SECURITY CONTROL SYSTEM

А

В

С

D

Е

CONTENTS

COUPE

BASIC INSPECTION8
DIAGNOSIS AND REPAIR WORKFLOW
INSPECTION AND ADJUSTMENT11
ECM RE-COMMUNICATING FUNCTION 11 ECM RE-COMMUNICATING FUNCTION : Description 11 ECM RE-COMMUNICATING FUNCTION : Special Repair Requirement 11
FUNCTION DIAGNOSIS12
INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION
NVIS (NISSAN VEHICLE IMMOBILIZER SYS- TEM-NATS)18
System Diagram 18 System Description 18 Component Parts Location 20 Component Description 21
VEHICLE SECURITY SYSTEM22System Diagram22System Description22Component Parts Location24Component Description24
DIAGNOSIS SYSTEM (BCM)26
COMMON ITEM

INTELLIGENT KEY	F
THEFT ALM	G
IMMU	Н
COMPONENT DIAGNOSIS32	
U1000 CAN COMM CIRCUIT	J
U1010 CONTROL UNIT (CAN)	SEC
B2190, P1610 NATS ANTENNA AMP	L
B2191, P1615 DIFFERENCE OF KEY	Ν
B2192, P1611 ID DISCORD, IMMU-ECM	0 P
B2193, P1612 CHAIN OF ECM-IMMU40 Description40 DTC Logic40 Diagnosis Procedure40 B2012 ID DISCORD IMMUL STRC	
B2013 ID DISCORD, IMMU-STRG41	

Description DTC Logic Diagnosis Procedure	. 41
B2014 CHAIN OF STRG-IMMU Description DTC Logic Diagnosis Procedure	42 42
B2555 STOP LAMP Description DTC Logic Diagnosis Procedure Component Inspection	46 46 46
B2556 PUSH-BUTTON IGNITION SWITCH Description DTC Logic Diagnosis Procedure Component Inspection	49 49 49
B2557 VEHICLE SPEED Description DTC Logic Diagnosis Procedure	51 51
B2560 STARTER CONTROL RELAY Description DTC Logic Diagnosis Procedure	52 52
B2601 SHIFT POSITION Description DTC Logic Diagnosis Procedure Component Inspection	53 53 53
Description DTC Logic Diagnosis Procedure	53 53 53 55 57 57
Description DTC Logic Diagnosis Procedure Component Inspection B2602 SHIFT POSITION Description DTC Logic	53 53 53 55 57 57 57 57 60 60 60
Description DTC Logic Diagnosis Procedure Component Inspection B2602 SHIFT POSITION Description DTC Logic Diagnosis Procedure B2603 SHIFT POSITION STATUS Description DTC Logic	53 53 53 55 57 57 57 57 60 60 60 60 64 64 64
Description DTC Logic Diagnosis Procedure Component Inspection B2602 SHIFT POSITION Description DTC Logic Diagnosis Procedure B2603 SHIFT POSITION STATUS Description DTC Logic Diagnosis Procedure Diagnosis Procedure Diagnosis Procedure Diagnosis Procedure	53 53 55 57 57 57 60 60 60 60 60 64 64 64 64 64 64 66

B2607 STEERING LOCK RELAY
B2608 STARTER RELAY 71 Description 71 DTC Logic 71 Diagnosis Procedure 71
B2609 STEERING STATUS73Description73DTC Logic73Diagnosis Procedure73
B260B STEERING LOCK UNIT78Description78DTC Logic78Diagnosis Procedure78
B260C STEERING LOCK UNIT79Description79DTC Logic79Diagnosis Procedure79
B260D STEERING LOCK UNIT80Description80DTC Logic80Diagnosis Procedure80
B260F ENGINE STATUS81Description81DTC Logic81Diagnosis Procedure81
B26E1 NO RECEPTION OF ENGINE STA- TUS SIGNALDescription82DTC Logic82Diagnosis Procedure82
B2612 STEERING STATUS83Description83DTC Logic83Diagnosis Procedure83
B2617 STARTER RELAY CIRCUIT88Description88DTC Logic88Diagnosis Procedure88
B2619 BCM 90 Description 90 DTC Logic 90 Diagnosis Procedure 90
B261A PUSH-BUTTON IGNITION SWITCH 91 Description
B261E VEHICLE TYPE94

Description
B2108 STEERING LOCK RELAY
B2109 STEERING LOCK RELAY
B210A STEERING LOCK CONDITION SWITCH
B210B STARTER CONTROL RELAY102Description102DTC Logic102Diagnosis Procedure102
B210C STARTER CONTROL RELAY103Description103DTC Logic103Diagnosis Procedure103
B210D STARTER RELAY 104 Description 104 DTC Logic 104 Diagnosis Procedure 104
B210E STARTER RELAY106Description106DTC Logic106Diagnosis Procedure106
B210F PNP/CLUTCH INTERLOCK SWITCH 109Description109DTC Logic109Diagnosis Procedure109Component Inspection114
B2110 PNP/CLUTCH INTERLOCK SWITCH115Description115DTC Logic115Diagnosis Procedure115Component Inspection120
POWER SUPPLY AND GROUND CIRCUIT 121
BCM
IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM)

KEY SLOT 122 Diagnosis Procedure 122	А
KEY SLOT ILLUMINATION	В
KEY CYLINDER SWITCH	С
	D
HORN131Description131Component Function Check131Diagnosis Procedure131	F
HEADLAMP	G
WARNING LAMP	H
VEHICLE SECURITY INDICATOR	J SEC
ECU DIAGNOSIS 136	SEC
BCM (BODY CONTROL MODULE)	L
ENGINE START FUNCTION	IVI
Wiring Diagram - NVIS	N
IPDM E/R (INTELLIGENT POWER DISTRI- BUTION MODULE ENGINE ROOM)	P
SYMPTOM DIAGNOSIS 176	
INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION SYMPTOMS	

VEHICLE SECURITY SYSTEM SYMPTOMS . 1 Symptom Table1	
NISSAN VEHICLE IMMOBILIZER SYSTEM- NATS SYMPTOMS 1	
Symptom Table1 ON-VEHICLE MAINTENANCE1	
	-
PRE-INSPECTION FOR DIAGNOSTIC	79
ON-VEHICLE REPAIR1	
KEY SLOT 1	Q1
Removal and Installation1	
PUSH BUTTON IGNITION SWITCH 1	
Removal and Installation1 SEDAN	82
BASIC INSPECTION1	83
DIAGNOSIS AND REPAIR WORKFLOW 1	
Work Flow1	83
INSPECTION AND ADJUSTMENT 1	
ECM RE-COMMUNICATING FUNCTION1 ECM RE-COMMUNICATING FUNCTION : De- scription1	
ECM RE-COMMUNICATING FUNCTION : Spe- cial Repair Requirement1	
FUNCTION DIAGNOSIS1	87
INTELLIGENT KEY SYSTEM/ENGINE	
START FUNCTION 1	87
System Diagram1 System Description1	87 87
Component Parts Location1	
Component Description1	92
NVIS (NISSAN VEHICLE IMMOBILIZER SYS-	
TEM-NATS) 1	
System Diagram1 System Description1	93 03
Component Parts Location1	
Component Description1	
VEHICLE SECURITY SYSTEM 1	97
System Diagram1	
System Description1	
Component Parts Location	
Component Description2 DIAGNOSIS SYSTEM (BCM)2	
COMMON ITEM2 COMMON ITEM : Diagnosis Description2	
COMMON ITEM : Diagnosis Description	

177 .177	INTELLIGENT KEY INTELLIGENT KEY : CONSULT-III Function	201
. 177	(BCM - INTELLIGENT KEY)	202
178 .178	THEFT ALM	
.179	THEFT)	
179	IMMU : CONSULT-III Function (BCM - IMMU)	
.179 .179	COMPONENT DIAGNOSIS	207
-	U1000 CAN COMM CIRCUIT	207
.181	Description	
181	DTC Logic	
.181	Diagnosis Procedure	
182	U1010 CONTROL UNIT (CAN) DTC Logic	
.182	Diagnosis Procedure	
	B2013 ID DISCORD, IMMU-STRG	209
.183	Description	209
183	DTC Logic	
.183	Diagnosis Procedure	
186	B2014 CHAIN OF STRG-IMMU	
.186	Description DTC Logic	
	Diagnosis Procedure	
.186	B2190, P1610 NATS ANTENNA AMP	214
.186	Description	
.187	DTC Logic Diagnosis Procedure	
	-	
187	B2191, P1615 DIFFERENCE OF KEY Description	
.187	DTC Logic	
.187	Diagnosis Procedure	218
.191 .192	B2192, P1611 ID DISCORD, IMMU-ECM	219
-	Description	
193	DTC Logic Diagnosis Procedure	
.193	B2193, P1612 CHAIN OF ECM-IMMU	
.193	Description	
.195 .196	DTC Logic	220
197	Diagnosis Procedure	220
.197		
	B2555 STOP LAMP	
.197	Description	221
.199		221 221
.199 .200	Description DTC Logic	221 221 221
.199	Description DTC Logic Diagnosis Procedure	221 221 221 223
.199 .200 201 .201	Description DTC Logic Diagnosis Procedure Component Inspection B2556 PUSH-BUTTON IGNITION SWITCH . Description	221 221 221 223 223 224
.199 .200 201	Description DTC Logic Diagnosis Procedure Component Inspection B2556 PUSH-BUTTON IGNITION SWITCH .	221 221 221 223 223 224 224 224

Component Inspection	225
B2557 VEHICLE SPEED	
Description DTC Logic	
Diagnosis Procedure	
B2560 STARTER CONTROL RELAY	227
Description	
DTC Logic	
Diagnosis Procedure	227
B2601 SHIFT POSITION	228
Description	228
DTC Logic	
Diagnosis Procedure	
Component Inspection	230
B2602 SHIFT POSITION	232
Description	232
DTC Logic	
Diagnosis Procedure	232
B2603 SHIFT POSITION STATUS	235
Description	
DTC Logic	
Diagnosis Procedure	235
B2604 PNP SWITCH	
Description	
DTC Logic Diagnosis Procedure	
B2605 PNP SWITCH	044
Description	
DTC Logic	
Diagnosis Procedure	
B2606 STEERING LOCK RELAY	243
Description	
DTC Logic	
Diagnosis Procedure	243
B2607 STEERING LOCK RELAY	244
Description	
DTC Logic	
Diagnosis Procedure	
B2608 STARTER RELAY	046
Description	
DESCRIPTION	
Diagnosis Procedure	
B2609 STEERING STATUS	248
Description	
DTC Logic	248
Diagnosis Procedure	
B260B STEERING LOCK UNIT	253
Description	
DTC Logic	253
Diagnosis Procedure	253

B260C STEERING LOCK UNIT	254
Description	.254 A
DTC Logic	
Diagnosis Procedure	
	D
B260D STEERING LOCK UNIT	255
Description	
DTC Logic	
Diagnosis Procedure	.255 C
B260F ENGINE STATUS	256
Description	
DTC Logic Diagnosis Procedure	.200
	.200
B26E1 NO RECEPTION OF ENGINE STA-	E
TUS SIGNAL	257
Description	
DTC Logic	
Diagnosis Procedure	
C C	
B2612 STEERING STATUS	-
Description	
DTC Logic	
Diagnosis Procedure	.258
B2617 STARTER RELAY CIRCUIT	Н
Description	
DTC Logic	
Diagnosis Procedure	.263
B2619 BCM	265
Description	
DTC Logic	
Diagnosis Procedure	
-	
B261A PUSH-BUTTON IGNITION SWITCH	
Description	
DTC Logic	
Diagnosis Procedure	.266 🛛
B261E VEHICLE TYPE	260
Description DTC Logic	
Diagnosis Procedure	269
	.203
B2108 STEERING LOCK RELAY	270 N
Description	
DTC Logic	.270
Diagnosis Procedure	.270
	0
B2109 STEERING LOCK RELAY	
Description	
DTC Logic	
Diagnosis Procedure	.271
B210A STEERING LOCK CONDITION	
SWITCH	272
Description	
	111
DTC Logic	
DTC Logic Diagnosis Procedure	.272

B210B STARTER CONTROL RELAY	277
Description	277
DTC Logic	
Diagnosis Procedure	277
B210C STARTER CONTROL RELAY	278
Description	
DTC Logic	
Diagnosis Procedure	
B210D STARTER RELAY	
Description	
DTC Logic Diagnosis Procedure	
	219
B210E STARTER RELAY	281
Description	
DTC Logic	
Diagnosis Procedure	281
B210F PNP/CLUTCH INTERLOCK SWITCH .	284
Description	
DTC Logic	
Diagnosis Procedure	
Component Inspection	
B2110 PNP/CLUTCH INTERLOCK SWITCH .	~~~
Description DTC Logic	
Diagnosis Procedure	
Component Inspection	
POWER SUPPLY AND GROUND CIRCUIT	296
BCM	296
BCM : Diagnosis Procedure	296
IPDM E/R (INTELLIGENT POWER DISTRIBU-	
TION MODULE ENGINE ROOM)	296
IPDM E/R (INTELLIGENT POWER DISTRIBU-	200
TION MODULE ENGINE ROOM) : Diagnosis Pro-	
cedure	296
KEY SLOT	
Diagnosis Procedure	297
KEY SLOT ILLUMINATION	298
Description	
Component Function Check	298
Diagnosis Procedure	298
KEY CYLINDER SWITCH	201
Description	
Component Function Check	
Diagnosis Procedure (With LH and RH Anti-Pinch)	
	301
Diagnosis Procedure (With LH Anti-Pinch Only)	
Component Inspection	
Special Repair Requirement	305
HORN	306
Description	306

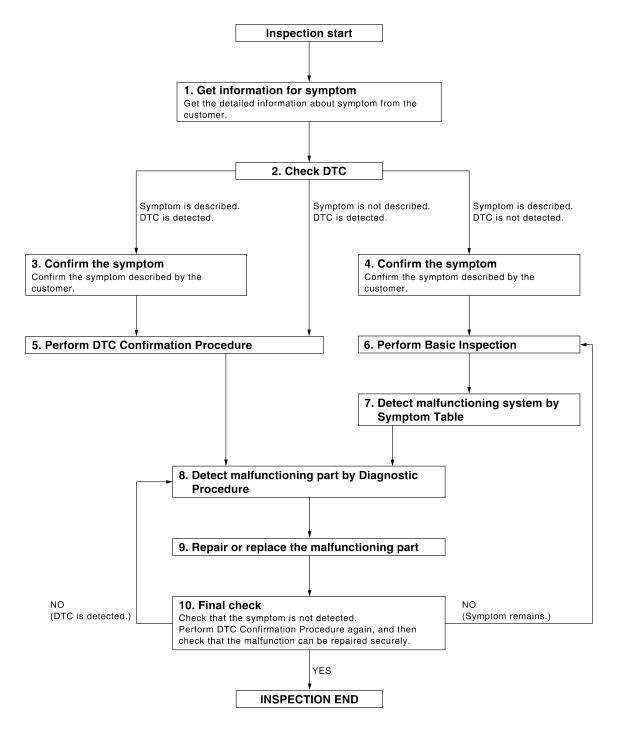
Component Function Check
HEADLAMP308Description308Component Function Check308Diagnosis Procedure308
WARNING LAMP309Description309Component Function Check309Diagnosis Procedure309
VEHICLE SECURITY INDICATOR310Description310Component Function Check310Diagnosis Procedure310
ECU DIAGNOSIS
BCM (BODY CONTROL MODULE)311Reference Value311Terminal Layout311Physical Values311Wiring Diagram - INTELLIGENT KEY SYSTEM/312ENGINE START FUNCTION -312Wiring Diagram - VEHICLE SECURITY SYSTEM
IPDM E/R (INTELLIGENT POWER DISTRI- BUTION MODULE ENGINE ROOM)
SYMPTOM DIAGNOSIS
INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION SYMPTOMS
VEHICLE SECURITY SYSTEM SYMPTOMS353 Symptom Table
NISSAN VEHICLE IMMOBILIZER SYSTEM- NATS SYMPTOMS
ON-VEHICLE MAINTENANCE
PRE-INSPECTION FOR DIAGNOSTIC
ON-VEHICLE REPAIR
KEY SLOT

PUSH BUTTON IGNITION SWITCH	Removal and Installation358	
		A
		В
		С
		D
		E
		F
		G
		Η
		I
		J
		SEC
		L
		Μ
		Ν
		0
		Ρ

BASIC INSPECTION DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

OVERALL SEQUENCE



DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[COUPE]

1. GET INFORMATION FOR SYMPTOM	
Get the detailed information from the customer about the symptom (the condition and the environment w the incident/malfunction occurred).	/hen
>> GO TO 2.	
2.CHECK DTC WITH BCM AND IPDM E/R	
 Check "Self Diagnostic Result" with CONSULT-III. Perform the following procedure if DTC is displayed. Record DTC and freeze frame data (Print them out with CONSULT-III.) Erase DTC. 	
 Study the relationship between the cause detected by DTC and the symptom described by the custor Check related service bulletins for information. 	ner.
Is any symptom described and any DTC detected?	
Symptom is described, DTC is displayed>>GO TO 3. Symptom is described, DTC is not displayed>>GO TO 4.	
Symptom is not described, DTC is displayed>>GO TO 5.	
3. CONFIRM THE SYMPTOM	
Confirm the symptom described by the customer. Connect CONSULT-III to the vehicle in "Data Monitor" mode and check real time diagnosis results. Verify relation ship between the symptom and the condition when the symptom is detected.	
>> GO TO 5.	
4.CONFIRM THE SYMPTOM	
Confirm the symptom described by the customer. Connect CONSULT-III to the vehicle in "Data Monitor" mode and check real time diagnosis results. Verify relation ship between the symptom and the condition when the symptom is detected.	
>> GO TO 6.	
>> GO TO 6. 5.PERFORM DTC CONFIRMATION PROCEDURE	
5.PERFORM DTC CONFIRMATION PROCEDURE Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again. At this time, always keep CONSULT-III connected to the vehicle, and check diagnostic results in real time If two or more DTCs are detected, refer to <u>SEC-171, "DTC Inspection Priority Chart"</u> and determine tro diagnosis order.	
5.PERFORM DTC CONFIRMATION PROCEDURE Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again. At this time, always keep CONSULT-III connected to the vehicle, and check diagnostic results in real time If two or more DTCs are detected, refer to <u>SEC-171, "DTC Inspection Priority Chart"</u> and determine tro diagnosis order. NOTE:	
 5.PERFORM DTC CONFIRMATION PROCEDURE Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again. At this time, always keep CONSULT-III connected to the vehicle, and check diagnostic results in real time If two or more DTCs are detected, refer to <u>SEC-171</u>, "DTC Inspection Priority Chart" and determine tro diagnosis order. NOTE: Freeze frame data is useful if the DTC is not detected. Perform Component Function Check if DTC Confirmation Procedure is not included in Service Manual. simplified check procedure is an effective alternative though DTC cannot be detected during this check. If the result of Component Function Check is NG, it is the same as the detection of DTC by DTC Confirmation 	uble This
 5.PERFORM DTC CONFIRMATION PROCEDURE Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again. At this time, always keep CONSULT-III connected to the vehicle, and check diagnostic results in real time If two or more DTCs are detected, refer to <u>SEC-171. "DTC Inspection Priority Chart"</u> and determine trodiagnosis order. NOTE: Freeze frame data is useful if the DTC is not detected. Perform Component Function Check if DTC Confirmation Procedure is not included in Service Manual. simplified check procedure is an effective alternative though DTC cannot be detected during this check. 	uble This
 5.PERFORM DTC CONFIRMATION PROCEDURE Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again. At this time, always keep CONSULT-III connected to the vehicle, and check diagnostic results in real time If two or more DTCs are detected, refer to <u>SEC-171</u>, "<u>DTC Inspection Priority Chart</u>" and determine tro diagnosis order. NOTE: Freeze frame data is useful if the DTC is not detected. Perform Component Function Check if DTC Confirmation Procedure is not included in Service Manual. simplified check procedure is an effective alternative though DTC cannot be detected during this check. If the result of Component Function Check is NG, it is the same as the detection of DTC by DTC Confirmation Procedure. Is DTC detected? Yes >> GO TO 8. 	uble This
 5.PERFORM DTC CONFIRMATION PROCEDURE Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again. At this time, always keep CONSULT-III connected to the vehicle, and check diagnostic results in real time If two or more DTCs are detected, refer to <u>SEC-171</u>. "DTC Inspection Priority Chart" and determine tro diagnosis order. NOTE: Freeze frame data is useful if the DTC is not detected. Perform Component Function Check if DTC Confirmation Procedure is not included in Service Manual. simplified check procedure is an effective alternative though DTC cannot be detected during this check. If the result of Component Function Check is NG, it is the same as the detection of DTC by DTC Confirmation Procedure. Is DTC detected? 	uble This
 5.PERFORM DTC CONFIRMATION PROCEDURE Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again. At this time, always keep CONSULT-III connected to the vehicle, and check diagnostic results in real time If two or more DTCs are detected, refer to <u>SEC-171</u>, "DTC Inspection Priority Chart" and determine trodiagnosis order. NOTE: Freeze frame data is useful if the DTC is not detected. Perform Component Function Check if DTC Confirmation Procedure is not included in Service Manual. simplified check procedure is an effective alternative though DTC cannot be detected during this check. If the result of Component Function Check is NG, it is the same as the detection of DTC by DTC Confirmition Procedure. Is DTC detected? Yes >> GO TO 8. No >> Refer to GI-42, "Intermittent Incident". 	uble This
 5.PERFORM DTC CONFIRMATION PROCEDURE Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again. At this time, always keep CONSULT-III connected to the vehicle, and check diagnostic results in real time If two or more DTCs are detected, refer to <u>SEC-171</u>. "DTC Inspection Priority Chart" and determine tro diagnosis order. NOTE: Freeze frame data is useful if the DTC is not detected. Perform Component Function Check if DTC Confirmation Procedure is not included in Service Manual. simplified check procedure is an effective alternative though DTC cannot be detected during this check. If the result of Component Function Check is NG, it is the same as the detection of DTC by DTC Confirming time Procedure. Is DTC detected? Yes >> GO TO 8. No >> Refer to GI-42, "Intermittent Incident". 6.PERFORM BASIC INSPECTION 	uble This

- 4, and determine the trouble diagnosis order based on possible causes and symptoms.
 Intelligent Key system/engine start function: <u>SEC-176</u>, "Symptom Table".
- Vehicle security system: <u>SEC-177, "Symptom Table"</u>.

SEC-9

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

• Nissan vehicle immobilizer system-NATS: SEC-178, "Symptom Table".

>> GO TO 8.

8. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

NOTE:

The Diagnostic Procedure described based on open circuit inspection. A short circuit inspection is also required for the circuit check in the Diagnostic Procedure.

Is malfunctioning part detected?

Yes >> GO TO 9.

No >> Check voltage of related BCM terminals using CONSULT-III.

9.REPAIR OR REPLACE THE MALFUNCTIONING PART

- 1. Repair or replace the malfunctioning part.
- 2. Reconnect parts or connectors disconnected during Diagnostic Procedure again after repair or replacement.
- 3. Check DTC. If DTC is displayed, erase it.

>> GO TO 10.

10.FINAL CHECK

When DTC was detected in step 2, perform DTC Confirmation Procedure or Component Function Check again, and then check that the malfunction have been fully repaired.

When symptom was described from the customer, refer to confirmed symptom in step 3 or 4, and check that the symptom is not detected.

Is the inspection result normal?

NO (DTC is detected)>>GO TO 8.

NO (Symptom remains)>>GO TO 6.

YES >> INSPECTION END

INSPECTION AND ADJUSTMENT	
< BASIC INSPECTION > [COUPE]	
INSPECTION AND ADJUSTMENT	
ECM RE-COMMUNICATING FUNCTION	A
ECM RE-COMMUNICATING FUNCTION : Description	В
Performing following procedure can automatically perform re-communication of ECM and BCM, but only when the ECM has been replaced with a new one (*1). *1: New one means an ECM which has never been energized on-board. (In this step, initialization procedure by CONSULT-III is not necessary)	С
 NOTE: When registering new Key IDs or replacing the ECM that is not brand new, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS. If multiple keys are attached to the key holder, separate them before work. Distinguish keys with unregistered key ID from those with registered ID. 	D
ECM RE-COMMUNICATING FUNCTION : Special Repair Requirement	Е
1.PERFORM ECM RE-COMMUNICATING FUNCTION	E
1. Install ECM.	Γ
 Insert the registered Intelligent Key (*2), turn ignition switch to "ON". *2: To perform this step, use the key that has been used before performing ECM replacement. Maintain ignition switch in "ON" position for at least 5 seconds. Turn ignition switch to "OFF". Start engine. 	G
Can engine be started?	Н
YES >> Procedure is completed. NO >> Initialize control unit.Refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.	I

SEC

L

M

Ν

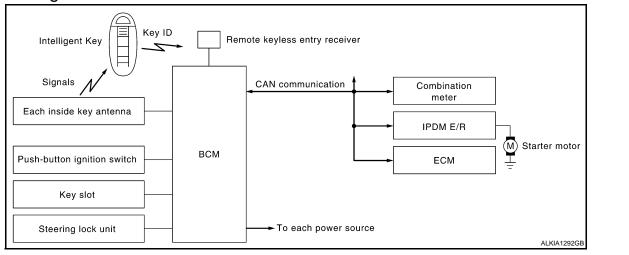
0

Ρ

< FUNCTION DIAGNOSIS >

FUNCTION DIAGNOSIS INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

System Diagram



System Description

INFOID:000000001344449

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM function	Actuator
Push-button ignition switch	Push switch		
CVT device (CVT models)	P range		
PNP switch (CVT models)	N, P range	, , , , , , , , , , , , , , , , , , , ,	Steering lock relay
Clutch interlock switch (M/T mod- els)	Clutch ON/OFF		Starter relay (IPDM E/R)
Stop lamp switch	Brake ON/OFF	Engine start function	Starter control relay (IPDM E/ R)
Each inside key antenna	Request signal		Starter motor
Remote keyless entry receiver	Key ID		KEY warning lamp
Each door switch	Door open/close	1	
ECM	Engine status signal		

SYSTEM DESCRIPTION

• The engine start function of Intelligent Key system is a system that makes it possible to start and stop the engine without removing the key. It verifies the electronic ID using two-way communications when pressing the push-button ignition switch while carrying the Intelligent Key, which operates based on the results of electronic ID verification for Intelligent Key using two-way communications between the Intelligent Key and the vehicle.

NOTE:

The driver should carry the Intelligent Key at all times.

- Intelligent Key has 2 IDs [for Intelligent Key and for NVIS (NATS)]. It can perform the door lock/unlock operation and the push-button ignition switch operation when the registered Intelligent Key is carried.
- When the Intelligent Key battery is discharged, it can be used as emergency back-up by inserting the Intelligent Key to the key slot. At that time, perform the NVIS (NATS) ID verification. If it is used when the Intelligent Key is carried, perform the Intelligent Key ID verification.
- If the ID is successfully verified, and when push-button ignition switch is pressed, steering lock will be released and initiating the engine will be possible.
- If the door lock/unlock operation is performed when the Intelligent Key battery is discharged, all doors lock/ unlock can be performed by operating the driver door key cylinder using the mechanical key set in the Intelligent Key.

SEC-12

[COUPE]

< FUNCTION DIAGNOSIS > Intelligent Key can be registered up to 4 keys (Including the standard Intelligent Key) on request from the owner. А NOTE: Refer to DLK-19. "INTELLIGENT KEY : System Description" for any functions other than engine start function of Intelligent Key system. В PRECAUTIONS FOR INTELLIGENT KEY SYSTEM In the Intelligent Key system of model L32, the transponder [the chip for NVIS (NATS) ID verification] is integrated into the Intelligent Key. (For the conventional models, it is integrated into the mechanical key.) Therefore, the mechanical key cannot perform the ID verification, and thus it cannot start the engine. Instead, the NVIS (NATS) ID verification can be performed by inserting the Intelligent Key into the key slot, and then it can start the engine. D OPERATION WHEN INTELLIGENT KEY IS CARRIED 1. When the push-button ignition switch is pressed and brake pedal is depressed, the BCM signals the inside key antenna and transmits the request signal to the Intelligent Key. Ε The Intelligent Key receives the request signal and transmits the Intelligent Key ID signal to the BCM via 2. the remote keyless entry receiver. The BCM receives the Intelligent Key ID signal and verifies it with the registered ID. 3. F BCM transmits the steering lock unlock signal to steering lock unit and IPDM E/R if the verification results 4. are OK. IPDM E/R turns the steering lock relay ON and supplies power to the steering lock unit. 6. Release of the steering lock. BCM transmits the power supply stop signal to IPDM E/R when it confirms that the steering lock is in the 7. unlock condition. Н 8. IPDM E/R turns the steering lock relay OFF and stops power supply to the steering lock unit. BCM turns ACC relay ON and transmits the ignition power supply ON signal to IPDM E/R. 10. IPDM E/R turns the ignition relay ON and starts the ignition power supply. 11. BCM confirms that the shift position is P or N (CVT models). 12. BCM transmits the starter request signal via CAN communication to IPDM E/R and turns the starter relay J in IPDM E/R ON if BCM judges that the engine start condition is satisfied. IPDM E/R turns the starter control relay ON when receiving the starter request signal. 14. Battery power is supplied through the starter relay and the starter control relay to operate the starter motor SEC and to start the cranking. CAUTION: If a malfunction is detected in the Intelligent Key system, the "KEY" warning lamp in the combination meter illuminates. At that time, the engine cannot be started. L 15. When BCM received feedback signal from ECM acknowledging the engine has been initiated, the BCM transmits a stop signal to IPDM E/R and stops the cranking by turning OFF the starter motor relay. (If the engine initiating has failed, the cranking will stop automatically within 5 seconds.) Μ CAUTION: When the Intelligent Key is carried outside of the vehicle (inside key antenna detection area) with the power supply in ACC or ON position, even if the engine start condition* is satisfied, the engine Ν cannot be started. *: For the engine start condition, refer to "PUSH-BUTTON IGNITION SWITCH OPERATION PROCEDURE". OPERATION RANGE Engine can be started when Intelligent Key is inside the vehicle. However, sometimes engine might not start when Intelligent Key is on instrument panel or in glove box. **OPERATION WHEN KEY SLOT IS USED** Ρ When the Intelligent Key battery is discharged, it performs the NVIS (NATS) ID verification between the integrated transponder and BCM by inserting the Intelligent Key into the key slot, and then the engine can be started. For details relating to starting the engine using key slot, refer to SEC-18, "System Description".

BATTERY SAVER SYSTEM

When all the following conditions are met for 60 minutes, the battery saver system will cut off the power supply to prevent battery discharge.

< FUNCTION DIAGNOSIS >

- The ignition switch is in the ACC position
- All doors are closed
- CVT selector lever is in the P position
- No Intelligent Key failures (Intelligent Key warning indicator is not ON)

Reset Condition of Battery Saver System

CVT models

In order to prevent the battery from discharging, the battery saver system will cut off the power supply when all doors are closed, the selector lever is on P position and the ignition switch is left on ACC position for 1 hour. If any of the following conditions are met the battery saver system is released and the steering will change automatically to lock position from OFF position.

- Opening any door
- Operating with request switch on door lock
- Operating with Intelligent Key on door lock

Press push-button ignition switch and ignition switch will change to ACC position from OFF position.

M/T models

If any of the conditions above is met the battery saver system is released but the steering will not lock. In this case, the steering operation OFF to LOCK is prohibited.

STEERING LOCK OPERATION

Steering is locked by steering lock unit when ignition switch is in the OFF position, CVT selector lever is in the P position and any of the following conditions are met.

- Opening door
- Closing door
- Door is locked with request switch
- Door is locked with Intelligent Key

PUSH-BUTTON IGNITION SWITCH OPERATION PROCEDURE

The power supply position changing operation can be performed with the following operations. **NOTE:**

- When an Intelligent Key is within the detection area of inside key antenna or when it is inserted to the key slot, it is equivalent to the operations below.
- When starting the engine, the BCM monitors under the engine start conditions,
- Brake pedal operating condition (CVT models)
- CVT selector lever position (CVT models)
- Clutch pedal operating condition (M/T models)
- Vehicle speed
- Steering lock condition
- Engine status
- Unless each start condition is fulfilled, the engine will not respond regardless of how many times the engine switch is pressed. At that time, illumination repeats the position in the order of LOCK→ACC→ON→OFF.

	Engine sta	Engine start/stop condition				
Power supply position	Brake pedal (CVT) /clutch pedal (M/T)	CVT selector lever position	Push-button ignition switch op- eration frequency			
$LOCK \rightarrow ACC$	Not depressed	Any position	1			
$LOCK\toACC\toON$	Not depressed	Any position	2			
$\begin{array}{c} LOCK \to ACC \to ON \to \\ OFF \end{array}$	Not depressed	Any position	3			
$LOCK \rightarrow START$ ACC $\rightarrow START$ ON $\rightarrow START$ (Engine start)	Depressed	P or N position (*1)	1 [If the switch is pressed once, the engine starts from any pow- er supply position (LOCK, ACC, and ON)]			
Engine is running \rightarrow OFF (Engine stop)	_	Any position Vehicle speed < 4 km/h (2 MPH)	1			

< FUNCTION DIAGNOSIS >

[COUPE]

	Engine start/	Puch button ignition switch on		
Power supply position	Brake pedal (CVT) /clutch pedal (M/T)	CVT selector lever position	Push-button ignition switch op- eration frequency	
Engine is running → ACC (Engine stop)	_	Any position other than P (*2)	1	
Engine stall return oper- ation while driving	_	P position	1	

*1: When the CVT selector lever position is N position, the engine start condition is different according to the vehicle speed.

• At vehicle speed of 4 km/h (2 MPH) or less, the engine can start only when the brake pedal is depressed.

• At vehicle speed of 4 km/h (2 MPH) or more, the engine can start even if the brake pedal is not depressed. (It is the same as "Engine stall return operation while driving".)

*2: When the CVT selector lever position is in any position other than P position and when the vehicle speed is 5 km/h (3 MPH) or more, the engine stop condition is different.

• Press and hold the push-button ignition switch for 2 seconds or more. (When the push-button ignition switch is pressed for too short a time, the operation may be invalid, so properly press and hold to prevent an incorrect operation.)

• Press the push-button ignition switch 3 times or more within 1.5 seconds. (Emergency stop operation)

Н

Ε

F

J

SEC

L

Μ

Ν

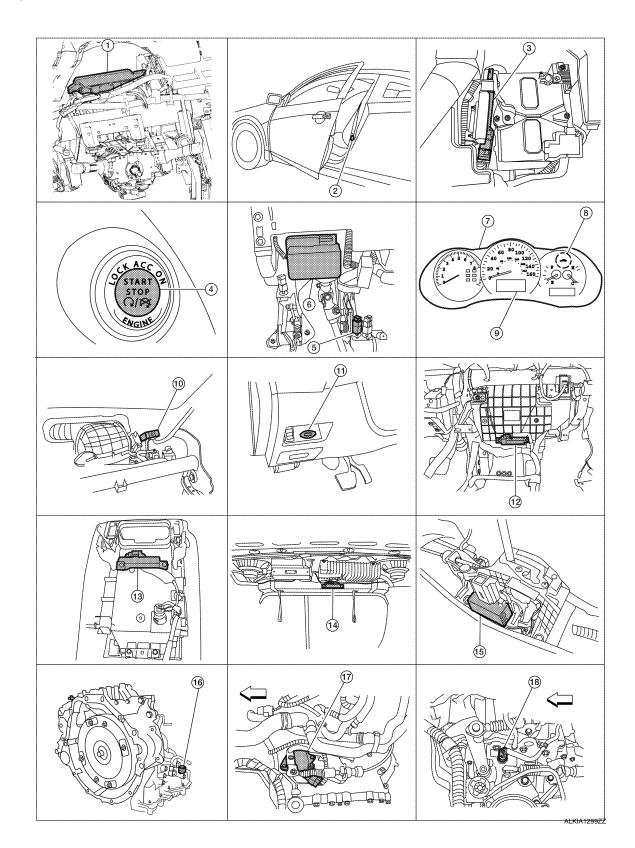
Ρ

< FUNCTION DIAGNOSIS >

Component Parts Location

INFOID:000000001344450

[COUPE]



< FUNCTION DIAGNOSIS >

[COUPE]

1.	Body control module M16, M17, M18, M19, M21 (view with instrument panel removed)	2.	Door switch LH B8 RH B108	3.	ECM E10	А
4.	Push button ignition switch M38	5.	Stop lamp switch E38 (view with lower driver instrument pan- el removed)	6.	Electronic steering column lock M32 (steering column)	В
7.	Combination meter M24	8.	Security indicator lamp	9.	Information display	
10.	Remote keyless entry receiver M27 (view with instrument panel removed)	11.	Key slot M40	12.	Instrument panel antenna M49 (view with instrument panel removed)	С
13.	Front console antenna M203 (bottom view of console)	14.	Rear parcel shelf antenna B29	15.	CVT device (detent switch) M23 (with CVT)	D
16.	Park neutral position switch connector (TCM connector) F16 (with CVT/VQ)	17.	Park neutral position switch F25 (with CVT/QR)	18.	Park neutral position switch F32 (with M/T)	

Component Description

INFOID:000000001344451

Е

Component	Reference	
BCM	<u>SEC-90</u>	
Steering lock unit	<u>SEC-78</u>	G
Push-button ignition switch	<u>SEC-91</u>	
Door switch	DLK-54	
CVT device (detention switch)	<u>SEC-53</u>	—— H
Inside key antenna	<u>DLK-44</u>	
Remote keyless entry receiver	DLK-109	
Stop lamp switch	<u>SEC-46</u>	
Park/neutral position switch	<u>SEC-64</u>	
Clutch switch	<u>SEC-109</u>	J
Steering lock relay	<u>SEC-68</u>	
Starter relay	<u>SEC-71</u>	SE
Starter control relay	<u>SEC-52</u>	
Security indicator	<u>SEC-135</u>	
Key warning lamp	<u>SEC-134</u>	L

Μ

Ν

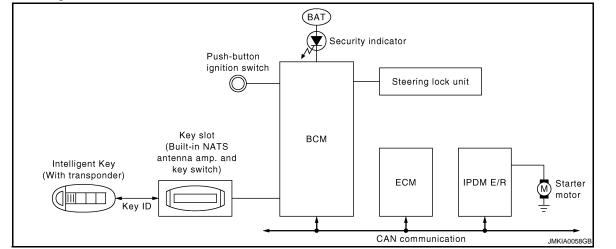
Ο

Ρ

< FUNCTION DIAGNOSIS >

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS)

System Diagram



System Description

INFOID:000000001344453

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM function	Actuator
Push-button ignition switch	Push switch		
CVT device (CVT models)	P range N, P range		 Steering lock relay
PNP switch (CVT models)			Steering lock relay Steering lock unit
Clutch interlock switch (M/T models)	Clutch ON/OFF	NVIS (NATS)	Starter relay (IPDM E/R) Starter control relay: (IPDM E/R)
Stop lamp switch	Brake ON/OFF	Starter motorKEY warning la	 Starter control relay (IPDM E/R) Starter motor
Key slot	Key ID		KEY warning lamp
Each door switch	Door open/close	1	Security indicator lamp
ECM	Engine status signal	1	

SYSTEM DESCRIPTION

- The NVIS (NATS) is an anti-theft system by registering an Intelligent Key ID in to the vehicle and prevents the engine being started by an unregistered Intelligent Key. It has a higher protection against auto thefts that duplicate mechanical key.
- It performs the ID verification when starting the engine in the same way as the Intelligent Key system. But, it performs the NVIS (NATS) ID verification when inserting the Intelligent Key and performs the Intelligent Key ID verification when carrying the Intelligent Key.
- The Intelligent Key system of L32 is not the same as the conventional models. The mechanical key integrated in the Intelligent Key cannot start the engine. When the Intelligent Key battery is discharged, the NVIS (NATS) ID verification memorized to the transponder integrated with Intelligent Key is performed by inserting the Intelligent Key into the key slot. If the verification results are OK, the engine start operation can be performed by the push-button ignition switch operation.
- Locate the security indicator and apply the anti-theft system equipment sticker, forewarn that the NVIS (NATS) is onboard with the model.
- The security indicator always blinks when the Intelligent Key is removed from the key slot and when the power supply position is in LOCK position.
- Intelligent Key can be registered up to 4 keys (Including the standard ignition key) on request from the owner.
- The specified registration is required when replacing ECM, BCM or Intelligent Key. The registrations procedure for NVIS (NATS) and registration procedure for Intelligent Key when installing the BCM, refer to CON-SULT-III Operation Manual.

[COUPE]

< FUNCTION DIAGNOSIS >

• Possible symptom of NVIS (NATS) malfunction is "Engine cannot start". In L32, the engine can be started with the Intelligent Key system and NVIS (NATS). Identify the possible causes according to "Work Flow", Refer to <u>SEC-8</u>, "Work Flow".

• If ECM other than Genuine NISSAN is installed, the engine cannot be started. For ECM replacement procedure, refer to <u>SEC-11, "ECM RE-COMMUNICATING FUNCTION : Special Repair Requirement"</u>.

PRECAUTIONS FOR KEY REGISTRATION

- The key registration is a procedure that erases the current NVIS (NATS) ID once, and then re-registers a new ID operation. Therefore the registered Intelligent Key is necessary for this procedure. Before starting the registration operation collect all registered Intelligent Keys from the customer
- When registering the Intelligent Key, performs only one procedure to register simultaneously both ID (NVIS "NATS" ID registration and Intelligent Key ID registration). The NVIS (NATS) ID registration is the procedure that registers the ID stored into the transponder (integrated in intelligent key) to BCM. The Intelligent key ID registration is the procedure that registers the ID to BCM.
- When performing the Intelligent Key system registration only, the engine cannot be started by inserting the key into the key slot. When performing the NVIS (NATS) registration only, the engine cannot be started by the operation when carrying the key. The registrations of both systems should be performed.

SECURITY INDICATOR

- Warns that the vehicle is equipped with NVIS (NATS).
- The security indicator always blinks when the Intelligent Key is removed from the key slot and when the ignition switch is in LOCK position.

NOTE:

Because security indicator is highly efficient, the battery is barely affected.

Н

SEC

M

Ν

Ρ

[COUPE]

А

В

E

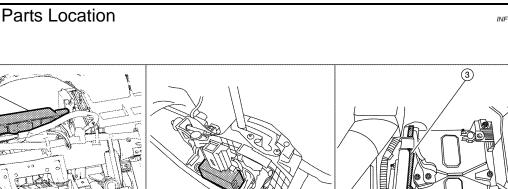
F

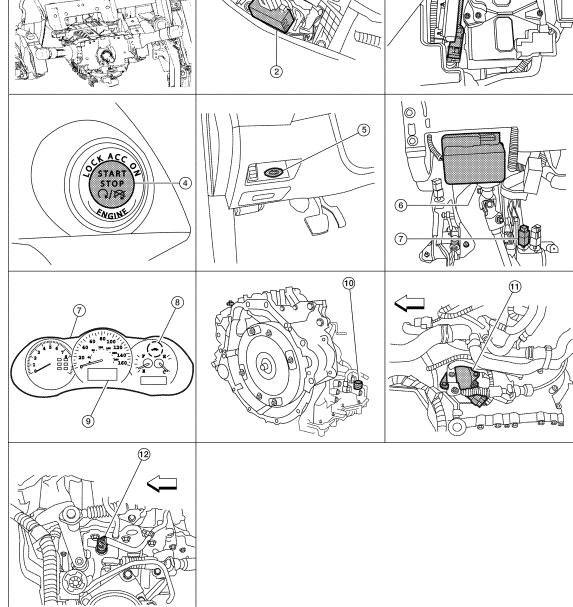
< FUNCTION DIAGNOSIS >

Component Parts Location

INFOID:000000001344454

[COUPE]





- Body control module M16, M17, M18, M19, M21 2. 1. (view with instrument panel removed)
- 4. Push button ignition switch M38
- Stop lamp switch E38 7. (view with lower LH instrument panel removed)
- 10. Park neutral position switch connector (TCM connector) F16 (with CVT/VQ)
- CVT device (detent switch) M23 3. (with CVT)
- 5. Key slot M40
- 8. Security indicator lamp
- 11. Park neutral position switch F25 (with CVT/QR)

- ALKIA1300ZZ
- ECM E10
- Electronic steering column lock M32 6. (steering column)
- 9. Information display
- 12. Park neutral position switch F32 (with M/T)



< FUNCTION DIAGNOSIS >

Component Description

INFOID:000000001344455

А

[COUPE]

Component	Reference	
BCM	<u>SEC-90</u>	В
Steering lock unit	<u>SEC-78</u>	
Push-button ignition switch	<u>SEC-91</u>	0
Door switch	<u>DLK-54</u>	
CVT device (detention switch)	<u>SEC-53</u>	
Inside key antenna	<u>DLK-44</u>	D
Remote keyless entry receiver	DLK-109	
Stop lamp switch	<u>SEC-46</u>	
Park/neutral position switch	<u>SEC-64</u>	E
Clutch switch	<u>SEC-109</u>	
Steering lock relay	<u>SEC-68</u>	F
Starter relay	<u>SEC-71</u>	
Starter control relay	<u>SEC-52</u>	
Security indicator	<u>SEC-135</u>	G
Key warning lamp	<u>SEC-134</u>	

Н

J

SEC

L

Μ

Ν

Ο

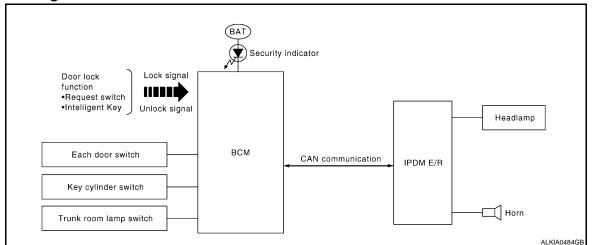
Ρ

VEHICLE SECURITY SYSTEM

< FUNCTION DIAGNOSIS >

VEHICLE SECURITY SYSTEM

System Diagram



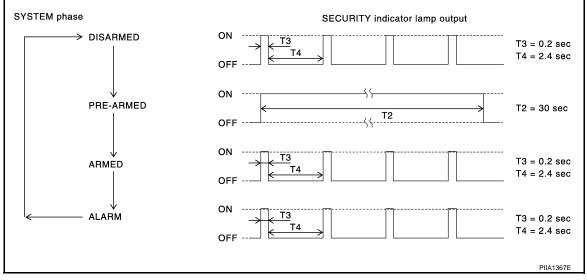
System Description

INFOID:000000001344457

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM system	Actuator		
All door switch	Open or close				
Trunk room lamp switch					
Door key cylinder switch	Lock or unlock Vehicle security system	• Horn			
Door lock and unlock switch			•		
Door request switch	_		Security indicator lamp		
Intelligent Key	Lock or unlock				
	Panic alarm				

OPERATION FLOW



SETTING THE VEHICLE SECURITY SYSTEM

Initial Condition

• Ignition switch is in OFF position.

Disarmed Phase

SEC-22

VEHICLE SECURITY SYSTEM
< FUNCTION DIAGNOSIS > [COUPE]
 When doors or trunk is open, the vehicle security system is set in the disarmed phase on the assumption that the owner is inside or near the vehicle. When the vehicle security system is in the disarmed phase, the security indicator lamp blinks every 2.4 seconds.
 Pre-armed Phase and Armed Phase When the following operation 1 or 2 is performed, the vehicle security system turns into the "pre-armed" phase. (The security indicator lamp illuminates.) BCM receives LOCK signal from front door key cylinder switch or Intelligent Key, after trunk and all doors
 are closed. Trunk and all doors are closed after front doors are locked by key or door lock and unlock switch. The security indicator lamp illuminates for 30 seconds. Then, the system automatically shifts into the "armed" phase.
 CANCELING THE SET VEHICLE SECURITY SYSTEM When one of the following operations is performed, the armed phase is canceled. 1. Unlock the doors with the key or Intelligent Key. 2. Turn ignition switch "ON" or "ACC" position.
CANCELING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM When unlocking the door with the key or Intelligent Key the alarm operation is canceled.
ACTIVATING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM Check that the system is in the armed phase. (The security indicator lamp blinks every 2.4 seconds.) When the following operation 1 or 2 is performed, the system sounds the horns and flashes the headlamps for about 50 seconds.
 Trunk or any door is opened during armed phase. Disconnecting and connecting the battery connector before canceling armed phase.
PANIC ALARM OPERATION Intelligent Key system will not operate horn and headlamps if the ignition switch is in the ACC or ON position.

ON position. When the Intelligent Key system is triggered, ground is supplied intermittently to both headlamp relay and horn relay.

When headlamp relay and horn relay are energized, then power is supplied to headlamps (LH and RH) and horns (HIGH and LOW).

The headlamp flashes and the horn sounds intermittently.

The alarm automatically turns off after 50 seconds or when BCM receives any signal from Intelligent Key.

SEC

Μ

Ν

Ο

Ρ

[COUPE]

А

В

С

D

Ε

F

Н

J

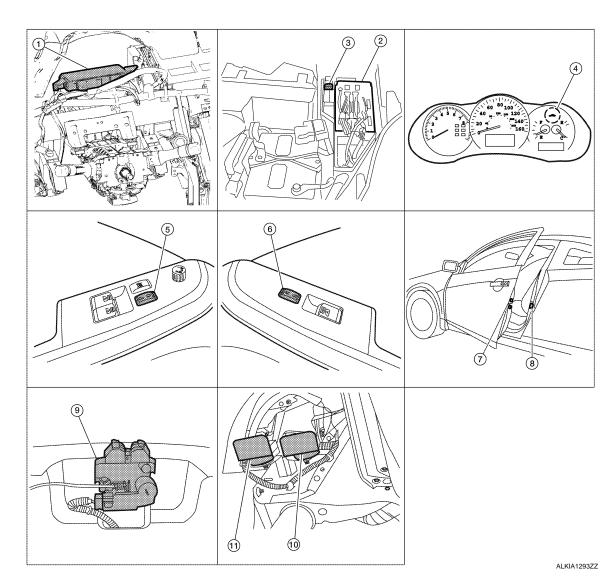
VEHICLE SECURITY SYSTEM

< FUNCTION DIAGNOSIS >

Component Parts Location

INFOID:000000001344458

[COUPE]



- 1. Body control module M16, M17, M18, M19, M21 2. (view with instrument panel removed)
- 4. Security indicator lamp (part of combination meter) M24
- 7. Door lock assembly LH (key cylinder switch) D10
- 10. Horn (high) E216 (view with front fender protector LH removed)

Component Description

- . IPDM E/R E17, E18
- 5. Main power window and door lock/ unlock switch D7, D8
- 8. Door switch LH B8 RH B108
- 11. Horn (low) E215

Horn relay H-1

3.

- 6. Power window and door lock/ unlock switch RH D105
- 9. Trunk lamp switch and trunk release solenoid T4

Component	Reference
BCM	<u>SEC-22</u>
Horn relay	<u>SEC-131</u>
Security indicator	<u>SEC-135</u>
Door switch	<u>DLK-54</u>
Door lock actuator	<u>DLK-96</u>
Trunk lid lock assembly	<u>DLK-99</u>



VEHICLE SECURITY SYSTEM

< FUNCTION DIAGNOSIS >

[COUPE]

В

С

D

Е

F

G

Н

Component	Reference	٨
Door key cylinder switch	<u>DLK-70</u>	A
Door lock and unlock switch	<u>DLK-57</u>	

J

SEC

L

M

Ν

0

Ρ

DIAGNOSIS SYSTEM (BCM) COMMON ITEM

COMMON ITEM : Diagnosis Description

BCM CONSULT-III FUNCTION

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM.
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from BCM.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.
ECU IDENTIFICATION	The BCM part number is displayed.
CONFIGURATION	This function is not used even though it is displayed.

SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

It can perform the diagnosis modes except the following for all sub system selection items.

System	Sub system selection item	Diagnosis mode		
System	Sub system selection item	WORK SUPPORT	DATA MONITOR	ACTIVE TEST
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Exterior lamp	EXTERNAL LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
Air conditioner	AIR CONDITONER		×	
Intelligent Key system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
BCM	BCM	×		
Immobilizer	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Trunk open	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	AIR PRESSURE MONITOR	×	×	

COMMON ITEM : CONSULT-III Function

ECU IDENTIFICATION Displays the BCM part No.

SELF-DIAG RESULT Refer to <u>BCS-85, "DTC Index"</u>. INTELLIGENT KEY INFOID:000000001344460

< FUNCTION DIAGNOSIS >

INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY)

BCM CONSULT-III FUNCTION

CONSULT-III performs the following functions via CAN communication with BCM.

• • • • •		В
Diagnosis mode	Function Description	
WORK SUPPORT	Changes the setting for each system function.	
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM.	С
DATA MONITOR	The BCM input/output signals are displayed.	
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.	D

WORK SUPPORT

Monitor item	Description
REMO CONT ID CONFIR	It can be checked whether Intelligent Key ID code is registered or not in this mode.
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch (driver side, passenger side and trunk) mode can be changed to operate (ON) or not operate (OFF) in this mode.
ENGINE START BY I-KEY	Engine start function mode can be changed to operate (ON) or not operate (OFF) with this mode.
TRUNK/GLASS HATCH OPEN	Buzzer reminder function mode by trunk opener request switch can be changed to operate (ON) or not operate (OFF) with this mode.
PANIC ALARM SET	 Panic alarm button pressing time on Intelligent Key remote control button can be selected from the following with this mode. 0.5 sec. 1.5 sec. OFF: Non-operation
PW DOWN SET	 Unlock button pressing time on Intelligent Key button can be selected from the following with this mode. 3 sec. 5 sec. OFF: Non-operation
TRUNK OPEN DELAY	 Trunk button pressing time on Intelligent Key button can be selected from the following with this mode. 0.5 sec. 1.5 sec. OFF: Non-operation
LO- BATT OF KEY FOB WARN	Intelligent Key low battery warning mode can be changed to operate (ON) or not operate (OFF) with this mode.
ANTI KEY LOCK IN FUNCTI	Key reminder function mode can be changed to operate (ON) or not operate (OFF) with this mode.
HORN WITH KEYLESS LOCK	Horn reminder function mode by Intelligent Key button can be changed to operate (ON) or not operate (OFF) with this mode.
HAZARD ANSWER BACK	 Hazard reminder function mode can be selected from the following with this mode. LOCK ONLY: Door lock operation only UNLOCK ONLY: Door unlock operation only LOCK AND UNLOCK: Lock/unlock operation OFF: Non operation
ANS BACK I-KEY LOCK	 Buzzer reminder function (lock operation) mode by door request switch (driver side and passenger side) can be selected from the following with this mode. HORN CHIRP: Sound horn BUZZER: Sound Intelligent Key warning buzzer OFF: Non-operation
ANS BACK I-KEY UNLOCK	Buzzer reminder function (unlock operation) mode by door request switch can be changed to operate (ON) or not operate (OFF) with this mode.

[COUPE]

А

< FUNCTION DIAGNOSIS >

[COUPE]

Monitor item	Description
SHORT CRANKING OUTPUT	Starter motor can operate during the times below. • 70 msec • 100 msec • 200 msec
INSIDE ANT DIAGNOSIS	This function allows inside key antenna self-diagnosis.

SELF-DIAG RESULT

Refer to <u>BCS-85, "DTC Index"</u>.

DATA MONITOR

Monitor Item	Condition
REQ SW-DR	Indicates [ON/OFF] condition of door request switch (driver side).
REQ SW-AS	Indicates [ON/OFF] condition of door request switch (passenger side).
REQ SW-BD/TR	Indicates [ON/OFF] condition of trunk opener request switch.
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch.
CLUCH SW	Indicates [ON/OFF] condition of clutch switch.
BRAKE SW 1	Indicates [ON/OFF] condition of brake switch.
DETE/CANCL SW	Indicates [ON/OFF] condition of P position.
SFT PN/N SW	Indicates [ON/OFF] condition of P or N position.
S/L -LOCK	Indicates [ON/OFF] condition of steering lock (LOCK).
S/L -UNLOCK	Indicates [ON/OFF] condition of steering lock (UNLOCK).
S/L RELAY-F/B	Indicates [ON/OFF] condition of ignition switch.
UNLK SEN-DR	Indicates [ON/OFF] condition of driver door UNLOCK status.
PUSH SW -IPDM	Indicates [ON/OFF] condition of push-button ignition switch.
IGN RLY1 F/B	Indicates [ON/OFF] condition of ignition relay 1.
DETE SW -IPDM	Indicates [ON/OFF] condition of P position.
SFT PN -IPDM	Indicates [ON/OFF] condition of P or N position.
SFT P -MET	Indicates [ON/OFF] condition of P position.
SFT N -MET	Indicates [ON/OFF] condition of N position.
ENGINE STATE	Indicates [STOP/START/CRANK/RUN] condition of engine states.
S/L LOCK-IPDM	Indicates [ON/OFF] condition of steering lock (LOCK).
S/L UNLOCK-IPDM	Indicates [ON/OFF] condition of steering lock (UNLOCK).
S/L RELAY-REQ	Indicates [ON/OFF] condition of steering lock relay.
VEH SPEED 1	Display the vehicle speed signal received from combination meter by numerical value [Km/h].
VEH SPEED 2	Display the vehicle speed signal received from ABS or VDC or CVT by numerical value [Km/h].
DOOR STAT-DR	Indicates [LOCK/READY/UNLK] condition of driver side door status.
DOOR STAT-AS	Indicates [LOCK/READY/UNLK] condition of passenger side door status.
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.
RKE OPE COUN1	When remote keyless entry receiver receives the signal transmitted while operating on Intelligent Key, the numerical value start changing.
RKE OPE COUN2	NOTE: This item is displayed, but cannot be monitored.
TRNK/HAT MNTR	Indicates [ON/OFF] condition of trunk lid.
RKE-LOCK	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.
RKE-UNLOCK	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.
RKE-TR/BD	Indicates [ON/OFF] condition of TRUNK OPEN signal from Intelligent Key.
RKE-PANIC	Indicates [ON/OFF] condition of PANIC button of Intelligent Key.

SEC-28

< FUNCTION DIAGNOSIS >

[COUPE]

В

Monitor Item	Condition	٥
RKE-P/W OPEN	Indicates [ON/OFF] condition of P/W DOWN signal from Intelligent Key.	A
RKE-MODE CHG	Indicates [ON/OFF] condition of MODE CHANGE signal from Intelligent Key.	

ACTIVE TEST

Test item	Description
BATTERY SAVER	This test is able to check interior room lamp operation. The interior room lamp will be activated after "ON" on CONSULT-III screen is touched.
PW REMOTO DOWN SET	This test is able to check power window down operation. The power window down will be activated after "ON" on CONSULT-III screen is touched.
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation. Intelligent Key warning buzzer sounds when "ON" on CONSULT-III screen is touched.
INSIDE BUZZER	 This test is able to check warning chime in combination meter operation. Take away warning chime sounds when "TAKE OUT" on CONSULT-III screen is touched. Key warning chime sounds when "KEY WARN" on CONSULT-III screen is touched. P position warning chime sounds when "P RNG WARN" on CONSULT-III screen is touched. ACC warning chime sounds when "ACC WARN" on CONSULT-III screen is touched.
INDICATOR	 This test is able to check warning lamp operation. "KEY" Warning lamp illuminates when "KEY IND ON" on CONSULT-III screen is touched. "KEY" Warning lamp flashes when "KEY IND FSH" on CONSULT-III screen is touched.
INT LAMP	This test is able to check interior room lamp operation. The interior room lamp will be activated after "ON" on CONSULT-III screen is touched.
LCD	 This test is able to check meter display information Engine start information displays when "BRAKE/P" on CONSULT-III screen is touched. Engine start information displays when "BRAKE/P/ON" on CONSULT-III screen is touched. Key ID warning displays when "KEY ID NG" on CONSULT-III screen is touched. Steering lock information displays when "STLCK RELES" on CONSULT-III screen is touched. P position warning displays when "P RNG IND" on CONSULT-III screen is touched. Intelligent Key insert information displays when "INSERT KEY" on CONSULT-III screen is touched. Intelligent Key low battery warning displays when "KEY BAT LOW" on CONSULT-III screen is touched. Take away through window warning displays when "TK AWAY WDW" on CONSULT-III screen is touched. Take away warning display when "TAKE AWAY" on CONSULT-III screen is touched. OFF position warning display when "IGN OFF WARN" on CONSULT-III screen is touched.
TRUNK/GLASS HATCH	This test is able to check trunk lid opener actuator open operation. This actuator opens when "ON" on CONSULT-III screen is touched.
FLASHER	This test is able to check security hazard lamp operation. The hazard lamps will be activated after "ON" on CONSULT-III screen is touched.
HORN	This test is able to check horn operation. The horn will be activated after "ON" on CONSULT-III screen is touched.
IGN CONT2	This test is able to check security hazard lamp operation. The hazard lamps will be activated after "ON" on CONSULT-III screen is touched.
P RANGE	This test is able to check A/T device power supply A/T device power is supplied when "ON" on CONSULT-III screen is touched.
ENGINE SW ILLUMI	This test is able to check push-ignition switch illumination operation. Push-ignition switch illumination illuminates when "ON" on CONSULT-III screen is touched.
LOCK INDCATOR	This test is able to check LOCK indicator in push-ignition switch operation. LOCK indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched.
ACC INDCATOR	This test is able to check ACC indicator in push-ignition switch operation. LOCK indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched.
IGNITION ON IND	This test is able to check INGITION ON indicator in push-ignition switch operation. LOCK indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched.
KEY SLOT ILLUMI	This test is able to check key slot illumination operation. Key slot illumination flash when "ON" on CONSULT-III screen is touched.

SEC-29

THEFT ALM

THEFT ALM : CONSULT-III Function (BCM - THEFT)

INFOID:000000001344463

APPLICATION ITEM

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.

DATA MONITOR

Monitored Item	Description
REQ SW-DR	Indicates [ON/OFF] condition of door request switch (driver side).
REQ SW-AS	Indicates [ON/OFF] condition of door request switch (passenger side).
REQ SW-BD/TR	Indicates [ON/OFF] condition of trunk opener request switch.
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch
UNLK SEN-DR	Indicates [ON/OFF] condition of driver door UNLOCK status.
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.
DOOR SW-DR	Indicates [ON/OFF] condition of door switch LH.
DOOR SW-AS	Indicates [ON/OFF] condition of door switch RH.
DOOR SW-BK	This is displayed even when it is not equipped.
CDL LOCK SW	Indicates [ON/OFF] condition of lock signal from door lock/unlock switch LH and RH.
CDL UNLOCK SW	Indicates [ON/OFF] condition of unlock signal from door lock/unlock switch LH and RH
KEY CYL LK-SW	Indicates [ON/OFF] condition of lock signal from door key cylinder switch.
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from door key cylinder switch.
KEY CYL SW-TR	This is displayed even when it is not equipped.
TR/BD OPEN SW	Indicates [ON/OFF] condition of trunk lid opener switch.
TRNK/HAT MNTR	Indicates [ON/OFF] condition of trunk room lamp switch.
RKE-LOCK	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.
RKE-UNLOCK	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.
RKE-TR/BD	Indicates [ON/OFF] condition of TRUNK OPEN signal from Intelligent Key.

WORK SUPPORT

Test Item	Description		
SECURITY ALARM SET	This mode is able to confirm and change security alarm ON-OFF setting.		
THEFT ALM TRG	The switch which triggered vehicle security alarm is recorded. This mode is able to confirm and erase the record of vehicle security alarm. The trigger data can be erased by touching "CLEAR" on CONSULT-III screen.		

ACTIVE TEST

Test Item Description	
THEFT IND	This test is able to check security indicator lamp operation. The lamp will be turned on when "ON" on CONSULT-III screen is touched.
VEHICLE SECURITY HORN	This test is able to check vehicle security horn operation. The horns will be activated for 0.5 sec- onds after "ON" on CONSULT-III screen is touched.

< FUNCTION DIAGNOSIS >

[COUPE]

Test Item Description				
HEADLAMP(HI)	This test is able to check vehicle security lamp operation. The headlamps will be activated for 0.5 seconds after "ON" on CONSULT-III screen is touched.			
FLASHER	This test is able to check vehicle security hazard lamp operation. The hazard lamps will be activated after "ON" on CONSULT-III screen is touched.			
IMMU				
IMMU : CONSULT-	III Function (BCM - IMMU)			
APPLICATION ITEM	he following functions via CAN communication with BCM.			
-				
Diagnosis mode	Function Description			
DATA MONITOR	The BCM input/output signals are displayed.			
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.			
DATA MONITOR	Content			
CONFRM ID ALL	Content			
CONFIRM ID ALL				
CONFIRM ID3	Indicates [YET] at all time.			
CONFIRM ID2	Switch to [DONE] when a registered Intelligent Key is inserted into the key slot.			
CONFIRM ID1				
TP 4				
TP 3	—			
TP 2	Indicates the number of ID which has been registered.			
TP 1	—			
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch.			
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.			
ACTIVE TEST				
Test item	Description			

0

COMPONENT DIAGNOSIS U1000 CAN COMM CIRCUIT

Description

Refer to LAN-7, "System Description".

DTC Logic

DTC DETECTION LOGIC

CONSULT-III dis- play description	DTC Detection Condition	Possible cause
CAN COMM CIR- CUIT [U1000]	When BCM cannot communicate CAN communication signal continuously for 2 seconds or more	In CAN communication system, any item (or items) of the following listed below is malfunctioning. • Transmission • Receiving (ECM) • Receiving (VDC/TCS/ABS) • Receiving (METER/M&A) • Receiving (TCM) • Receiving (MULTI AV) • Receiving (IPDM E/R)

Diagnosis Procedure

1.PERFORM SELF DIAGNOSTIC

1. Turn ignition switch ON and wait for 2 second or more.

2. Check "Self Diagnostic Result".

Is "CAN COMM CIRCUIT" displayed?

YES >> Refer to LAN-8, "CAN Communication Control Circuit".

NO >> Refer to GI-42, "Intermittent Incident".

[COUPE]

INFOID:000000001344465

INFOID:000000001344466

U1010 CONTROL UNIT (CAN)

< COMPONENT DIAGNOSIS >

U1010 CONTROL UNIT (CAN)

DTC Logic

DTC DETECTION LOGIC

CONSULT-III display description	DTC Detection Condition	Possible cause	С		
CAN COMM CIRCUIT [U1010]	BCM detected internal CAN communication circuit malfunction.	BCM			
Diagnosis Proce	dure	INFOID:000000001344469	D		
1. REPLACE BCM			_		
When DTC U1010 is detected, replace BCM.					
>> Replace	BCM. Refer to BCS-88, "Removal and Installation".		F		
			G		

J

Н

SEC

L

Μ

Ν

Ο

Ρ

INFOID:000000001344468

А

В

[COUPE]

< COMPONENT DIAGNOSIS >

B2190, P1610 NATS ANTENNA AMP

Description

Performs ID verification through BCM and Intelligent Key when push-button ignition switch is pressed. Prohibits the release of steering lock or start of engine when an unregistered ID of Intelligent Key is used.

DTC Logic

INFOID:000000001344471

INFOID:000000001836911

INFOID:000000001344470

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2190			Harness or connectors
P1610	NATS ANTENNA AMP	Inactive communication between key slot and BCM.	(The key slot circuit is open or shorted)Key slotBCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Insert Intelligent Key into the key slot.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-34, "Diagnosis Procedure".
- NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press the push-button ignition switch.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to <u>SEC-34, "Diagnosis Procedure"</u>.
- NO >> INSPECTION END.

Diagnosis Procedure

1. INSPECTION START

Check the case in which DTC is detected.

- Case1: It is detected when Intelligent Key is inserted into key slot.
- Case2: It is detected after Intelligent Key is inserted into key slot and push-button ignition switch is pressed.

In which case is DTC detected?

Case1. >> GO TO 2. Case2. >> GO TO 4.

2. CHECK KEY SLOT INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect key slot harness connector.
- 3. Check voltage between key slot harness connector and ground.

AI KIA042877

B2190, P1610 NATS ANTENNA AMP

< COMPONENT DIAGNOSIS >

[COUPE]

С

ALKIA0430ZZ

	ey slot		Ground	Voltage [V] (approx.)
Connector	Terminal			
M40 the inspection result nor	2		Ground	Battery voltage
ES >> Replace key s O >> GO TO 3. CHECK KEY SLOT CIF Disconnect BCM harn Check continuity betw	ot. CUIT ess connector.	ess connector M4	D (A)	~ ~
terminal 2 and BCM ha	arness connector N	/19 (B) terminal 68		
Key slot			ВСМ	
Connector	Terminal	Connector	Terminal	Continuity
A: M40	2	B: M19	68	Yes
Connector	ey slot Terminal		Ground	Continuity
A: M40 the inspection result nor	2		Ground	No
 YES >> GO TO 8. NO >> Repair harnes CHECK PUSH-IGNITIC ress push-button ignition ress ignition switch turn to YES >> GO TO 5. NO >> GO TO 7. CHECK KEY SLOT CO Turn ignition switch OF Disconnect key slot has Check veltage between 	N SWITCH OPER switch and check i ON? MMUNICATION SI	f it turns ON. IGNAL	und	
Check voltage betwee	II KEY SIOT NAINESS	connector and gro		

B2190, P1610 NATS ANTENNA AMP

< COMPONENT DIAGNOSIS >

[COUPE]

Key	' slot	Ground	Continuity	
Connector	Terminal	Ciouna	Continuity	
M40	3	Ground	Yes	

Is the inspection result normal?

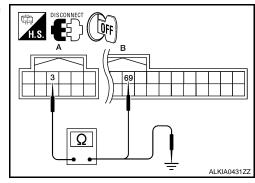
YES >> Replace key slot.

NO >> GO TO 6.

6. Check key slot communication signal circuit

1. Disconnect BCM harness connector.

2. Check continuity between key slot harness connector M40 (A) terminal 3 and BCM harness connector M19 (B) terminal 69.



Key	Key slot		BCM	
Connector	Terminal	Connector	Connector Terminal Cont	
A: M40	3	B: M19	69	Yes

3. Check continuity between key slot harness connector M40 (A) terminal 3 and ground.

Key	' slot	Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: M40	3	Ground	No	

Is the inspection result normal?

YES >> GO TO 8.

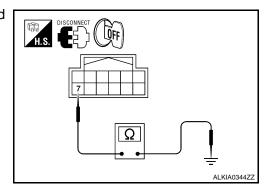
NO >> Repair harness or connector.

7. CHECK KEY SLOT GROUND CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect key slot harness connector.

3. Check continuity between key slot harness connector and ground.



Key	/ slot	Ground	Continuity
Connector	Terminal	Giodila	
M40	7	Ground	Yes



B2190, P1610 NATS ANTENNA AMP

< COMPONENT DIAGNOSIS >	[COUPE]
Is the inspection result normal?	
YES >> GO TO 8. NO >> Repair harness or connector.	A
8. CHECK INTERMITTENT INCIDENT	
Refer to GI-42, "Intermittent Incident".	B
>> INSPECTION END.	C
	D

J

I

Е

F

G

Н

Μ

Ν

0

Ρ

SEC

B2191, P1615 DIFFERENCE OF KEY

Description

Performs ID verification through BCM and Intelligent Key when push-button ignition switch is pressed. Prohibits the release of steering lock or start of engine when an unregistered ID of Intelligent Key is used.

DTC Logic

INFOID:000000001344474

INFOID:000000001344475

INFOID:000000001344473

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2191	DIFFERENCE OF	The ID verification results between BCM and Intel-	Intelligent Key
P1615	KEY	ligent Key are NG. The registration is necessary.	• Intelligent Key

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press the push-button ignition switch

2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Go to <u>SEC-38. "Diagnosis Procedure"</u>. NO >> INSPECTION END.

Diagnosis Procedure

1.PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Re-register all Intelligent Keys. For initialization and registration of Intelligent Key. Refer to "CONSULT-III Operation Manual.

Can the system be initialized and can the engine be started with re-registered Intelligent Key?

- YES >> Intelligent Key was unregistered.
- NO >> BCM is malfunctioning.
 - Replace BCM
 - Perform initialization again

< COMPONENT DIAGNOSIS > B2192, P1611 ID DISCORD, IMMU-ECM

Description

BCM performs the ID verification with ECM that allows the engine to start. Start the engine if the ID is OK. ECM prevents the engine from starting if the ID is not registered. BCM starts the communication with ECM if ignition switch is turned ON.

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2192 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-32, "DTC Logic"</u>.
- If DTC B2192 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-33, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	F
B2192	ID DISCORD, IMMU-	The ID verification results between BCM and ECM	• BCM	-
P1611	ECM	are NG. The registration is necessary.	• ECM	
				G

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

		Н
1. Turn ignition switch ON under the following conditions.		11
 A/T selector lever is in the P or N position 		
- Do not depress the brake pedal		I
Check "Self diagnostic result" with CONSULT-III.		I
Is DTC detected?		
YES >> Go to <u>SEC-39, "Diagnosis Procedure"</u> .		
NO >> INSPECTION END.		J
Diagnosis Procedure	INFOID:000000001344478	
		050
1. PERFORM INITIALIZATION		SEC
Perform initialization with CONSULT-III. Re-register all Intelligent Keys.		
For initialization and registration of Intelligent Key. Refer to "CONSULT-III Operation Manual".		L
Can the system be initialized and can the engine be started with re-registered Intelligent Key?		_
YES >> ID was unregistered.		
NO >> BCM is malfunctioning.		Μ
Replace BCM		IVI
Perform initialization again		
Replace ECM		
		Ν
		\bigcirc
		\sim

Ρ

[COUPE]

INFOID:000000001344476

INFOID:000000001344477

А

В

С

D

B2193, P1612 CHAIN OF ECM-IMMU

Description

BCM performs the ID verification with ECM that allows the engine to start. Start the engine if the ID is OK. ECM prevents the engine from starting if the ID is not registered. BCM starts the communication with ECM if ignition switch is turned ON.

DTC Logic

INFOID:000000001344480

INFOID:000000001344481

INFOID:000000001344479

DTC DETECTION LOGIC **NOTE**:

- If DTC B2193 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-32, "DTC Logic".
- If DTC B2193 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-33, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2193			Harness or connectors
P1612	CHAIN OF ECM- IMMU	Inactive communication between ECM and BCM	(The CAN communication line is open or shorted)BCMECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions.
- CVT selector lever is in the P or N position.
- Do not depress brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-40. "Diagnosis Procedure".
- NO >> INSPECTION END.

Diagnosis Procedure

1.REPLACE BCM

- 1. Replace BCM.
- 2. Perform initialization with CONSULT-III. For initialization, refer to "CONSULT-III Operation Manual".

Does the engine start?

NO

- YES >> BCM is malfunctioning.
 - Replace BCM.
 - Perform initialization again.
 - >> ECM is malfunctioning.
 - Replace ECM.
 - Perform ECM re-communicating function.

B2013 ID DISCORD, IMMU-STRG

Description

BCM performs the ID verification with the steering lock unit and releases the steering lock if both BCM and steering lock unit ID are same. BCM starts the communication with the steering lock unit when Intelligent Key is carried into the passenger compartment and the push-button ignition switch is pressed.

DTC Logic

INFOID:000000001344483

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2013	ID DISCORD, IMMU- STRG	The ID verification results between BCM and steer- ing control unit are NG. The registration is neces- sary.	Steering wheel lock unit
OTC CONFI	RMATION PROC	EDURE	
1.PERFORM	I DTC CONFIRMAT	TION PROCEDURE	
	e push-button ignitio	n switch " with CONSULT-III.	
	<u>ted?</u> So to <u>SEC-41. "Diac</u> NSPECTION END.	nosis Procedure".	
Diagnosis	Procedure		INFOID:000000001344484
1.PERFORM	I INITIALIZATION		
		JLT-III. Re-register all Intelligent Keys. of Intelligent Key. Refer to "CONSULT-III O	peration Manual".
Can the syste	em be initialized and	I can steering lock be released with re-regis	stered Intelligent Key?
	teering lock unit wa Replace steering wh		

Μ

Ν

Ο

Ρ

[COUPE]

INFOID:000000001344482

А

В

Description

BCM performs the ID verification with the steering lock unit to release the steering. BCM starts the communication with the steering lock unit when Intelligent Key is carried into the passenger compartment and the pushbutton ignition switch is pressed.

DTC Logic

INFOID:000000001344486

INFOID:000000001836912

INFOID:000000001344485

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2014	CHAIN OF STRG- IMMU	Inactive communication between steering control unit and BCM	 Harness or connectors (steering lock unit circuit is open or short- ed) Steering lock unit BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Lock steering.
- 2. Press the push-button ignition switch.
- 3. Check "Self diagnostic result" with CONSULT-III.

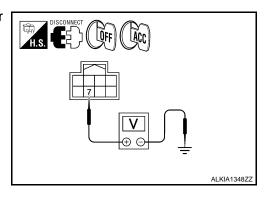
Is DTC detected?

- YES >> Go to <u>SEC-42, "Diagnosis Procedure"</u>.
- NO >> INSPECTION END.

Diagnosis Procedure

1. CHECK STEERING LOCK UNIT POWER SUPPLY

- 1. Turn ignition switch OFF.
- 2. Disconnect steering lock unit harness connector.
- Check voltage between steering lock unit harness connector and ground while turning ignition switch from OFF to ACC.



Steering lock unit		Ground	Ignition switch position	Voltago [V/]	
Connector	Terminal	Ground	ignition switch position	Voltage [V]	
M32	7	Ground	$OFF \to ACC$	Battery voltage	
10132	Ι	Ground	OFF or ON	0	

Is the inspection normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.check steering lock unit power supply circuit

1. Turn ignition switch OFF.

< COMPONENT DIAGNOSIS >

[COUPE]

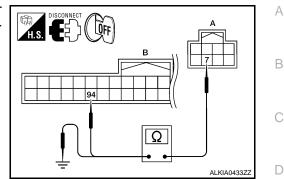
Е

F

Н

Ρ

- 2. Disconnect BCM harness connector.
- Check continuity between steering lock unit harness connector M32 (A) terminal 7 and BCM harness connector M19 (B) terminal 94.



Steering lock unit		BCM		Continuity
Connector	Terminal	connector	Terminal	Continuity
A: M32	7	B: M19	94	Yes

4. Check continuity between steering lock unit harness connector M32 (A) terminal 7 and ground.

Steering lock unit		Ground	Continuity	
Connector	Terminal	Ground	Continuity	(
A: M32	7	Ground	No	

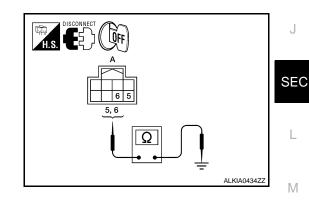
Is the inspection normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

3. check steering lock unit ground circuit

- 1. Turn ignition switch OFF.
- 2. Check continuity between steering lock unit and ground.



-	Steering	lock unit	Ground	Continuity	N
_	Connector	Terminal	Ground	Continuity	N
_	M32	5	Ground	Yes	
	IVI32	6	Ground	165	0

Is the inspection normal?

YES >> GO TO 4.

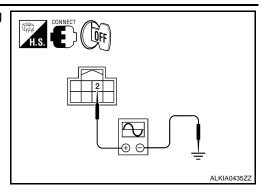
NO >> Repair harness or connector.

4.CHECK STEERING LOCK UNIT COMMUNICATION SIGNAL

1. Connect steering lock unit harness connector.

< COMPONENT DIAGNOSIS >

2. Using an oscilloscope, read voltage signal between steering lock unit harness connector and ground.



Steering lock unit		Ground	Steering lock unit condi-	Value	
Connector	Terminal	Giouna	tion	value	
			Lock	Battery voltage	
M32	32 2 Ground	Lock or unlock	(V) 15 10 50 50 MKIA0066GB		
		For 15 seconds after un- lock	Battery voltage		
			15 seconds or later after unlock.	0 V	

Steering is locked Steering is unlocked

: Opening the door when ignition switch is ON to OFF. : Ignition switch is OFF to ACC.

Is the inspection normal?

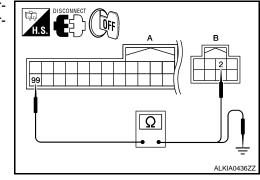
YES >> Replace steering lock unit.

NO >> GO TO 5.

5. CHECK STEERING LOCK UNIT COMMUNICATION CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM harness connector.

 Check continuity between BCM harness connector M19 (A) terminal 99 and steering lock unit harness connector M32 (B) terminal 2.



BCM		Steering lock unit		Continuity
Connector	Terminal	connector	Terminal	Continuity
A: M19	99	B: M32	2	Yes

4. Check continuity between BCM harness connector M19 (A) terminal 99 and ground.

SEC-44

[COUPE]

< COMPONENT DIAGNOSIS >

[COUPE]

	BCM	Cround	Continuity
Connector	Terminal	Ground Continuity	
A: M19	99	Ground	No
the inspection normal?			
ES >> GO TO 6.			
O >> Repair harnes	s or connector.		
CHECK INTERMITTEN	T INCIDENT		
efer to <u>GI-42, "Intermitter</u>	nt Incident"		
	<u>i i i i i i i i i i i i i i i i i i i </u>		
>> INSPECTION	END		

J

SEC

L

M

Ν

Ο

Ρ

G

Н

B2555 STOP LAMP

Description

BCM detects the stop lamp status and confirms the stop lamp switch ON/OFF status. BCM confirms the engine start condition according to the stop lamp switch ON/OFF status.

DTC Logic

INFOID:000000001344489

INEOID:000000001836913

INFOID:000000001344488

DTC DETECTION LOGIC

DTC No.	Trouble diagno- sis name	DTC detecting condition	Possible cause
B2555	STOP LAMP	BCM makes a comparison between the upper voltage and lower voltage of stop lamp switch. It judges from their values to detect the malfunctioning circuit.	 Harness or connectors (stop lamp switch circuit is open or shorted) Stop lamp switch Fuse

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Depress the brake pedal and wait for at least 1 second.
- 2. Check "Self diagnostic result" with CONSULT-III.

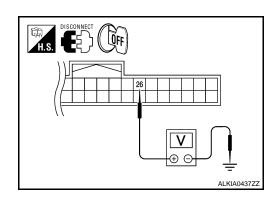
Is DTC detected?

- YES >> Go to SEC-46, "Diagnosis Procedure".
- NO >> INSPECTION END.

Diagnosis Procedure

1. CHECK STOP LAMP SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM harness connector.
- 3. Check voltage between BCM harness connector and ground.



BCM		Ground	Stop lamp switch position	Voltage [V]
Connector	Terminal	Cround	Stop lamp switch position	voltage [v]
M18	26	Ground	Depressed	Battery voltage
MITO	20	Cround	Released	0

Is the inspection normal?

YES >> Stop lamp switch is OK.

NO
$$>>$$
 GO 10 2.

2. CHECK STOP LAMP SWITCH POWER SUPPLY CIRCUIT

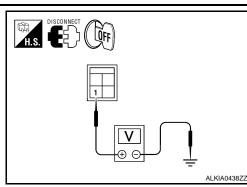
1. Disconnect stop lamp switch harness connector.



B2555 STOP LAMP

< COMPONENT DIAGNOSIS >

2. Check voltage between stop lamp harness connector and ground.



Stop lamp switch		Ground	Voltage [V]	
Connector	Terminal	Ground	voltage [v]	
E38	1	Ground	Battery voltage	

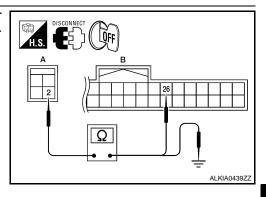
Is the inspection result normal?

YES >> GO TO 3.

NO >> Check harness for open or short between stop lamp switch and fuse.

3.CHECK STOP LAMP SWITCH CIRCUIT

1. Check continuity between stop lamp switch harness connector E38 (A) terminal 2 and BCM harness connector M18 (B) terminal 26.



Stop lamp switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: E38	2	B: M18	26	Yes

2. Check continuity between stop lamp switch harness connector E38 (A) terminal 2 and ground.

 Stop lan	np switch	Ground	Continuity	- M
 Connector	Terminal	Giouna	Continuity	
 A: E38	2	Ground	No	N

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

4.CHECK STOP LAMP SWITCH

Refer to SEC-48, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace stop lamp switch.

5. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

SEC-47

А

В

D

Ε

F

Н

L

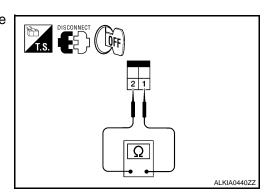
Ρ

>> INSPECTION END.

Component Inspection

1.CHECK STOP LAMP SWITCH

- 1. Turn ignition switch OFF.
- 2.
- Disconnect stop lamp switch harness connector. Check continuity between stop lamp switch terminals under the 3. following conditions.



Stop lar	mp switch	Condition		Continuity
Ter	minal			Continuity
1	2	Proko podol	Not depressed	No
1 2 Brake pedal	Depressed	Yes		

Is the inspection result normal?

- YES >> INSPECTION END.
- NO >> Replace stop lamp switch.

INFOID:000000001836914

B2556 PUSH-BUTTON IGNITION SWITCH

< COMPONENT DIAGNOSIS >

B2556 PUSH-BUTTON IGNITION SWITCH

Description

The switch that changes the power supply position. BCM maintains the power supply position status. BCM changes the power supply position with the operation of the push-button ignition switch.

DTC Logic

INFOID:000000001344493

INFOID:000000001836915

INFOID:000000001344492

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B2556	PUSH-BUTTON IG- NITION SWITCH	BCM detects the push-button ignition switch stuck to ON for 100 seconds or more	 Harness or connectors (Push-button ignition switch circuit is shorted.) Push-button ignition switch 	E

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine and wait for at least 100 seconds.
- 2. Check "Self diagnostic result" with CONSULT-III.

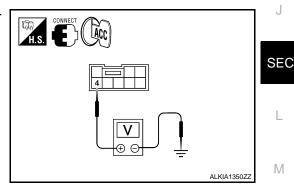
Is DTC detected?

- YES >> Go to <u>SEC-49, "Diagnosis Procedure"</u>.
- NO >> INSPECTION END.

Diagnosis Procedure

1. CHECK PUSH-BUTTON IGNITION SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect push-button ignition switch harness connector.
- Check voltage between push-button ignition switch harness connector and ground.



Push-button ignition switch		Ground	Voltage [V]	Ν
Connector	Terminal	Ground	voltage [v]	
M38	4	Ground	Battery voltage	\cap

Is the inspection normal?

YES >> GO TO 2.

NO >> GO TO 4.

2.CHECK PUSH-BUTTON IGNITION SWITCH

Refer to SEC-50, "Component Inspection".

Is the inspection normal?

YES >> GO TO 3.

NO >> Replace push-button ignition switch. Refer to <u>SEC-182, "Removal and Installation"</u>.

SEC-49

А

В

F

Н

B2556 PUSH-BUTTON IGNITION SWITCH

< COMPONENT DIAGNOSIS >

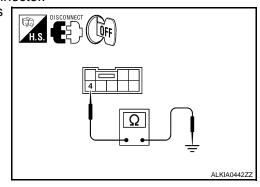
3. CHECK INTERMITTENT INCIDENT

Refer to <u>GI-42, "Intermittent Incident"</u>.

>> INSPECTION END.

4. CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT FOR SHORT

- 1. Disconnect BCM harness connector and IPDM E/R harness connector.
- 2. Check continuity between push-button ignition switch harness connector and ground.



Push-button	Push-button ignition switch		Continuity	
Connector	Terminal	Ground	Continuity	
M38	4	Ground	No	

Is the inspection normal?

YES >> Replace BCM. Refer to <u>BCS-88, "Removal and Installation"</u>.

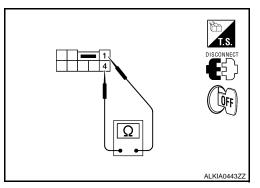
NO >> Repair harness or connector.

Component Inspection

INFOID:000000001836916

1. CHECK PUSH-BUTTON IGNITION SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect push-button ignition switch harness connector.
- 3. Check continuity between push-button ignition switch terminals under the following conditions.



Push-button	Push-button ignition switch Terminal		Continuity
Terr			Continuity
1	4	Pressed	Yes
		Not pressed	No

Is the inspection result normal?

YES >> INSPECTION END.

NO >> Replace push-button ignition switch. Refer to <u>SEC-182, "Removal and Installation"</u>.

B2557 VEHICLE SPEED

< COMPONENT DIAGNOSIS >

B2557 VEHICLE SPEED

Description

BCM receives the 2 vehicle speed signals via CAN communication. 1 signal is transmitted by the "unified meter" Another signal is transmitted by "ABS actuator and electric unit (control unit)". BCM compares both signals to detect the vehicle speed.

DTC Logic

DTC DETECTION LOGIC

NOTE:

D 1

- If DTC B2557 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-32, "DTC Logic".
- If DTC B2557 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to Е SEC-33, "DTC Logic".

DTC	Self-diagnosis name	DTC detecting condition	Possible causes	F
B2557	VEHICLE SPEED	 BCM detects the following difference between the vehicle speed from "unified meter" and the one from "ABS actuator and electric unit" for 10 seconds continuously One is 10km/h or more and the other is 4km/h or less. 	 Wheel sensor Unified meter ABS actuator and electric unit (control unit) 	G
	RMATION PRO	CEDURE		
.PERFORM	DTC CONFIRM	ATION PROCEDURE		H

- 1. Drive the vehicle at the vehicle speed of 10 km/h or more and wait for at least 10 seconds.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-51, "Diagnosis Procedure".

>> INSPECTION END. NO

Diagnosis Procedure

1. CHECK DTC WITH "ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)"	SEC
Check "Self diagnostic result" with CONSULT-III. Refer to <u>BRC-51, "DTC No. Index"</u> (ABS), <u>BRC-120, "DTC No. Index"</u> (NDS/TCS/ABS) or <u>BRC-222, "DTC No. Index"</u> (VDS/TCS/ABS).	
Is the inspection result normal?	L
YES >> GO TO 2.	
NO >> Repair or replace.	Μ
2. CHECK UNIFIED METER.	

Check unified meter. Refer to MWI-4, "Work Flow".

>> INSPECTION END.

INFOID:000000001344496

INFOID:000000001344497

INFOID:000000001344498

Ν

Ρ

А

В

С

D

B2560 STARTER CONTROL RELAY

Description

Starter control relay, integrated in IPDM E/R, permits the starter relay operation when in N or P position and the steering is locked or unlocked. It is installed in parallel with the starter relay.

DTC Logic

INFOID:000000001344500

INFOID:000000001344499

DTC DETECTION LOGIC

NOTE:

- If DTC B2560 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-32, "DTC Logic"</u>.
- If DTC B2560 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-33, "DTC Logic"</u>.

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B2560	STARTER CONTROL RELAY	BCM detects a mismatch between the OFF re- quest of starter control relay to IPDM E/R and the feedback. (The feedback is ON instead of OFF.)	• IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions and wait for at least 2 seconds.
- A/T selector lever is in the P position
- Depress the brake pedal
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-52, "Diagnosis Procedure".
- NO >> INSPECTION END.

Diagnosis Procedure

1.CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III. Refer to PCS-41, "DTC Index".

Is the inspection result normal?

- YES >> GO TO 2.
- NO >> Repair or replace.

2. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

INFOID:000000001344501

< COMPONENT DIAGNOSIS >	
-------------------------	--

B2601 SHIFT POSITION

Description

BCM confirms the shift position with the following 2 signals.

- CVT selector lever
- P position signal from IPDM E/R (CAN)

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2601 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-32, "DTC Logic"</u>.
- If DTC B2601 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-33, "DTC Logic"</u>.
- If DTC B2601 is displayed with DTC B2605, first perform the trouble diagnosis for DTC B2605. Refer to <u>SEC-66. "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B2601	SHIFT POSITION	BCM detects when a difference between the shift P input signal and the shift position signal re- ceived from IPDM E/R via CAN communication continues for 2 seconds or more	 Harness or connectors (CVT device circuit is open or short- ed.) CVT device (detention switch) 	G

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions, and wait for at least 2 seconds.
- CVT selector lever is in the P position.
- Do not depress the brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Turn ignition switch ON under the following conditions, and wait for at least 2 seconds.
- CVT selector lever is in other than P position.
- Do not depress the brake pedal.
- 4. Check "Self diagnostic result" with CONSULT-III.

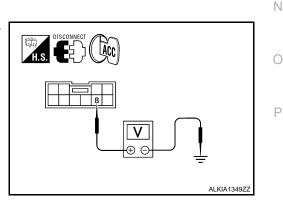
Is DTC detected?

- YES >> Go to <u>SEC-53, "Diagnosis Procedure"</u>.
- NO >> INSPECTION END.

Diagnosis Procedure

1. CHECK CVT DEVICE POWER SUPPLY

- 1. Turn ignition switch to ACC.
- 2. Disconnect CVT device (detention switch) harness connector.
- Check voltage between CVT device (detention switch) harness connector and ground.



[COUPE]

INFOID:000000001344502

INFOID:000000001344503

А

В

D

F

SEC

Μ

INFOID:000000001836920

< COMPONENT DIAGNOSIS >

[COUPE]

CVT device (de	etention switch)	Ground	Voltage [V]
Connector	Terminal	Ground	voltage [v]
M23	8	Ground	Battery voltage

Is the inspection result normal?

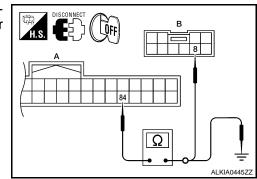
YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK CVT DEVICE POWER SUPPLY CIRCUIT

1. Disconnect BCM harness connector.

 Check continuity between BCM harness connector M19 (A) terminal 84 and CVT device (detention switch) harness connector M23 (B) terminal 8.



BCM		CVT device (detention switch)		Continuity
Connector	nector Terminal Connector Terminal		Terminal	Continuity
A: M19	84	B: M23	8	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 84 and ground.

ВС	BCM		Continuity	
Connector	Connector Terminal		Continuity	
A: M19	84	Ground	No	

Is the inspection result normal?

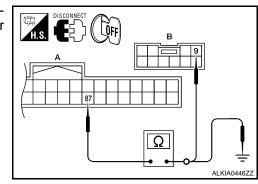
YES >> Replace BCM.

NO >> Repair harness or connector.

3.CHECK CVT DEVICE CIRCUIT (BCM)

1. Disconnect BCM harness connector and IPDM E/R harness connector.

 Check continuity between BCM harness connector M19 (A) terminal 87 and CVT device (detention switch) harness connector M23 (B) terminal 9.



BCM Connector Terminal			device on switch)	Continuity
		Connector	Terminal	*
A: M19	87	B: M23	9	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 87 and ground.

SEC-54

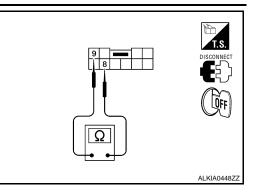
< COMPONENT DIAGNOSIS >

[COUPE]

	BCM			Onessed	Orantinuitu
Connect	or	Terminal		Ground	Continuity
A: M19)	87		Ground	No
CHECK CVT D Disconnect BC Check continu	D 4. r harness or c EVICE CIRCI CM harness co uity between or M23 (A) ter	JIT (IPDM E/R)			
CVT dev (detention s		IPDI	M E/R	Continuity	– ALKIA0447ZZ
Connector	Terminal	Connector	Terminal		
A: M23	9	B: E17	43	Yes	ctor M23 (A) terminal 9 and
(deten	T device tion switch)		Ground	Continuity	
Connector	Termir				
A: M23 the inspection re	9		Ground	No	
YES >> GO TO NO >> Repair CHECK CVT D efer to <u>SEC-55.</u> the inspection re YES >> GO TO NO >> Repla	D 5. r harness or c EVICE <u>'Component In esult normal?</u> D 6. ce CVT devi	nspection".		val and Installation	<u>on"</u> (RE0F09B), or <u>TM-426.</u>
CHECK INTER		CIDENT			
efer to <u>GI-42, "In</u>	termittent Inci	<u>dent"</u> .			
>> INSPE	ECTION END.				
omponent In	spection				INFOID:000000001836921
.CHECK ECVT			CH)		
. Turn ignition s	witch OFF.	tention switch) h		tor.	

< COMPONENT DIAGNOSIS >

3. Check continuity between CVT device (detention switch) terminals as follows.



CVT device (detention switch) Terminal		Co	ndition	Continuity
0		CVT selector lever	P position	No
0	9	CVT Selector lever	Other than above	Yes

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace CVT device. Refer to <u>TM-250, "Removal and Installation"</u> (RE0F09B), or <u>TM-426,</u> <u>"Removal and Installation"</u> (RE0F10A).

[COUPE]

B2602 SHIFT POSITION

Description

BCM confirms the shift position with the following 2 signals.

- CVT selector lever
- Speed signal from meter

DTC Logic

DTC DETECTION LOGIC NOTE:

- If DTC B2602 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-32, "DTC Logic".
- If DTC B2602 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to Е SEC-33, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	F
B2602	SHIFT POSITION	 BCM detects the following status for 10 seconds. Shift position is in P position Vehicle speed is 4km/h (2 MPH) or more Ignition switch is in the ON position 	 Harness or connectors (CVT drive circuit is open or short- ed) CVT device (detention switch) Combination meter 	G
DTC CONFI	RMATION PROC	EDURE		Н

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine under the following conditions and wait for at least 10 seconds. CVT selector lever is in the P or N position Depress the brake pedal. 2. Drive the vehicle for at least 10 seconds at a speed greater than 4 km/h (2 MPH).
- Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-57, "Diagnosis Procedure".
- NO >> INSPECTION END.

Diagnosis Procedure

1. CHECK DTC WITH "COMBINATION METER"

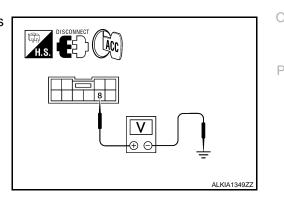
Check "Self diagnostic result" with CONSULT-III. Refer to MWI-92, "DTC Index".

Is the inspection result normal?

- YES >> GO TO 2.
- NO >> Repair or replace.

2.CHECK CVT DEVICE POWER SUPPLY

- 1. Turn ignition switch to ACC.
- 2. Disconnect CVT device (detention switch) harness connector.
- 3. Check voltage between CVT device (detention switch) harness connector and ground.



INFOID:000000001344506

INFOID:000000001344507

А

В

D

SEC

L

Μ

Ν

INEOID:000000001836922

< COMPONENT DIAGNOSIS >

[COUPE]

CVT device (CVT device (detention switch)		Voltage [V]
Connector	Terminal	- Ground	voltage [v]
M23	8	Ground	Battery voltage

Is the inspection result normal?

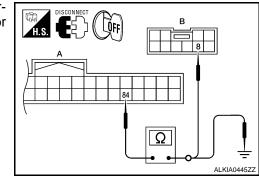
YES >> GO TO 4.

NO >> GO TO 3.

3.CHECK CVT DEVICE POWER SUPPLY CIRCUIT

1. Disconnect BCM harness connector.

 Check continuity between BCM harness connector M19 (A) terminal 84 and CVT device (detention switch) harness connector M23 (B) terminal 8.



_	BCM		CVT device (detention switch)		Continuity
_	Connector	Terminal	Connector	Terminal	Continuity
_	A: M19	84	B: M23	8	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 84 and ground.

ВС	CM	Ground	Continuity
Connector	Terminal	Gibunu	Continuity
A: M19	84	Ground	No

Is the inspection result normal?

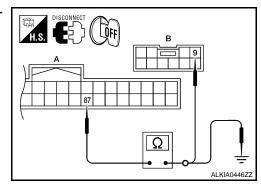
YES >> Replace BCM.

NO >> Repair harness or connector.

4. CHECK CVT DEVICE CIRCUIT

1. Disconnect BCM harness connector.

2. Check continuity between CVT device (detention switch) harness connector and BCM harness connector.



BCM		CVT device (d	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
A: M19	87	B: M23	9	Yes

3. Check continuity between CVT device (detention switch) harness connector and ground.

SEC-58

< COMPONENT DIAGNOSIS >

[COUPE]

Connector Terminal Ground Continuity A: M19 87 Ground No Is the inspection result normal? YES >> GO TO 5. No >> Repair harness or connector. 5. CHECK CVT DEVICE Refer to SEC-55. "Component Inspection". Is the inspection result normal? YES >> GO TO 6. NO >> Replace CVT device. Refer to IM-250. "Removal and Installation" (RE0F09B), or IM-"Removal and Installation" (RE0F10A). 6.CHECK INTERMITTENT INCIDENT Refer to GI-42. "Intermittent Incident". >> INSPECTION END. >> INSPECTION END.	BCM
Is the inspection result normal? YES >> GO TO 5. NO >> Repair harness or connector. 5.CHECK CVT DEVICE Refer to <u>SEC-55. "Component Inspection"</u> . Is the inspection result normal? YES >> GO TO 6. NO >> Replace CVT device. Refer to <u>TM-250. "Removal and Installation"</u> (RE0F09B), or <u>TM- "Removal and Installation"</u> (RE0F10A). 6.CHECK INTERMITTENT INCIDENT Refer to <u>GI-42. "Intermittent Incident"</u> .	ector
YES >> GO TO 5. NO >> Repair harness or connector. 5.CHECK CVT DEVICE Refer to <u>SEC-55. "Component Inspection"</u> . <u>Is the inspection result normal?</u> YES >> GO TO 6. NO >> Replace CVT device. Refer to <u>TM-250. "Removal and Installation"</u> (RE0F09B), or <u>TM- "Removal and Installation"</u> (RE0F10A). 6.CHECK INTERMITTENT INCIDENT Refer to <u>GI-42. "Intermittent Incident"</u> .	V 19
NO >> Repair harness or connector. 5.CHECK CVT DEVICE Refer to <u>SEC-55. "Component Inspection"</u> . <u>Is the inspection result normal?</u> YES >> GO TO 6. NO >> Replace CVT device. Refer to <u>TM-250. "Removal and Installation"</u> (RE0F09B), or <u>TM- "Removal and Installation"</u> (RE0F10A). 6.CHECK INTERMITTENT INCIDENT Refer to <u>GI-42. "Intermittent Incident"</u> .	n result normal?
 5.CHECK CVT DEVICE Refer to <u>SEC-55. "Component Inspection"</u>. <u>Is the inspection result normal?</u> YES >> GO TO 6. NO >> Replace CVT device. Refer to <u>TM-250. "Removal and Installation"</u> (RE0F09B), or <u>TM-</u> <u>"Removal and Installation"</u> (RE0F10A). 6.CHECK INTERMITTENT INCIDENT Refer to <u>GI-42. "Intermittent Incident"</u>. 	
Refer to <u>SEC-55, "Component Inspection"</u> . <u>Is the inspection result normal?</u> YES >> GO TO 6. NO >> Replace CVT device. Refer to <u>TM-250, "Removal and Installation"</u> (RE0F09B), or <u>TM- "Removal and Installation"</u> (RE0F10A). 6.CHECK INTERMITTENT INCIDENT Refer to <u>GI-42, "Intermittent Incident"</u> .	
<u>Is the inspection result normal?</u> YES >> GO TO 6. NO >> Replace CVT device. Refer to <u>TM-250, "Removal and Installation"</u> (RE0F09B), or <u>TM- "Removal and Installation"</u> (RE0F10A). 6.CHECK INTERMITTENT INCIDENT Refer to <u>GI-42, "Intermittent Incident"</u> .	DEVICE
YES >> GO TO 6. NO >> Replace CVT device. Refer to <u>TM-250. "Removal and Installation"</u> (RE0F09B), or <u>TM-</u> <u>"Removal and Installation"</u> (RE0F10A). 6.CHECK INTERMITTENT INCIDENT Refer to <u>GI-42. "Intermittent Incident"</u> .	5, "Component Ins
NO >> Replace CVT device. Refer to <u>TM-250. "Removal and Installation"</u> (RE0F09B), or <u>TM-</u> <u>"Removal and Installation"</u> (RE0F10A). 5. CHECK INTERMITTENT INCIDENT Refer to <u>GI-42. "Intermittent Incident"</u> .	n result normal?
"Removal and Installation" (RE0F10A). CHECK INTERMITTENT INCIDENT Refer to <u>GI-42, "Intermittent Incident"</u> .	
6.CHECK INTERMITTENT INCIDENT Refer to <u>GI-42, "Intermittent Incident"</u> .	place CVT device
Refer to GI-42, "Intermittent Incident".	
	ERMITTENT INCIE
>> INSPECTION END.	"Intermittent Incide
>> INSPECTION END.	
	SPECTION END.

J

L

Μ

Ν

0

Ρ

Description

BCM confirms the shift position with the following 2 signals.

- CVT selector lever
- P/N position switch

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2603 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-32, "DTC Logic"</u>.
- If DTC B2603 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-33, "DTC Logic"</u>.

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B2603	SHIFT POSITION STATUS	 BCM detects the followings status for 500 ms or more when shift is in P position and, ignition switch is in ON position. Park/neutral position (PNP) switch: approx. 0V CVT device (detention switch): approx 0V 	 Harness or connector (CVT device circuit is open or shorted.) Harness or connectors [Park/neutral position (PNP) switch circuit is open or shorted.] CVT device (detention switch) Park/neutral position (PNP) switch

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P position.
- Do not depress the brake pedal.
- 2. Shift to N and wait for at least 1 second.
- 3. Shift to any gear other than P or N and wait for at least 1 second.
- 4. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Go to <u>SEC-60, "Diagnosis Procedure"</u>. NO >> INSPECTION END.

Diagnosis Procedure

1.CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III. Refer to PCS-41. "DTC Index".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2. CHECK PNP SWITCH CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect TCM harness connector and BCM harness connector.

INFOID:000000001836923

[COUPE]

INFOID:000000001344509

INFOID:000000001344510

< COMPONENT DIAGNOSIS >

[COUPE]

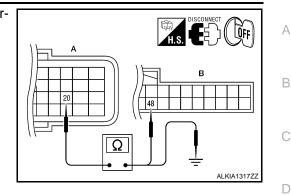
Е

F

Н

Ρ

 Check continuity between TCM harness connector F16 (A) terminal 20 and BCM harness connector M18 (B) terminal 48.



ТСМ		B	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
A: F16	20	B: M18	48	Yes

4. Check continuity between TCM harness connector F16 (A) terminal 20 and ground.

Т	CM	Ground	Continuity	
Connector	Terminal	Cround	Continuity	
A: F16	20	Ground	No	

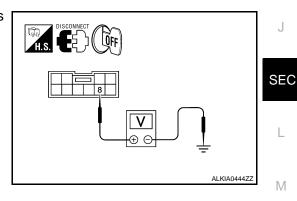
Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3.CHECK CVT DEVICE POWER SUPPLY

- 1. Turn ignition switch OFF.
- 2. Disconnect CVT device (detention switch) harness connector.
- 3. Check voltage between CVT device (detention switch) harness connector and ground.



 CVT device (detention switch)		Ground	Voltage [V]	NI
 Connector	Terminal	Ground	voltage [v]	IN
 M23	8	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 5.

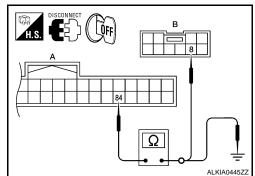
NO >> GO TO 4.

4.CHECK CVT DEVICE POWER SUPPLY CIRCUIT

1. Disconnect BCM harness connector.

< COMPONENT DIAGNOSIS >

 Check continuity between BCM harness connector M19 (A) terminal 84 and CVT device (detention switch) harness connector M23 (B) terminal 8.



[COUPE]

В	BCM		CVT device (detention switch)	
Connector	Terminal	Connector	Terminal	Continuity
A: M19	84	B: M23	8	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 84 and ground.

B	BCM		Continuity
Connector	Terminal	Ground	Continuity
A: M19	84	Ground	No

Is the inspection result normal?

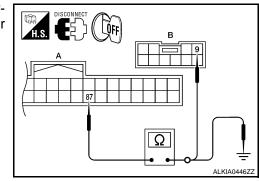
YES >> Replace BCM. Refer to <u>BCS-88, "Removal and Installation"</u>.

NO >> Repair harness or connector.

5.CHECK CVT DEVICE CIRCUIT

1. Disconnect BCM harness connector.

 Check continuity between BCM harness connector M19 (A) terminal 87 and CVT device (detention switch) harness connector M23 (B) terminal 9.



B	BCM CVT device (detention switch) Continuity			
Connector	Terminal	Connector	Terminal	Ť
A: M19	87	B: M23	9	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 87 and ground.

BCM		Ground	Continuity
Connector	Terminal	Giodila	Continuity
A: M19	87	Ground	No

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

6.CHECK CVT DEVICE

[COUPE]

< COMPONENT DIAGNOSIS > [COUPE]	
Refer to <u>SEC-55, "Component Inspection"</u> .	
Is the inspection result normal?	А
YES >> GO TO 7.	
NO >> Replace CVT device. Refer to <u>TM-250, "Removal and Installation"</u> (RE0F09B), or <u>TM-426</u> , <u>"Removal and Installation"</u> (RE0F10A).	В
7. CHECK INTERMITTENT INCIDENT	
Refer to GI-42, "Intermittent Incident".	С
>> INSPECTION END.	6
	D

Е

F

G

Н

J

SEC

L

M

Ν

Ο

Ρ

B2604 PNP SWITCH

Description

BCM confirms the shift position with the following 4 signals.

- CVT selector lever
- P/N position switch
- P position signal from IPDM E/R (CAN)
- P position signal from TCM (CAN)

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2604 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-32, "DTC Logic"</u>.
- If DTC B2604 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-33, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2604	PNP SWITCH	 BCM detects the following status for 500 ms or more when the ignition switch is in the ON position. P/N switch indicates vehicle is in P or N shift position. Signal from TCM indicates vehicle is in forward or reverse gear. P/N switch indicates vehicle is in forward or reverse gear. Signal from TCM indicates vehicle is in P or N. 	 Harness or connectors [The park/neutral position (PNP) switch circuit is open or shorted.] Park/ neutral position (PNP) switch TCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine under the following conditions and wait for at least 1 seconds.

- CVT selector lever is in the P position

- Do not depress the brake pedal
- 2. Use CVT selector lever to select each gear one at a time. Wait at each gear for at least 1 second.
- 3. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-64, "Diagnosis Procedure".
- NO >> INSPECTION END.

Diagnosis Procedure

1.CHECK DTC WITH TCM

Check "Self diagnostic result" with CONSULT-III. Refer to <u>TM-216, "DTC Index"</u> (RE0F09B) or <u>TM-394, "DTC Index"</u> (RE0F10A).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace.

2. CHECK PNP SWITCH CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect TCM harness connector and BCM harness connector.

INFOID:000000001344512

INEOID:000000001344513

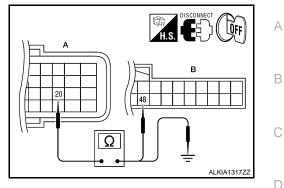
INFOID:000000001344514

B2604 PNP SWITCH

< COMPONENT DIAGNOSIS >

[COUPE]

3. Check continuity between TCM harness connector and BCM harness connector.



ТС	ТСМ		BCM	
Connector	Terminal	Connector	Terminal	Continuity
A: F16	20	B: M18	48	Yes

4. Check continuity between TCM harness connector and ground.

ТСМ		Ground	Continuity
Connector	Terminal	Ground	Continuity
A: F16	20	Ground	No

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

SEC

L

Μ

Ν

Ο

Ρ

J

С

D

Ε

F

Н

B2605 PNP SWITCH

Description

BCM confirms the shift position with the following 4 signals.

- AT selector lever
- P/N position switch
- P position signal from IPDM E/R (CAN)
- P position signal from TCM (CAN)

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2605 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-32, "DTC Logic"</u>.
- If DTC B2605 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-33, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2605	PNP SWITCH	 BCM detects the following status for 500 ms or more when the ignition switch is in ON position N position input signal exists. Shift position signal from IPDM E/R does not exist. N position input signal does not exist. Shift posi- tion signal from IPDM E/R exists. 	 Harness or connectors [The park/neutral position (PNP) switch circuit is open or shorted.] Park/neutral position (PNP) switch IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions and wait for at least 1 seconds.
- CVT selector lever is in the P or N position
- Do not depress the brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-66. "Diagnosis Procedure".
- NO >> INSPECTION END.

Diagnosis Procedure

1.CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III. Refer to PCS-41, "DTC Index".

Is the inspection result normal?

NO >> Repair or replace.

2.CHECK PNP SWITCH CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect TCM harness connector and BCM harness connector.

INFOID:000000001344515

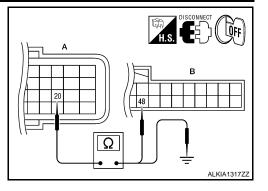
INEOID:000000001344516

INFOID:000000001344517

B2605 PNP SWITCH

< COMPONENT DIAGNOSIS >

3. Check continuity between TCM connector and BCM harness connector.



	тс	CM	BCM		Continuity
-	Connector	Terminal	Connector	Terminal	Continuity
-	A: F16	20	B: M18	48	Yes

4. Check continuity between TCM harness connector and ground.

ТСМ		Ground	Continuity
Connector	Terminal	Ground	Continuity
A: F16	20	Ground	No

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

J

SEC

L

Μ

Ν

Ο

Ρ

[COUPE]

А

В

С

D

Ε

F

G

Н

B2606 STEERING LOCK RELAY

Description

The steering lock relay ON signal is transmitted to IPDM E/R by BCM via CAN communication. IPDM E/R turns the steering lock relay ON and transmits the release of the steering to BCM.

DTC Logic

INFOID:000000001344519

INFOID:000000001344518

DTC DETECTION LOGIC

NOTE:

- If DTC B2606 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-32, "DTC Logic"</u>.
- If DTC B2606 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-33. "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2606	STEERING LOCK RELAY	 BCM detects that there is a mismatch between the following statuses. Steering lock unit ON signal transmitted by IPDM E/R The steering lock unit status feedback 	Steering lock relay (in IPDM E/R)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press the push-button ignition switch under the following conditions.
- CVT selector lever is in the P or N position.
- Do not depress the brake pedal.
- 2. Steering is locked.
- 3. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-68. "Diagnosis Procedure".
- NO >> INSPECTION END.

Diagnosis Procedure

1.CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III. Refer to PCS-41, "DTC Index".

Is the inspection result normal?

- YES >> GO TO 2.
- NO >> Repair or replace.

2.INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

[COUPE]

INFOID:000000001344520

B2607 STEERING LOCK RELAY

< COMPONENT DIAGNOSIS >

B2607 STEERING LOCK RELAY

Description

BCM requests to IPDM E/R to supply power to steering lock unit. IPDM E/R sends status of steering lock unit back to BCM.

DTC Logic

INFOID:000000001344522

ALKIA0450ZZ

INFOID:000000001344521

DTC DETECTION LOGIC

NOTE:

- If DTC B2607 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-32, "DTC Logic"</u>.
- If DTC B2607 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-33. "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2607	STEERING LOCK RELAY	 BCM detects that there is a difference between the following statuses. BCM request for steering lock unit power supply (ON/OFF) IPDM E/R status of steering lock unit power supply (ON/OFF) 	 Harness or connectors (steering lock unit power supply circuit is open or shorted) Steering lock relay (in IPDM E/R)
	IRMATION PROC		
		ATION PROCEDURE	
- A/T sele	ctor lever is in the I	P position	
2. Steering	epress brake peda lock is locked.		
3. Check "S	-	It" with CONSULT-III.	
YES >> (NO >> I	Go to <u>SEC-69, "Dia</u> NSPECTION END	ignosis Procedure".	
-	Procedure		INFOID:000000001836977
1.снеск с	TC WITH IPDM E	R	
Check "Self of	diagnostic result" w	ith CONSULT-III. Refer to PCS-41, "DTC Ir	ndex".
	<u>tion result normal?</u> GO TO 2.		
NO >> I	Repair or replace m	nalfunctioning parts.	
		JNIT POWER SUPPLY CIRCUIT	
2. Disconne		it harness connector.	
	oltage between ste conditions.	ering lock unit and ground under the	

[COUPE]

А

С

Ε

B2607 STEERING LOCK RELAY

< COMPONENT DIAGNOSIS >

[COUPE]

Steering lock unit		Ground	Condition	Voltage (V)	
Connector	Terminal	Giodila	Condition	voltage (v)	
M32	1	Ground	Press push-button ignition switch when steering lock is in lock condition.	Battery voltage	

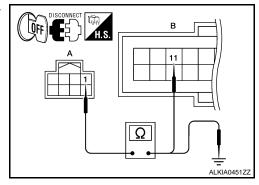
Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

3. CHECK STEERING LOCK UNIT POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect IPDM E/R harness connector.
- 3. Check continuity between steering lock unit and IPDM E/R harness connector.



Steering	Steering lock unit		M E/R	Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
A: M32	1	B: E18	11	Yes	

4. Check continuity between steering lock unit and ground.

Steering	lock unit	Ground	Continuity	
Connector	Terminal	Ciouna		
A: M32	1	Ground	No	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-43, "Removal and Installation".

NO >> Repair harness or connector.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

B2608 STARTER RELAY

< COMPONENT DIAGNOSIS >

B2608 STARTER RELAY

Description

Located in IPDM E/R, it runs the starter motor. The starter relay is turned ON by the BCM when the ignition switch is in START position. IPDM E/R transmits the starter relay ON signal to BCM via CAN communication.

DTC Logic

INFOID:000000001344525

INFOID:000000001344526

INFOID:000000001344524

DTC DETECTION LOGIC

NOTE:

- If DTC B2608 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-32, "DTC Logic"</u>.
- If DTC B2608 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-33. "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B2608	STARTER RELAY	BCM receives starter relay ON signal (CAN) from IPDM E/R even if BCM turns the starter relay OFF	 Harness or connectors (starter relay circuit is open or shorted.) IPDM E/R 	F

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press the push-button ignition switch under the following conditions.
- CVT selector lever is in the P or N position.
- Depress the brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.

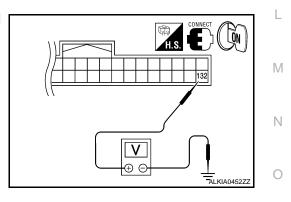
Is DTC detected?

- YES >> Go to SEC-71, "Diagnosis Procedure".
- NO >> INSPECTION END.

Diagnosis Procedure

1.CHECK STARTER RELAY

- 1. Turn ignition switch ON.
- Check voltage between BCM harness connector and ground under the following condition.



BCM		Ground	Condition		Voltage (V)
Connector	Terminal	Ground	Condition		voltage (v)
M21 132	C)/T oc	CVT selector lever	N or P position	Battery voltage	
	132 Ground		Other than above	0	
	132	Ground		Not depressed	0
		Clutch pedal	Depressed	Battery voltage	

А

В

Ε

Н

SEC

Ρ

B2608 STARTER RELAY

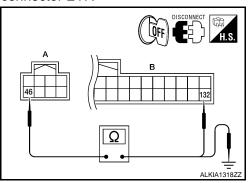
< COMPONENT DIAGNOSIS >

Is the measurement value within the specification?

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

2. CHECK STARTER RELAY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM harness connector M21 and IPDM E/R harness connector E17.
- 3. Check continuity between IPDM E/R harness connector and
- BCM harness connector.



IPDM E/R		BCM		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
A: E17	46	B: M21	132	Yes	

4. Check continuity between IPDM E/R harness connector and ground.

IPDN	M E/R	Ground	Continuity	
Connector	Terminal	Cround	Continuity	
A: E17	46	Ground	No	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-43, "Removal and Installation".

NO >> Repair harness or connector.

3.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

< COMPONENT DIAGNOSIS >

B2609 STEERING STATUS

Description

There are 2 switches in the steering lock unit (steering lock/unlock switch 1 and 2). BCM compares those two switches conditions to judge the present steering status.

DTC Logic

INFOID:000000001344528

INFOID:000000001344527

DTC DETECTION LOGIC

NOTE:

- If DTC B2609 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-32, "DTC Logic"</u>.
- If DTC B2609 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-33. "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B2609	STEERING STATUS	BCM detects the malfunction of steering lock unit switches for 1 second.	 Harness or connectors [steering lock unit circuit (BCM side) is open or shorted] Harness or connectors [steering lock unit circuit (IPDM E/ R side) is open or shorted.] Steering lock unit IPDM E/R 	

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

1. Press the push-button ignition switch under the following conditions and wait for at least 1 second. CVT selector lever is in the P position. Do not depress brake pedal Steering is locked 2. Check "Self diagnostic result" with CONSULT-III. Is DTC detected? SEC YES >> Go to SEC-73, "Diagnosis Procedure". NO >> GO TO 2. 2. PERFORM DTC CONFIRMATION PROCEDURE 2 L 1. Turn ignition switch ON. Turn ignition switch OFF. 2. 3. Press door switch. M 4. Check "Self diagnostic result" with CONSULT-III. Is DTC detected? >> Go to SEC-73, "Diagnosis Procedure". YES Ν >> INSPECTION END. NO Diagnosis Procedure INFOID:000000001836925 **1.**INSPECTION START Check the case in which DTC is detected. Ρ Case1: It is detected after ignition switch is changed from ON to OFF and door switch is pressed Case2: It is detected after ignition switch is changed from ON to OFF In which case is DTC detected? Case1 >> GO TO 2. Case2 >> GO TO 7.

2. CHECK BCM OUTPUT SIGNAL

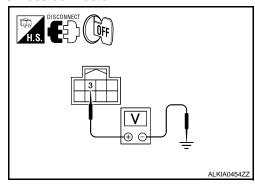
[COUPE]

А

Е

< COMPONENT DIAGNOSIS >

- 1. Turn ignition switch OFF.
- 2. Disconnect steering lock unit harness connector and IPDM E/R harness connector.
- 3. Check voltage between steering lock unit harness connector and ground.



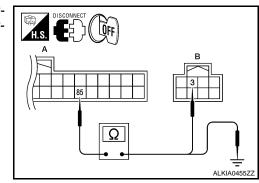
Steering lock unit		Ground	Voltage [V]
Connector	Terminal	Ground	voltage [v]
M32	3	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4. NO >> GO TO 3.

3.CHECK STEERING LOCK UNIT CIRCUIT-I

- 1. Disconnect BCM harness connector.
- Check continuity between BCM harness connector M19 (A) terminal 85 and steering lock unit harness connector M32 (B) terminal 3.



BCM		Steering	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
A: M19	85	B: M32	3	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 85 and ground.

BCM		Ground	Continuity
Connector	Terminal	Ciouna	Continuity
A: M19	85	Ground	No

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

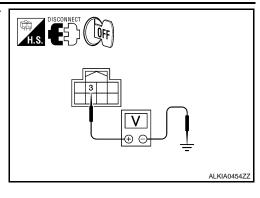
4.CHECK IPDM E/R OUTPUT SIGNAL

1. Connect IPDM E/R harness connector.

2. Disconnect BCM harness connector.

< COMPONENT DIAGNOSIS >

3. Check voltage between steering lock unit harness connector and ground.



Steering lock unit		Ground	Voltage [V]	
Connector	Terminal	Ground	vonage [v]	
M32	3	Ground	Battery voltage	

Is the inspection result normal?

YES >> Replace steering lock unit.

NO >> GO TO 5.

5. CHECK STEERING LOCK UNIT CIRCUIT-II

1. Check continuity between steering lock unit harness connector M32 (A) terminal 3 and IPDM E/R harness connector E18 (B) termial 32.

В

Steering	Steering lock unit		IPDM E/R		
Connector	Terminal	Connector	Terminal	Continuity	
A: M32	3	B: E18	32	Yes	

Check continuity between steering lock unit harness connector M32 (A) terminal 3 and ground. 2.

 Steering	Steering lock unit Ground Continuity			
 Connector	Terminal	Ground	Continuity	
 A: M32	3	Ground	No	Ν

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

6. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

7.CHECK BCM OUTPUT SIGNAL

1. Turn ignition switch OFF.

2. Disconnect steering lock unit harness connector and IPDM E/R harness connector E5.

SEC-75

[COUPE]

В

А

D

Е

F

Н

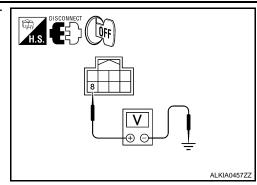
SEC

L

Ρ

< COMPONENT DIAGNOSIS >

3. Check voltage between steering lock unit harness connector and ground.



[COUPE]

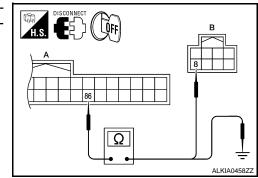
Steering lock unit		Ground	Voltage [V]
Connector	Connector Terminal		voltage [v]
M32	8	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 9. NO >> GO TO 8.

8. CHECK STEERING LOCK UNIT CIRCUIT-I

- 1. Disconnect BCM harness connector M19.
- Check continuity between BCM harness connector M19 (A) terminal 86 and steering lock unit harness connector M32 (B) terminal 8.



B	BCM		Steering lock unit		
Connector	Terminal	Connector	Terminal	Continuity	
A: M19	86	B: M32	8	Yes	

3. Check continuity between BCM harness connector M19 (A) terminal 86 and ground.

BCM		Ground	Continuity
 Connector	Terminal	Cibana	Continuity
 A: M19	86	Ground	No

Is the inspection result normal?

YES >> GO TO 11.

NO >> Repair harness or connector.

9.CHECK IPDM E/R OUTPUT SIGNAL

1. Connect IPDM E/R harness connector.

2. Disconnect BCM harness connector M19.

< COMPONENT DIAGNOSIS >

[COUPE]

А

В

С

D

Ε

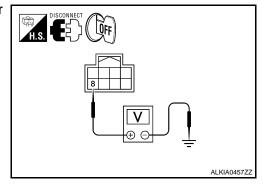
F

Н

SEC

L

3. Check voltage between steering lock unit harness connector and ground.



ConnectorTerminalCrownelVoltage [v]M328GroundBattery voltage	Steering	lock unit	Ground	Voltage [V]
M32 8 Ground Battery voltage	Connector Terminal		Ground	vonage [v]
	 M32	8	Ground	Battery voltage

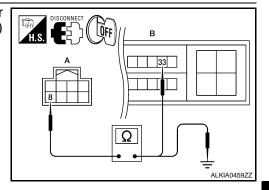
Is the inspection result normal?

YES >> Replace steering lock unit.

NO >> GO TO 10.

10. CHECK STEERING LOCK UNIT CIRCUIT-II

1. Check continuity between steering lock unit harness connector M32 (A) terminal 8 and IPDM E/R harness connector E18 (B) terminal 33.



Steering	Steering lock unit		IPDM E/R	
Connector	Terminal	Connector Terminal		Continuity
A: M32	8	B: E18	33	Yes

2. Check continuity between steering lock unit harness connector and ground.

Steering	lock unit	Ground	Continuity	• M
Connector	Terminal	Ground	Continuity	
A: M32	8	Ground	No	Ν

Is the inspection result normal?

YES >> GO TO 11.

NO >> Repair harness or connector.

11.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

0

Ρ

B260B STEERING LOCK UNIT

Description

The steering lock unit performs the check by itself according to the steering status.

DTC Logic

INFOID:000000001344531

INFOID:000000001344532

INFOID:000000001344530

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260B	STEERING LOCK UNIT	BCM detects malfunctioning of steering lock unit before steering unlocking.	Steering lock unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press the push-button ignition switch, when steering is locked.

2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-78. "Diagnosis Procedure".

NO >> INSPECTION END.

Diagnosis Procedure

1.INSPECTION START

1. Turn ignition switch ON.

- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure. See <u>SEC-78, "DTC Logic"</u>.

Is the DTC B260B displayed again?

- YES >> Replace steering lock unit.
- NO >> INSPECTION END.

B260C STEERING LOCK UNIT

< COMPONE	ENT DIAGNOSIS >	>	[COUPE]	
B260C S	TEERING LO	CK UNIT		
Description	n		INFOID:000000001344533	
The steering	lock unit performs t	he check by itself according to the steering	status.	
DTC Logic	-		INFOID:000000001344534	
	CTION LOGIC			
DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B260C	STEERING LOCK UNIT	BCM detects malfunctioning of steering lock unit before steering locking.	Steering lock unit	
DTC CONFI	IRMATION PROC	EDURE		
1.PERFORM	M DTC CONFIRMA	TION PROCEDURE		
	tion switch ON.			
3. Press do 4. Check "S	-	t" with CONSULT-III.		
I <u>s DTC detec</u> YES >> 0	Go to <u>SEC-79, "Diac</u>	anosis Procedure".		
-	NSPECTION END.	-		
Diagnosis	Procedure		INFOID:00000001344535	
1.INSPECT	ION START			
2. Check "S 3. Touch "E 4. Perform	RASE". DTC Confirmation	t" with CONSULT-III. n Procedure.		_
	<u>2-79, "DTC Logic"</u> . 260C displayed aga	ain?		5
YES >> F	Replace steering loc			
NO >> I	NSPECTION END.			

Μ

Ν

Ο

Ρ

B260D STEERING LOCK UNIT

Description

The steering lock unit performs the check by itself according to the steering lock status (before lock, after lock and unlock).

DTC Logic

INFOID:000000001344537

INFOID:000000001344538

INFOID:000000001344536

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260D	STEERING LOCK UNIT	BCM detects malfunctioning of steering lock unit after steering locking.	Steering lock unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.

- 2. Turn ignition switch OFF.
- 3. Press door switch.
- 4. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-80, "Diagnosis Procedure".

NO >> INSPECTION END.

Diagnosis Procedure

1.INSPECTION START

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure. See <u>SEC-80, "DTC Logic"</u>.

Is the DTC B260D displayed again?

- YES >> Replace steering lock unit.
- NO >> INSPECTION END.

B260F ENGINE STATUS

< COMPONENT DIAGNOSIS >

B260F ENGINE STATUS

Description

BCM receives the engine status signal from ECM via CAN communication.

DTC Logic

INFOID:000000001344540

INFOID:000000001344539

DTC DETECTION LOGIC

- NOTE:
- If DTC B260F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-32, "DTC Logic"</u>.
- If DTC B260F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-33, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B260F	INTERRUPTION OF ENGINE STATUS SIGNAL	BCM is not yet received the engine status signal from ECM when ignition switch is in ON position	• ECM	
DTC CONFI	RMATION PROC	EDURE		(
1.PERFORM	M DTC CONFIRMA	TION PROCEDURE		
CVT seleDo not de	ector lever is in the lepress the brake pe			ŀ
	<u>ted?</u> So to <u>SEC-81, "Diac</u> NSPECTION END.	nosis Procedure".		
Diagnosis	Procedure		INFOID:000000001344541	
1.INSPECTI	ON START			
 Check "S Touch "E Perform 	tion switch ON. Self diagnostic resul RASE". DTC Confirmation S-81, "DTC Logic".	" with CONSULT-III.		S
Is the DTC B YES >> 0 NO >> II	260F displayed aga GO TO 2. NSPECTION END.	in?		ľ
2.REPLACE	ECM			1
INSPEC	C-1016, "BASIC I	NSPECTION : Special Repair Requiren air Requirement" (QR25DE FOR CALIFOR rement" (QR25DE EXCEPT FOR CALIFO	NIA) or EC-543, "BASIC INSPEC-	C
>>	NSPECTION END.			

>> INSPECTION END.

А

В

С

D

Ρ

B26E1 NO RECEPTION OF ENGINE STATUS SIGNAL

< COMPONENT DIAGNOSIS >

B26E1 NO RECEPTION OF ENGINE STATUS SIGNAL

Description

BCM receives the engine status signal from ECM via CAN communication.

DTC Logic

INFOID:000000001344543

INFOID:000000001344542

DTC DETECTION LOGIC

NOTE:

- If DTC B26E1 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-32, "DTC Logic"</u>.
- If DTC B26E1 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-33, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260F	NO RECEPTION OF ENGINE STATUS SIGNAL	BCM does not receive the engine status signal from ECM when ignition switch is in the ON position	• ECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions.
- CVT selector lever is in the P or N position.
- Do not depress the brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-82, "Diagnosis Procedure".
- NO >> INSPECTION END.

Diagnosis Procedure

1.INSPECTION START

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure. See <u>SEC-82. "DTC Logic"</u>.

Is the DTC B26E1 displayed again?

- YES >> GO TO 2.
- NO >> INSPECTION END.

2.REPLACE ECM

- 1. Replace ECM.
- 2. Go to <u>EC-1016</u>, "BASIC INSPECTION : Special Repair Requirement" (VQ35DE), <u>EC-24</u>, "BASIC <u>INSPECTION : Special Repair Requirement</u>" (QR25DE FOR CALIFORNIA), or <u>EC-543</u>, "BASIC INSPEC-<u>TION : Special Repair Requirement</u>" (QR25DE EXCEPT FOR CALIFORNIA).

>> INSPECTION END.

INFOID:000000001344544

[COUPE]

< COMPONENT DIAGNOSIS >

B2612 STEERING STATUS

Description

There are 2 switches in the steering unit. IPDM E/R compares those 2 switches conditions to judge the present steering status and transmit the result to BCM via CAN communication.

DTC Logic

INFOID:000000001344546

INFOID:000000001344545

DTC DETECTION LOGIC

NOTE:

- If DTC B2612 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-32, "DTC Logic"</u>.
- If DTC B2612 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-33. "DTC Logic"</u>.

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B2612	STEERING STA- TUS	 BCM detects the mismatch between the following status for 1 second Steering lock or unlock Feedback of steering lock status from IPDM E/R (CAN) 	 Harness or connectors [steering lock unit circuit (BCM side) is open or shorted] Harness or connectors [steering lock unit circuit (IPDM E/R side) is open or shorted.] Steering lock unit IPDM E/R
	ATION PROCED	URE N PROCEDURE 1	
CVT selector Do not depres Steering is loo	lever is in the P or ss brake pedal.		ns and wait for at least 1 second.
DTC detected?	-		
ES >> Go to	SEC-83, "Diagnos	sis Procedure".	
IO >> GO T			

- 1. Turn ignition switch ON.
- 2. Turn ignition switch OFF.
- 3. Press door switch.
- 4. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Go to <u>SEC-83, "Diagnosis Procedure"</u>. NO >> INSPECTION END.

Diagnosis Procedure

1.INSPECTION START

Check the case in which DTC is detected.

- Case1: It is detected after ignition switch is changed from ON to OFF and door switch is pressed.
- Case2: It is detected after ignition switch is changed from ON to OFF

In which case is DTC detected?

Case1 >> GO TO 2. Case2 >> GO TO 7.

2.CHECK BCM OUTPUT SIGNAL

А

Е

Μ

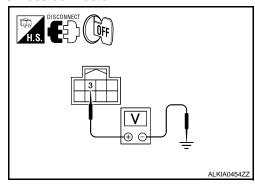
Ν

Ρ

INFOID:000000001836926

< COMPONENT DIAGNOSIS >

- 1. Turn ignition switch OFF.
- 2. Disconnect steering lock unit harness connector and IPDM E/R harness connector.
- 3. Check voltage between steering lock unit harness connector and ground.



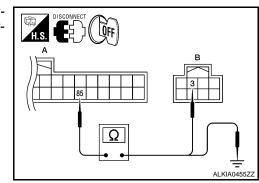
Steering	Steering lock unit		Voltage [V]	
Connector	Terminal	Ground	voltage [v]	
M32	3	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 4. NO >> GO TO 3.

3.CHECK STEERING LOCK UNIT CIRCUIT-I

- 1. Disconnect BCM harness connector.
- Check continuity between BCM harness connector M19 (A) terminal 85 and steering lock unit harness connector M32 (B) terminal 3.



B	BCM		Steering lock unit		
Connector	Terminal	Connector	Terminal	Continuity	
A: M19	85	B: M32	3	Yes	

3. Check continuity between BCM harness connector M19 (A) terminal 85 and ground.

BCM		Ground	Continuity	
Connector	Terminal	Crodina	Continuity	
A: M19	85	Ground	No	

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

4.CHECK IPDM E/R OUTPUT SIGNAL

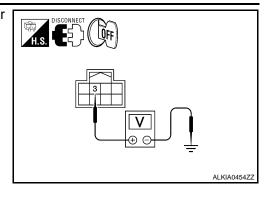
1. Connect IPDM E/R harness connector.

2. Disconnect BCM harness connector.

SEC-84

< COMPONENT DIAGNOSIS >

3. Check voltage between steering lock unit harness connector and ground.



Steering lock unit		Ground	Voltage [V]	
Connector	Terminal	Cround	voltage [v]	
M32	3	Ground	Battery voltage	

Is the inspection result normal?

YES >> Replace steering lock unit.

NO >> GO TO 5.

5. CHECK STEERING LOCK UNIT CIRCUIT-II

 Check continuity between steering lock unit harness connector M32 (A) terminal 3 and IPDM E/R harness connector E18 (B) terminal 32.

В

	Steering	j lock unit	IPDI	M E/R	Continuity
Cor	nnector	Terminal	Connector	Terminal	Continuity
A	M32	3	B: E18	32	Yes

2. Check continuity between steering lock unit harness connector M32 (A) terminal 3 and ground.

 Steering	lock unit	Ground	Continuity	- M
 Connector	Terminal	Ground	Continuity	
 A: M32	3	Ground	No	N

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

6. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

7. CHECK BCM OUTPUT SIGNAL

1. Turn ignition switch OFF.

2. Disconnect steering lock unit harness connector and IPDM E/R harness connector.

SEC-85

[COUPE]

А

В

D

Е

F

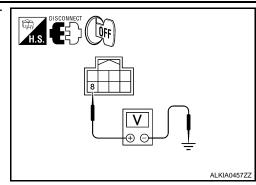
Н

SEC

Ρ

< COMPONENT DIAGNOSIS >

3. Check voltage between steering lock unit harness connector and ground.



[COUPE]

Steering lock unit		Ground	Voltage [V]	
Connector	Terminal	Ground	volidge [v]	
M32	8	Ground	Battery voltage	

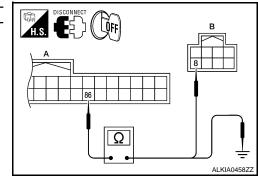
Is the inspection result normal?

YES >> GO TO 9. NO >> GO TO 8.

8. CHECK STEERING LOCK UNIT CIRCUIT-I

1. Disconnect BCM harness connector.

 Check continuity between BCM harness connector M19 (A) terminal 86 and steering lock unit harness connector M32 (B) terminal 8.



BCM		Steering lock unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M19	86	B: M32	8	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 86 and ground.

BCM Terminal		Ground	Continuity	
 Connector	Terminal	Ciouna	Continuity	
 A: M19	86	Ground	No	

Is the inspection result normal?

YES >> GO TO 11.

NO >> Repair harness or connector.

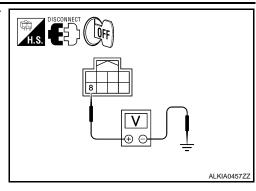
9.CHECK IPDM E/R OUTPUT SIGNAL

1. Connect IPDM E/R harness connector.

2. Disconnect BCM harness connector.

< COMPONENT DIAGNOSIS >

3. Check voltage between steering lock unit harness connector and ground.



 Steering	lock unit	Ground	Voltago [\/]	
 Connector	Connector Terminal		Voltage [V]	
 M32	8	Ground	Battery voltage	

Is the inspection result normal?

YES >> Replace steering lock unit. NO >> GO TO 10.

10. CHECK STEERING LOCK UNIT CIRCUIT-II

 Check continuity between steering lock unit harness connector M32 (A) terminal 8 and IPDM E/R harness connector E18 (B) terminal 33.

Steering	lock unit	IPDN	/I E/R	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M32	8	B: E18	33	Yes

2. Check continuity between steering lock unit harness connector and ground.

Steering	lock unit	Ground	Continuity	• M
Connector	Terminal	Ground	Continuity	
A: M32	8	Ground	No	Ν

Is the inspection result normal?

YES >> GO TO 11.

NO >> Repair harness or connector.

11. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

SEC

L

[COUPE]

А

В

С

D

Е

F

Н

B2617 STARTER RELAY CIRCUIT

Description

INFOID:000000001344548

[COUPE]

Located in IPDM E/R, it runs the starter motor. The starter relay is turned ON by the BCM when the ignition switch is in START position. IPDM E/R transmits the starter relay ON signal to BCM via CAN communication.

DTC Logic

INFOID:000000001344549

INFOID:000000001344550

DTC DETECTION LOGIC

NOTE:

- If DTC B2617 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-32, "DTC Logic"</u>.
- If DTC B2617 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-33. "DTC Logic"</u>.
- If DTC B2617 is displayed with DTC B2611, first perform the trouble diagnosis for DTC B2611. Refer to <u>PCS-59, "DTC Logic"</u>.
- If DTC B2617 is displayed with DTC B210E, first perform the trouble diagnosis for DTC B210E. Refer to <u>SEC-88, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2617	STARTER RELAY CIRCUIT	 An immediate operation of starter relay is requested by BCM, but there is no response for more than 1 second BCM is not commanding starter relay activation, but BCM detects starter relay output is active 	 Harness or connectors (Starter relay circuit is open or short- ed.) IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P position.
- Do not depress the brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.

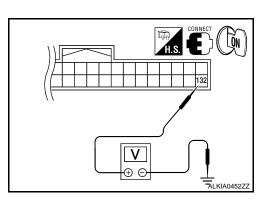
Is DTC detected?

- YES >> Go to SEC-88, "Diagnosis Procedure".
- NO >> INSPECTION END

Diagnosis Procedure

1.CHECK STARTER RELAY

- 1. Turn ignition switch ON.
- 2. Check voltage between BCM harness connector and ground under the following condition.



B2617 STARTER RELAY CIRCUIT

< COMPONENT DIAGNOSIS >

[COUPE]

F

Н

J

SEC

Μ

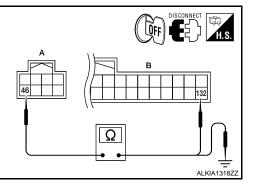
Ν

Ο

Ρ

BCM Ground Transmiss		Transmission type	Condition	Voltage (V)	-	
Connector	Terminal	Giouna	Transmission type	Condition	vollage (v)	
			CVT: Select lever in Park	Ignition switch cranking or request to start	Battery voltage	-
MOI	122	Ground M/T: Clutch pedal depressed	I dik	Other than above	0	-
M21	132		M/T: Clutch pedal Ignition switch cranking or request to start	0	Battery voltage	-
	depressed	Other than above	0	-		
<u>the measurem</u> 'ES >> GO IO >> GO		n the specific	ation.			-
.CHECK STAF	RTER RELAY (CIRCUIT				

Check continuity between IPDM E/R harness connector and BCM harness connector.



IPDI	M E/R	B	СМ	Continuity
Connector	Terminal	Connector Terminal		Continuity
A: E17	46	B: M21	132	Yes

4. Check continuity between IPDM E/R harness connector and ground.

IPDM E/R		Ground	Continuity	
Connector	Terminal	Ground	Continuity	L
A: E17	46	Ground	No	-

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-88, "Removal and Installation"</u>.

NO >> Repair harness or connector.

3.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

B2619 BCM

Description

BCM requests IPDM E/R to supply power to steering lock unit. After receiving the power, the steering lock unit transmits an ON signal to BCM.

DTC Logic

INFOID:000000001344552

INFOID:000000001344553

INFOID:000000001344551

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2619	BCM	BCM detects a mismatch between the power sup- plied to the steering lock unit and the feedback for one second or more.	• BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.

- CVT selector lever is in the P position
- Do not depress brake pedal
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-90. "Diagnosis Procedure".
- NO >> INSPECTION END.

Diagnosis Procedure

1.INSPECTION START

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure. See <u>SEC-90, "DTC Logic"</u>.

Is the DTC B2619 displayed again?

- YES >> Replace BCM. Refer to <u>BCS-88. "Removal and Installation"</u>.
- NO >> INSPECTION END

B261A PUSH-BUTTON IGNITION SWITCH

< COMPONENT DIAGNOSIS >

B261A PUSH-BUTTON IGNITION SWITCH

Description

IPDM E/R transmits the push-button ignition switch status via CAN communication to BCM. BCM receives push-button ignition switch status by hardwire input. BCM compares the 2 signals for mismatch.

DTC Logic

INFOID:000000001344555

INFOID:000000001344554

DTC DETECTION LOGIC

NOTE:

- If DTC B261A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-32, "DTC Logic"</u>.
- If DTC B261A is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-33. "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B261A	PUSH-BUTTON IGNITION SWITCH	 BCM detects the mismatch between the following for 1 second or more Push-button ignition switch status Push-button ignition switch status from IPDM E/R (CAN) 	 Harness or connectors (Push-button ignition switch circuit is open or shorted) Between BCM and push-button igni- tion switch Between IPDM E/R and push-button ignition switch 	F

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- Press the push-button ignition switch under the following conditions and wait for at least 1 second.
 CVT selector lever is in the P position
- Do not depress brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.

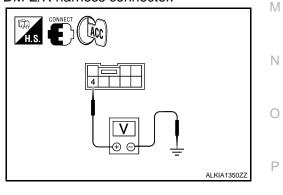
Is DTC detected?

- YES >> Go to SEC-91, "Diagnosis Procedure".
- NO >> INSPECTION END

Diagnosis Procedure

1.CHECK PUSH-BUTTON IGNITION SWITCH OUTPUT SIGNAL 1

- 1. Turn ignition switch OFF.
- 2. Disconnect push-button ignition switch harness connector and IPDM E/R harness connector.
- 3. Check voltage between push-button ignition switch harness connector and ground.



Push-button ignition switch		Ground	Voltage (V)
Connector	Terminal	Gibuna	voltage (v)
M38	4	Ground	Battery voltage

А

Е

Н

SEC

L

INFOID:000000001836927

B261A PUSH-BUTTON IGNITION SWITCH

< COMPONENT DIAGNOSIS >

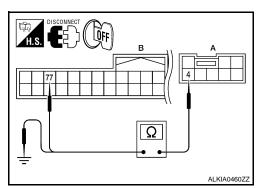
Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

2. CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT

- 1. Disconnect BCM harness connector.
- Check continuity between push-button ignition switch harness connector M38 (A) terminal 4 and BCM harness connector M19 (B) terminal 77.



Push-button	ignition switch	BCM		Continuity	
Connector	Terminal	Connector Terminal		Continuity	
A: M38	4	B: M19	77	Yes	

3. Check continuity between push-button ignition switch harness connector M38 (A) terminal 4 and ground.

Push-button ignition switch		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: M38	4	Ground	No	

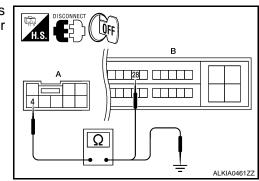
Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

3.CHECK PUSH-BUTTON IGNITION SWITCH

- 1. Disconnect IPDM E/R harness connector.
- Check continuity between push-button ignition switch harness connector M38 (A) terminal 4 and IPDM E/R harness connector E18 (B) terminal 28.



Push-button	ignition switch	IPDM E/R		R Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
A: M38	4	B: E18	28	Yes	

3. Check continuity between push-button ignition switch harness connector and ground.

Push-button ignition switch		Ground	Continuity
Connector	Terminal	Giodila	Continuity
A: M38	4	Ground	No

B261A PUSH-BUTTON IGNITION SWITCH

< COMPONENT DIAGNOSIS >	[COUPE]
Is the inspection result normal?	
YES >> GO TO 4. NO >> Repair harness or connector.	A
4.CHECK INTERMITTENT INCIDENT	
Refer to GI-42, "Intermittent Incident".	B
>> INSPECTION END	С
	D

J

Е

F

G

Н

SEC

M

Ν

Ο

Ρ

B261E VEHICLE TYPE

Description

There are two types of vehicle.

• HEV

Conventional

DTC Logic

DTC DETECTION LOGIC **NOTE**:

- If DTC B261E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-32, "DTC Logic".
- If DTC B261E is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-33, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B261E	VEHICLE TYPE	Difference of BCM configration	• BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-94, "Diagnosis Procedure".
- NO >> INSPECTION END

Diagnosis Procedure

1.INSPECTION START

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Touch "ERASE".
- Perform DTC Confirmation Procedure. See <u>SEC-94</u>, "DTC Logic".

Is the 1st trip DTC B261E displayed again?

- YES >> Perform BCM configuration. Refer to CONSULT-III Operation Manual.
- NO >> INSPECTION END

INFOID:000000001344557

INFOID:000000001344558

INFOID:000000001344559

B2108 STEERING LOCK RELAY

< COMPONENT DIAGNOSIS >

B2108 STEERING LOCK RELAY

Description

The steering lock relay ON signal is transmitted to IPDM E/R by BCM via CAN communication. IPDM E/R turns the steering lock relay ON and transmits the release of the steering to BCM.

DTC Logic

INFOID:000000001344561

INFOID:000000001344562

INFOID:000000001344560

DTC DETECTION LOGIC

NOTE:

- If DTC B2108 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to D SEC-32, "DTC Logic".
- If DTC B2108 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-33, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B2108	STRG LCK RELAY ON	IPDM E/R detects that the relay is stuck at ON po- sition for about 1 second even if the IPDM E/R re- ceives steering lock relay ON/OFF signal from BCM.	• IPDM E/R	F

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- Press the push-button ignition switch under the following conditions and wait for at least 1 second. 1.
- CVT selector lever is in the P position
- Do not depress the brake pedal.
- Check "Self diagnostic result" with CONSULT-III. 2.

Is DTC detected?

- >> Go to SEC-95, "Diagnosis Procedure". YES
- NO >> INSPECTION END

Diagnosis Procedure

1.CHECK FUSE

1. Turn ignition switch OFF. Check 10A fuse (No. 40, located in IPDM E/R). 2. Is the inspection normal? YES >> Replace IPDM E/R. Refer to PCS-43, "Removal and Installation". Check the following. NO >> Harness for open or short between IPDM E/R and battery Fuse

Ν

[COUPE]

А

В

Е

Н

SEC

L

Μ

B2109 STEERING LOCK RELAY

Description

The steering lock relay ON signal is transmitted to IPDM E/R by BCM via CAN communication. IPDM E/R turns the steering lock relay ON and transmits the release of the steering to BCM.

DTC Logic

INFOID-000000001344564

INFOID:000000001836928

INFOID:000000001344563

DTC DETECTION LOGIC

NOTE:

- If DTC B2109 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-32, "DTC Logic".
- If DTC B2109 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-33, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2109	STRG LCK RELAY OFF	IPDM E/R detects that the relay is stuck at OFF po- sition for about 1 second even if the IPDM E/R re- ceives steering lock relay ON/OFF signal from BCM.	 Harness or connector (power supply circuit) IPDM E/R Battery

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- Press the push-button ignition switch under the following conditions and wait for at least 1 second. 1.
- CVT selector lever is in the P or N position
- Do not depress the brake pedal
- Check "Self diagnostic result" with CONSULT-III. 2.

Is DTC detected?

- >> Go to SEC-96, "Diagnosis Procedure". YES
- NO >> INSPECTION END

Diagnosis Procedure

1.CHECK POWER SUPPLY CIRCUIT

Check IPDM E/R power supply circuit. Refer to PCS-19, "Diagnosis Procedure".

Is the inspection normal?

YES >> GO TO 2.

- NO >> Repair the malfunctioning parts
- 2.CHECK FUSE
- 1. Turn ignition switch OFF.
- Check 10A fuse (No. 40, located in IPDM E/R). 2.

Is the inspection normal?

- YES >> Replace IPDM E/R. Refer to PCS-43, "Removal and Installation". NO
 - >> Check the following.
 - Harness for open or short between IPDM E/R and battery
 - Fuse

< COMPONENT DIAGNOSIS >

B210A STEERING LOCK CONDITION SWITCH

Description

There are 2 switches in the steering unit. IPDM E/R compares those 2 switches conditions to judge the present steering status and transmit the result to BCM via CAN communication.

DTC Logic

INFOID:000000001344567

INFOID:000000001344566

DTC DETECTION LOGIC

NOTE:

- If DTC B210A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-32, "DTC Logic"</u>.
- If DTC B210A is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-33. "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B210A	STRG LCK STATE SW	 BCM detects the mismatch between the following for 1 second Steering lock or unlock Feedback of steering lock status from IPDM E/R (CAN) 	 Harness or connectors [steering lock unit circuit (BCM side) is open or shorted] Harness or connectors [steering lock unit circuit (IPDM E/ R side) is open or shorted.] Steering lock unit IPDM E/R 	F G H

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P or N position
- Do not depress the brake pedal
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-97, "Diagnosis Procedure".
- NO >> INSPECTION END

Diagnosis Procedure

1.INSPECTION START

Check the case in which DTC is detected. • Case1: It is detected after ignition switch is changed from ON to OFF and door switch is pressed • Case2: It is detected after ignition switch is changed from ON to OFF In which case is DTC detected? Case1 >> GO TO 2. Case2 >> GO TO 7.

2.check bcm output signal

1. Turn ignition switch OFF.

2. Disconnect steering lock unit harness connector and IPDM E/R harness connector.

[COUPE]

Ε

А

J

SEC

L

Μ

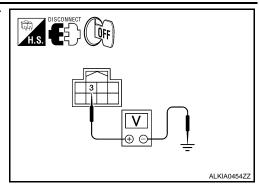
Ν

Ρ

INFOID:000000001836929

< COMPONENT DIAGNOSIS >

3. Check voltage between steering lock unit harness connector and ground.



[COUPE]

Steering	lock unit	Ground	Voltage [V]
Connector	Terminal	Gibunu	voliage [v]
M32	3	Ground	Battery voltage

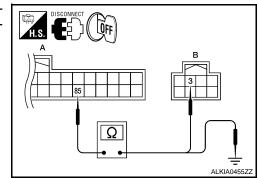
Is the inspection result normal?

YES >> GO TO 4. NO >> GO TO 3.

3. CHECK STEERING LOCK UNIT CIRCUIT-I

1. Disconnect BCM harness connector.

 Check continuity between BCM harness connector M19 (A) terminal 85 and steering lock unit harness connector M32 (B) terminal 3.



BCM		Steering lock unit		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
A: M19	85	B: M32	3	Yes	

3. Check continuity between BCM harness connector M19 (A) terminal 85 and ground.

 B	CM	Ground	Continuity
 Connector	Terminal		
 A: M19	85	Ground	No

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

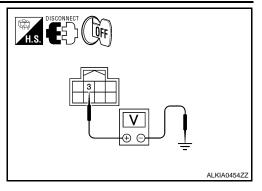
4.CHECK IPDM E/R OUTPUT SIGNAL

1. Connect IPDM E/R harness connector.

2. Disconnect BCM harness connector.

< COMPONENT DIAGNOSIS >

3. Check voltage between steering lock unit harness connector and ground.



	Steering	lock unit	Ground	Voltago [\/]	
-	Connector	Terminal	Ground	Voltage [V]	
-	M32	3	Ground	Battery voltage	
		10			

Is the inspection result normal?

YES >> Replace steering lock unit.

NO >> GO TO 5.

5. CHECK STEERING LOCK UNIT CIRCUIT-II

 Check continuity between steering lock unit harness connector M32 (A) terminal 3 and IPDM E/R harness connector E18 (B) termial 32.

В
ALKIA0456ZZ

Steering	Steering lock unit		IPDM E/R		
Connector	Terminal	Connector	Terminal	Continuity	
A: M32	3	B: E18	32	Yes	

2. Check continuity between steering lock unit harness connector M32 (A) terminal 3 and ground.

Steering	lock unit	Ground	Continuity	M
Connector	Terminal	Ground	Communy	
A: M32	3	Ground	No	Ν

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

6.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

7. CHECK BCM OUTPUT SIGNAL

1. Turn ignition switch OFF.

2. Disconnect steering lock unit harness connector and IPDM E/R harness connector E5.

SEC-99

Ρ

С

D

Ε

F

Н

SEC

L

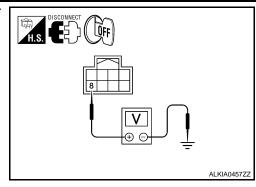
А

В

[COUPE]

< COMPONENT DIAGNOSIS >

3. Check voltage between steering lock unit harness connector and ground.



[COUPE]

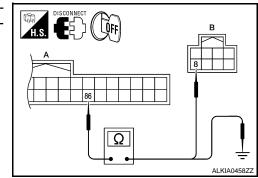
Steering	lock unit	Ground	Voltage [V]
Connector	Terminal	Gibunu	voliage [v]
M32	8	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 9. NO >> GO TO 8.

8. CHECK STEERING LOCK UNIT CIRCUIT-I

- 1. Disconnect BCM harness connector M122.
- Check continuity between BCM harness connector M19 (A) terminal 86 and steering lock unit harness connector M32 (B) terminal 8.



В	BCM		Steering lock unit	
Connector	Terminal	Connector	Terminal	Continuity
A: M19	86	B: M32	8	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 86 and ground.

 B	CM	Ground	Continuity	
Connector	Terminal	Ciouna	Continuity	
 A: M19	86	Ground	No	

Is the inspection result normal?

YES >> GO TO 11.

NO >> Repair harness or connector.

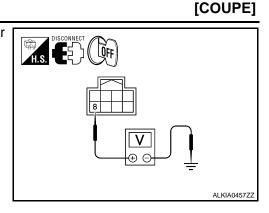
9.CHECK IPDM E/R OUTPUT SIGNAL

1. Connect IPDM E/R harness connector.

2. Disconnect BCM harness connector.

< COMPONENT DIAGNOSIS >

3. Check voltage between steering lock unit harness connector and ground.



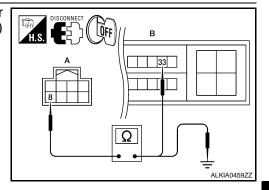
	Steering	g lock unit	Ground	Voltage [V]
	Connector	Terminal	Ground	voltage [v]
	M32	8	Ground	Battery voltage
. '		10		

Is the inspection result normal?

YES >> Replace steering lock unit. NO >> GO TO 10.

10. CHECK STEERING LOCK UNIT CIRCUIT-II

1. Check continuity between steering lock unit harness connector M32 (A) terminal 8 and IPDM E/R harness connector E18 (B) terminal 33.



Steering	Steering lock unit		IPDM E/R		
Connector	Terminal	Connector	Terminal	Continuity	
A: M32	8	B: E18	33	Yes	

2. Check continuity between steering lock unit harness connector and ground.

 Steering	lock unit	Ground	Continuity	- M
 Connector	Terminal	Ground	Continuity	
 A: M32	8	Ground	No	N

Is the inspection result normal?

YES >> GO TO 11.

NO >> Repair harness or connector.

11.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

SEC-101

SEC

L

Ρ

А

В

D

Ε

F

Н

B210B STARTER CONTROL RELAY

Description

Starter control relay, integrated in IPDM E/R, permits the starter relay operation when in N or P position and the steering is locked or unlocked. It is installed in parallel with the starter relay.

DTC Logic

INFOID:000000001344570

INFOID:000000001344571

INFOID:000000001344569

DTC DETECTION LOGIC

NOTE:

- If DTC B210B is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-32, "DTC Logic"</u>.
- If DTC B210B is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-33, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210B	START CONT RLY ON	 IPDM E/R detects that the relay is stuck at ON position even if the followings condition are met for about 1 second. Starter control relay ON/OFF signal from BCM Clutch interlock or shift park neutral position (PNP) switch input signal 	• IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn the power supply position to start under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P or N position.
- Depress the brake pedal
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-102, "Diagnosis Procedure".
- NO >> INSPECTION END

Diagnosis Procedure

1.INSPECTION START

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure. See <u>PCS-41, "DTC Index"</u>.

Is the DTC B210B displayed again?

- YES >> Replace IPDM E/R. Refer PCS-43, "Removal and Installation".
- NO >> INSPECTION END

SEC-102

B210C STARTER CONTROL RELAY

< COMPONENT DIAGNOSIS >

B210C STARTER CONTROL RELAY

Description

Starter control relay, integrated in IPDM E/R, permits the starter relay operation when in N or P position and the steering is locked or unlocked. It is installed in parallel with the starter relay.

DTC Logic

INFOID:000000001344573

INFOID:000000001344572

DTC DETECTION LOGIC

NOTE:

- If DTC B210C is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-32, "DTC Logic"</u>.
- If DTC B210C is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-33, "DTC Logic"</u>.

	DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause		
	B210C	START CONT RLY OFF	 IPDM E/R detects that the relay is stuck at ON position even if the followings condition are met for about 1 second. Starter control relay ON/OFF signal from BCM Clutch interlock or shift park neutral position (PNP) switch input signal 	• IPDM E/R	F	
D	IC CONFI	RMATION PROC	EDURE		F	
1	PERFORM	I DTC CONFIRMA	TION PROCEDURE			
1. - -	CVT sele Depress	ctor lever is in the l the brake pedal		nd wait for at least 1 second.		
2. Is	Check "S DTC detec	U	t" with CONSULT-III.		J	
Y	′ES >> 0	Go to <u>SEC-103, "Dia</u>	agnosis Procedure".		_	
		NSPECTION END			SE	
	•	Procedure		INFOID:00000000134457	74	
1		ON START			L	
1. 2. 3. 4.	 Check "Self diagnostic result" with CONSULT-III. Touch "ERASE". 					
Ŷ	<u>the DTC B</u> ′ES	210C displayed aga	ain? Refer to <u>PCS-43. "Removal and Installatior</u>	<u></u> .	Ν	
					С	

[COUPE]

А

С

Ε

B210D STARTER RELAY

Description

INFOID:000000001344575

[COUPE]

Located in IPDM E/R, it runs the starter motor. The starter relay is turned ON by the BCM when the ignition switch is in START position. IPDM E/R transmits the starter relay ON signal to BCM via CAN communication.

DTC Logic

INFOID:000000001344576

DTC DETECTION LOGIC

NOTE:

- If DTC B210D is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-32, "DTC Logic"</u>.
- If DTC B210D is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-33. "DTC Logic"</u>.
- If DTC B210D is displayed with DTC B2617, first perform the trouble diagnosis for DTC B2617. Refer to <u>SEC-88, "DTC Logic"</u>.

_	DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
-	B210D	STARTER RELAY ON	 IPDM E/R detects that the relay is stuck at ON position even if the followings condition are met for about 1 second. Starter control relay ON/OFF signal from BCM Clutch interlock or shift park neutral position (PNP) switch input 	• IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Ignition switch ON under the following conditions and wait for at least 1 second.
- Ă/T selector lever is P or N position
- Do not depress the brake pedal
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-104, "Diagnosis Procedure".
- NO >> INSPECTION END.

Diagnosis Procedure

INFOID:000000001344577

- 1. CHECK STARTER RELAY POWER SUPPLY CIRCUIT
- 1. Turn ignition switch OFF.
- 2. Disconnect IPDM E/R harness connector.
- Check voltage between IPDM E/R harness connector and ground.

d	

B210D STARTER RELAY

< COMPONENT DIAGNOSIS >

[COUPE]

_	IPDM E/R		Ground	Voltage (V)	А
	Connector	Terminal	Ground	vollage (v)	
_	E18	36	Ground	Battery voltage	5
ls ti	ne inspection result norm	al?			В

YES >> Replace IPDM E/R. Refer to PCS-43, "Removal and Installation".

>> Check harness for open or short between IPDM E/R and battery. NO

J

SEC

L

Μ

Ν

Ο

Ρ

С

D

Е

F

G

Н

B210E STARTER RELAY

Description

INFOID:000000001344578

[COUPE]

Located in IPDM E/R, it runs the starter motor. The starter relay is turned ON by the BCM when the ignition switch is in START position. IPDM E/R transmits the starter relay ON signal to BCM via CAN communication.

DTC Logic

INFOID:000000001344579

INFOID:000000001344580

DTC DETECTION LOGIC

NOTE:

- If DTC B210E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-32, "DTC Logic"</u>.
- If DTC B210E is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-33, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210E	STARTER RELAY OFF	 IPDM E/R detects that the relay is stuck at ON position even if the followings condition are met for about 1 second. Starter control relay ON/OFF signal from BCM Clutch interlock or shift park neutral position (PNP) switch input 	• IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions and wait for at least 1 second.
- A/T selector lever is in the P or N position
- Do not depress the brake pedal
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to <u>SEC-106</u>, "Diagnosis Procedure".
- NO >> INSPECTION END.

Diagnosis Procedure

1.INSPECTION START

Check which type of transmission the vehicle is equipped with.

Which type of transmission

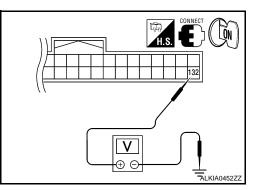
CVT >> GO TO 2.

M/T >> GO TO 3.

2. CHECK STARTER RELAY OUTPUT SIGNAL/CVT MODELS

1. Turn ignition switch OFF.

- 2. Disconnect BCM harness connector.
- 3. Check voltage between BCM harness connector and ground.



B210E STARTER RELAY

COMPONENT	DIAGNOSIS	>					[COUI
BCM con	nector			Con	dition		
Connector	Terminal	Ground	Ignition switc			CVT selector ver	e- Voltage (V)
						P or N	Battery voltage
M21	132	Ground	ON	Depre	essed	Other than above	0
the inspection ro ES >> GO To O >> GO To CHECK STAR Turn ignition s Disconnect Bo Check voltage	O 5. O 4. TER RELAY (switch OFF. CM harness (OUTPUT SIG					
BCM	connector			Co	ondition		
Connector	Termina	Gro I	ound Igr	nition switch		tch pedal	Voltage (V)
M21	132	0	ound	OFF		depressed	0
IVIZ I	132	Giù	buna	OFF	De	epressed	Battery voltage
s the inspection re	0 5.	-					

IPDM E/R		В	BCM		
Connector	Terminal	Connector	Terminal	Continuity	
A: E17	46	B: M21	132	Yes	

Ω

0

Ρ

ALKIA1318ZZ

3. Check continuity between BCM harness connector and ground.

SEC-107

B210E STARTER RELAY

< COMPONENT DIAGNOSIS >

[COUPE]

IPDN	/I E/R	Ground	Continuity
Connector	Terminal	Giodila	Continuity
A: E17	46	Ground	No

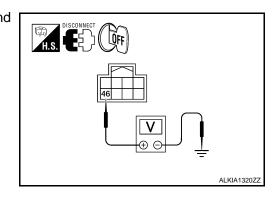
Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-43, "Removal and Installation".

NO >> Repair harness connector.

5. CHECK STARTER RELAY POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect IPDM E/R harness connector.
- 3. Check voltage between IPDM E/R harness connector and ground.



IPDM E/R		Ground	Voltage (V)
Connector	Terminal	Ground	Voltage (V)
E17	46	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-43, "Removal and Installation".

NO >> Check harness for open or short between IPDM E/R and battery.

< COMPONENT DIAGNOSIS >

B210F PNP/CLUTCH INTERLOCK SWITCH

Description

IPDM E/R confirms the shift position with the following signals.

- Park/neutral position (PNP) switch (A/T models)
- Clutch interlock switch (M/T models)
- Shift position signal from BCM (CAN)

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B210F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-32, "DTC Logic"
- If DTC B210F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-32, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210F	INTER LOCK/PNP SW ON	 IPDM E/R detects a mismatch between the signals below for 1 second or more. Clutch interlock input signal (M/T models) Shift PNP switch input signal (A/T models) Shift position signal from BCM (CAN) 	 Harness or connectors [Park/neutral position (PNP) switch circuit is open or shorted (A/T mod- els)] or (Clutch interlock switch cir- cuit is open or shorted.) Clutch interlock switch (M/T mod- els) Park/neutral position (PNP) switch (A/T models)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

I.PERFORM DTC CONFIRMATION PROCEDURE	
 Turn ignition switch ON under the following conditions and wait for at least 1 second. A/T selector lever is in the P or N position 	J
 Do not depress the brake pedal Check "Self diagnostic result" with CONSULT-III. 	050
Is DTC detected?	SEC
YES >> Go to <u>SEC-109, "Diagnosis Procedure"</u> . NO >> INSPECTION END	L
Diagnosis Procedure	
1.INSPECTION START	Μ
Check which type of transmission the vehicle is equipped with.	
Which type of transmission	Ν
CVT >> GO TO 2.	
M/T >> GO TO 5.	
2.CHECK DTC WITH BCM	0
Refer to <u>BCS-85, "DTC_Index"</u> .	
Is the inspection result normal?	
YES >> GO TO 3.	Ρ
NO >> Repair or replace malfunctioning parts.	
3. CHECK PNP SWITCH INPUT SIGNAL	
Turn ignition switch OFF. Disconnect IPDM F/R harness connector	

Disconnect IPDM E/R harness connector.

3. Turn ignition switch ON.

[COUPE]

А

INFOID:000000001344581

В

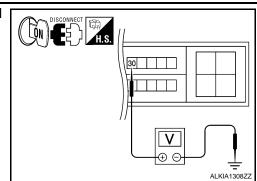
D

E

INFOID:000000001344582

< COMPONENT DIAGNOSIS >

4. Check voltage between IPDM E/R harness connector and ground under following condition.

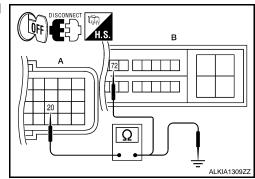


[COUPE]

IPDI	IPDM E/R		Ground Co		
Connector	Terminal	Giouna	Condition		Voltage (V)
E18	30	Ground	CVT selector lever	P or N	0
Elo	30	Giouna	CVT Selector level	Other than above	Battery voltage

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to PCS-43, "Removal and Installation".
- NO >> GO TO 4 (VQ35DE).
- NO >> GO TO 10 (QR25DE).
- **4.**CHECK PNP SWITCH CIRCUIT
- 1. Turn ignition switch OFF.
- 2. Disconnect TCM harness connector.
- Check continuity between IPDM E/R harness connector and TCM harness connector.



ТСМ		IPDI	Continuity	
Connector	Connector Terminal		Terminal	Continuity
A: F16	20	B: E18	72	Yes

4. Check continuity between TCM harness connector and ground.

-	т	CM	Ground	Continuity
	Connector	Terminal	Glouid	Continuity
-	A: F16	20	Ground	No

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair harness or connector.

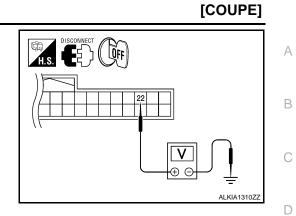
5.CHECK CLUTCH INTERLOCK SWITCH INPUT SIGNAL (BCM)

1. Turn ignition switch OFF.

2. Disconnect BCM harness connector.

< COMPONENT DIAGNOSIS >

3. Check voltage between BCM harness connector and ground.



Ε

F

G

Н

SEC

L

Μ

Ν

Ο

Ρ

ALKIA1308ZZ

∨ ⊕ ⊝

BC	BCM		Condition		
Connector	Terminal	Ground	Condition		Voltage (V)
M40	22	Cround	Clutch nodal	Not depressed	0
M18	22	Ground	Clutch pedal	Depressed	Battery voltage
ne inspection	result normal	?			
	TO 11. ICH INTERLO	OCK SWITCH II	NPUT SIGNAL		
Turn ignition	PDM E/R hari switch ON.	ness connector.			
check volta ground.	ge between	IPDM E/R ha	rness connector		

IPD	IPDM E/R		Condition		Voltage (V/)	
Connector	Terminal	Ground	Condition		Voltage (V)	
E18	20	Cround	Clutch podel	Not depressed	0	
EIO	30	Ground	Clutch pedal	Depressed	Battery voltage	

Is the inspection result normal?

YES >> Replace the IPDM E/R. Refer to <u>PCS-43, "Removal and Installation"</u>.

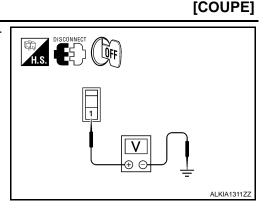
NO >> GO TO 7.

7. CHECK CLUTCH INTERLOCK SWITCH POWER SUPPLY

1. Disconnect clutch interlock switch harness connector.

< COMPONENT DIAGNOSIS >

2. Check voltage between clutch interlock switch harness connector and ground.



Clutch inte	rlock switch	Ground	Voltage (V)	
Connector	Terminal	Cround	vonage (v)	
E36	1	Ground	Battery voltage	

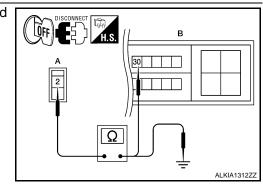
Is the inspection result normal?

YES >> GO TO 8.

NO >> Check harness for open or short between clutch interlock switch and fuse.

8.check clutch interlock switch circuit

1. Check continuity between IPDM E/R harness connector and clutch interlock switch harness connector.



Clutch inte	Clutch interlock switch		IPDM E/R		
Connector	Terminal	Connector Terminal		Continuity	
A: E36	2	B: E18	30	Yes	

2. Check continuity between clutch interlock switch harness connector and ground.

Clutch inte	rlock switch	Ground	Continuity	
Connector	Terminal	Giodila	Continuity	
A: E36	2	Ground	No	

Is the inspection result normal?

YES >> GO TO 9.

NO >> Repair harness or connector.

9.CHECK CLUTCH INTERLOCK SWITCH

Refer to SEC-114, "Component Inspection".

Is the inspection result normal?

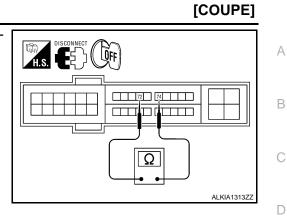
- YES >> Replace the IPDM E/R. Refer to PCS-43, "Removal and Installation".
- NO >> Replace clutch interlock switch.

10.CHECK PNP SWITCH CIRCUIT FOR CONTINUITY

1. Turn ignition switch OFF.

< COMPONENT DIAGNOSIS >

2. Check continuity between IPDM E/R harness connector terminals 72 and 74.



С

Ρ

	IPDM E/R		0	ondition	Continuity
Connector	Terr	ninals		Unation	Continuity
F10	72	74	PNP switch position	P or N	Yes
FIU	12	74	PNP Switch position	Other	No
Is the inspection	n result normal	?			
	TO 11. TO 12.				
11.CHECK PN					
Check continuit 72, 74 and grou		DM E/R harne	ess connector term		
	ind.			H.S.	
IPDN	M E/R	Ground	Continuity		
Connector	Terminal				
F10	72	Ground	No		72,74
	74				
Is the inspection					Ω
	blace the IPDIV tallation".	1 E/R. Refer to	PCS-43, "Remova	and	
NO >> Rep	pair or replace				
12.снеск р	NP SWITCH IN	NPUT SIGNAL	CIRCUIT		
		arness connect			
		n PNP switch a	and IPDM E/R har	ness	
connectors.				T.S.	
				A	
				1,2	
					$)) \qquad \underline{72,74}$
				l I	Ω

Park/neutral position switch		IPDI	IPDM E/R	
Connector	Terminal	Connector	Terminal	Continuity
A: F25	1	B: F10	74	Yes
A. F20	2	<u>.</u> Б. ГТО	72	tes

3. Check continuity between PNP switch harness connector and ground.

SEC-113

< COMPONENT DIAGNOSIS >

Park/neutral position switchGroundContinuityConnectorTerminalGroundNoA: F251GroundNo

Is the inspection result normal?

YES >> Replace PNP switch.

NO >> Repair harness or connector.

13. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

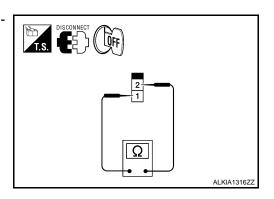
Component Inspection

INFOID:000000001344584

[COUPE]

$1. {\sf check\ clutch\ interlock\ switch}$

- 1. Turn ignition switch OFF.
- 2. Disconnect clutch interlock switch harness connector.
- 3. Check continuity between clutch interlock switch under the following conditions.



Clutch interlock switch		Condition		Continuity	
Teri	minal				
1	2	Clutch pedal		No	
1			Depressed	Yes	

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace clutch interlock switch.

< COMPONENT DIAGNOSIS >

B2110 PNP/CLUTCH INTERLOCK SWITCH

Description

IPDM E/R confirms the shift position with the following signals.

- Park/neutral position (PNP) switch (A/T models)
- Clutch inter lock switch (M/T models)
- Shift position signal from BCM (CAN)

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2110 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-32, "DTC Logic".
- If DTC B2110 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-33, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	F
B2110	INTER LOCK/PNP SW	IPDM E/R detects mismatch between the signals below for 1 second or more.Clutch interlock input signal (M/T models)Shift NP switch input signal (A/T models)	 Harness or connectors [Park/neutral position (PNP) switch circuit is open or shorted (A/T mod- els)] or (Clutch interlock switch circuit is open or shorted.) Clutch inter lock switch (MT models) Park/neutral position (PNP) switch (AT models) 	G H

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

I.FERIORM DIE CONTRIMATION FROCEDORE	
 Turn the ignition switch ON under the following conditions and wait for at least 1 second. A/T selector lever is in the P or N position Do not depress the brake pedal 	J
 Check "Self diagnostic result" with CONSULT-III. <u>Is DTC detected?</u> 	SEC
YES >> Go to <u>SEC-115, "Diagnosis Procedure"</u> . NO >> INSPECTION END	
Diagnosis Procedure	
1.INSPECTION START	M
Check which type of transmission the vehicle is equipped with.	
Which type of transmission	Ν
CVT >> GO TO 2. M/T >> GO TO 5.	
2. СНЕСК DTC WITH BCM	0
Refer to <u>BCS-85, "DTC Index"</u> .	
Is the inspection result normal?	
YES >> GO TO 3. NO >> Repair or replace malfunctioning parts.	Ρ
3. CHECK PNP SWITCH INPUT SIGNAL	
 Turn ignition switch OFF. Disconnect IPDM E/R harness connector. Turn ignition switch ON. 	

[COUPE]

INFOID:000000001344585

INFOID:000000001344586

А

В

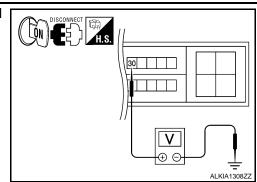
С

D

Ε

< COMPONENT DIAGNOSIS >

4. Check voltage between IPDM E/R harness connector and ground under following condition.

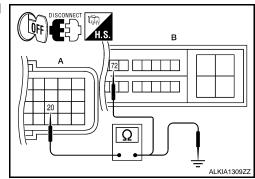


[COUPE]

IPDM E/R		Ground Co		ondition		
Connector	Terminal	Glound	Conduon		Voltage (V)	
E18	30	Ground	CVT selector lever	P or N	0	
210	30	Giouna	CVI Selector level	Other than above	Battery voltage	

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to PCS-43, "Removal and Installation".
- NO >> GO TO 4 (VQ35DE).
- NO >> GO TO 10 (QR25DE).
- **4.**CHECK PNP SWITCH CIRCUIT
- 1. Turn ignition switch OFF.
- 2. Disconnect TCM harness connector.
- Check continuity between IPDM E/R harness connector and TCM harness connector.



T	ТСМ		M E/R	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: F16	20	B: E18	72	Yes

4. Check continuity between TCM harness connector and ground.

	ТСМ		Ground	Continuity	
Conne	ctor	Terminal	Glouid	Continuity	
A: F1	6	20	Ground	No	

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair harness or connector.

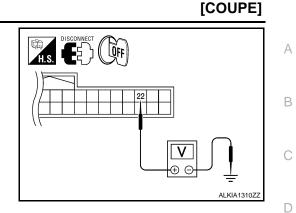
5.CHECK CLUTCH INTERLOCK SWITCH INPUT SIGNAL (BCM)

1. Turn ignition switch OFF.

2. Disconnect BCM harness connector.

< COMPONENT DIAGNOSIS >

3. Check voltage between BCM harness connector and ground.



SEC

L

Μ

Ν

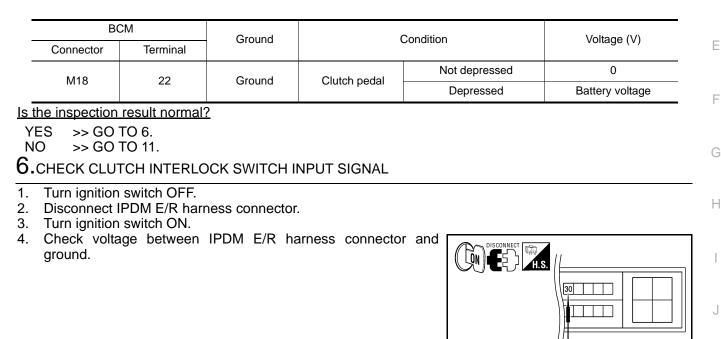
Ρ

ALKIA1308ZZ

∨ ⊕ ∈

0

Battery voltage



 IPDM E/R
 Ground
 Condition
 Voltage (V)

Clutch pedal

Not depressed

Depressed

Is the inspection result normal?

YES >> Replace the IPDM E/R. Refer to PCS-43, "Removal and Installation".

Ground

NO >> GO TO 7.

E18

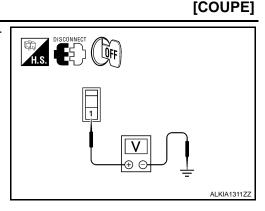
7. CHECK CLUTCH INTERLOCK SWITCH POWER SUPPLY

1. Disconnect clutch interlock switch harness connector.

30

< COMPONENT DIAGNOSIS >

Check voltage between clutch interlock switch harness connector and ground.



Clutch inter	rlock switch	Ground	Voltage (V)	
Connector	Terminal	Cround	voliage (v)	
E36	1	Ground	Battery voltage	

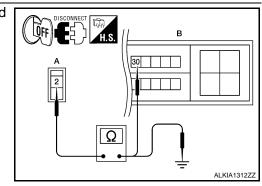
Is the inspection result normal?

YES >> GO TO 8.

NO >> Check harness for open or short between clutch interlock switch and fuse.

8.check clutch interlock switch circuit

1. Check continuity between IPDM E/R harness connector and clutch interlock switch harness connector.



Clutch interlock switch		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: E36	2	B: E18	30	Yes

2. Check continuity between clutch interlock switch harness connector and ground.

Clutch inte	rlock switch	Ground	Continuity	
Connector	Terminal	Giodila	Continuity	
A: E36	2	Ground	No	

Is the inspection result normal?

YES >> GO TO 9.

NO >> Repair harness or connector.

9.CHECK CLUTCH INTERLOCK SWITCH

Refer to SEC-120, "Component Inspection".

Is the inspection result normal?

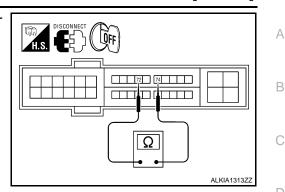
- YES >> Replace the IPDM E/R. Refer to PCS-43, "Removal and Installation".
- NO >> Replace clutch interlock switch.

10.CHECK PNP SWITCH CIRCUIT FOR CONTINUITY

1. Turn ignition switch OFF.

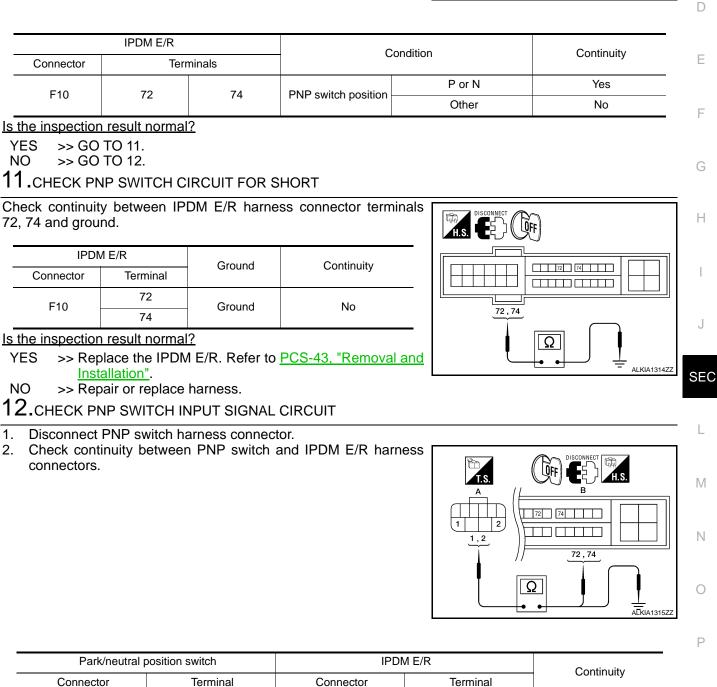
< COMPONENT DIAGNOSIS >

2. Check continuity between IPDM E/R harness connector terminals 72 and 74.



[COUPE]

А



Check continuity between PNP switch harness connector and ground. 3.

1

2

A: F25

SEC-119

B: F10

74

72

Yes

< COMPONENT DIAGNOSIS >

Park/neutral position switchGroundContinuityConnectorTerminalGroundNoA: F251GroundNo

Is the inspection result normal?

YES >> Replace PNP switch.

NO >> Repair harness or connector.

13. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

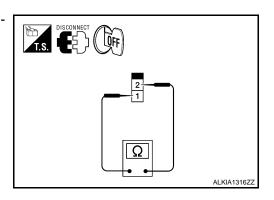
Component Inspection

INFOID:000000001836931

[COUPE]

$1. {\sf check\ clutch\ interlock\ switch}$

- 1. Turn ignition switch OFF.
- 2. Disconnect clutch interlock switch harness connector.
- 3. Check continuity between clutch interlock switch under the following conditions.



	interlock vitch	C	ondition	Continuity
Teri	minal			
1	2	Clutch padal		No
	1 2	Clutch pedal Depressed		Yes

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace clutch interlock switch.

POWER SUPPLY AND GROUND CIRCUIT	
< COMPONENT DIAGNOSIS > [COUPE]	
POWER SUPPLY AND GROUND CIRCUIT BCM	A
BCM : Diagnosis Procedure	В
Refer to <u>BCS-36, "Diagnosis Procedure"</u> . IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) : Di- agnosis Procedure	С
Refer to PCS-19, "Diagnosis Procedure".	D

J

Е

F

G

Н

I

L

Μ

Ν

0

Ρ

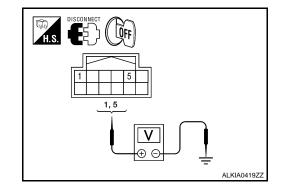
< COMPONENT DIAGNOSIS >

KEY SLOT

Diagnosis Procedure

1. CHECK KEY SLOT POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect key slot connector.
- 3. Check voltage between slot connector and ground.



Key slot		Ground	Voltage (V)	
Connector	Terminal	Ground	(Approx.)	
 M40	1	Ground	Battony voltago	
1/140	5	Ground	Battery voltage	

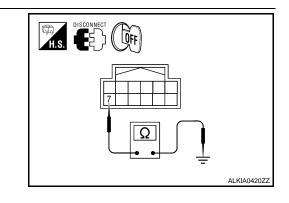
Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace key slot power supply circuit.

2. CHECK KEY SLOT GROUND CIRCUIT

Check continuity between key slot connector and ground.



Keys	Key slot		Continuity	
Connector	Connector Terminal		Continuity	
M40	7	Ground	Yes	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace key slot ground circuit.

3. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

INFOID:000000001836932

KEY SLOT ILLUMINATION

< COMPONENT DIAGNOSIS > [COUPE]
KEY SLOT ILLUMINATION	А
Description INFOID:0000000013445	
Blinks when Intelligent Key insertion is required.	В
Component Function Check	i94
1.CHECK FUNCTION	С
With CONSULT-III Check key slot illumination ("KEY SLOT ILLUMI") Active Test mode.	D
<u>Is the inspection result normal?</u> YES >> Key slot function is OK. NO >> Refer to <u>SEC-123, "Diagnosis Procedure"</u> .	E
Diagnosis Procedure	133
1. CHECK KEY SLOT ILLUMINATION OUTPUT SIGNAL	F
Check voltage between key slot connector and ground.	G
	Н

	Terminals					
(+)			Condition	Key slot	Voltage (V)	SEC
Key slot connector	Terminal	()		illumination	(Approx.)	
M40	6	Ground	Intelligent Key inserted	OFF	Battery voltage	L
10140	0	Giouna	Intelligent Key removed	ON	0	_

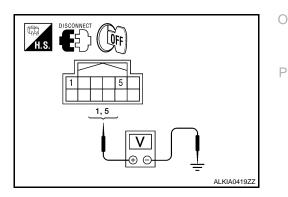
Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 2.

2.CHECK KEY SLOT POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect key slot connector.
- 3. Check voltage between slot connector and ground.



ΞΞ

ALKIA0418ZZ

J

Μ

Ν

KEY SLOT ILLUMINATION

< COMPONENT DIAGNOSIS >

[COUPE]

	Terminals			
(-	+)	(-)	Voltage (V) (Approx.)	
Key slot connector	Terminal	(–) (Approx.)		
M40	1	Ground	Pottory voltago	
10140	5	Ground	Battery voltage	

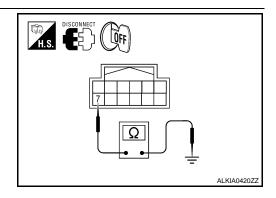
Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace key slot power supply circuit.

3. CHECK KEY SLOT GROUND CIRCUIT

Check continuity between key slot connector and ground.



-	Key slot connector	Terminal	Ground	Continuity
-	M40	7	Ground	Yes

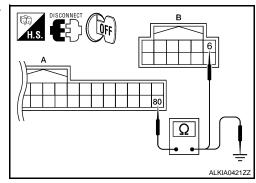
Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace key slot ground circuit.

4.CHECK KEY SLOT CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM and key slot connector.
- 3. Check continuity between BCM connector and key slot connector.



BCM connector	Terminal	Key slot connector	Terminal	Continuity
A: M19	80	B: M40	6	Yes

4. Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
A: M19	80	Ground	No

Is the inspection result normal?

KEY SLOT ILLUMINATION

< CON	IPONENT DIAGNOSIS >	[COUPE]	
YES NO	>> GO TO 5. >> Repair or replace harness between BCM and key slot.		A
5. сн	ECK KEY SLOT		
Refer t	o DLK-73. "Component Inspection".		В
<u>Is the i</u>	nspection result normal?		
YES	>> GO TO 6.		
NO	>> Replace key slot. Refer to <u>SEC-181. "Removal and Installation"</u> .		С
б. СНІ	ECK INTERMITTENT INCIDENT		
Refer t	o GI-42, "Intermittent Incident".		
			D
	>> INSPECTION END.		

J

Е

F

G

Н

I

L

Μ

Ν

0

Ρ

< COMPONENT DIAGNOSIS >

KEY CYLINDER SWITCH

Description

INFOID:000000001836934

[COUPE]

For vehicles equipped with LH and RH anti-pinch system, the main power window and door lock/unlock switch detects condition of the door key cylinder switch and transmits to BCM as the LOCK or UNLOCK signal.

For vehicles equipped with LH anti-pinch system only, the door lock assembly LH (key cylinder switch) transmits the LOCK or UNLOCK signal directly to the BCM.

Component Function Check

INFOID:000000001836935

INFOID:000000001836936

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

Check KEY CYL UN-SW, KEY CYL UN-SW in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT-III. Refer to <u>DLK-36, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)"</u>.

Monitor item	Со	ndition
KEY CYL LK-SW	Lock	: ON
KET OTE EK-SW	Neutral / Unlock	: OFF
KEY CYL UN-SW	Unlock	: ON
KET CTL UN-SW	Neutral / Lock	: OFF

Is the inspection result normal?

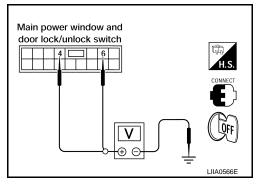
- YES >> Key cylinder switch is OK.
- NO >> With LH and RH anti-pinch, refer to <u>SEC-126. "Diagnosis Procedure (With LH and RH Anti-Pinch)"</u>.
- NO >> With LH anti-pinch only, refer to <u>SEC-128</u>, "Diagnosis Procedure (With LH Anti-Pinch Only)".

Diagnosis Procedure (With LH and RH Anti-Pinch)

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

1. Turn ignition switch ON.

 Check voltage between main power window and door lock/ unlock switch connector and ground.



Terminals				
(+) Main power window and door lock/unlock switch connector				Voltage (V)
		()) Key position	(Approx.)
D7	4	Ground	Lock	0
	4		Battery voltage	
	6	Giouna	Unlock	0
	6		Neutral / Lock	Battery voltage

KEY CYLINDER SWITCH

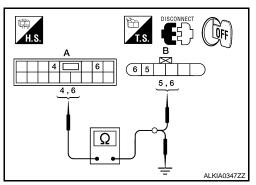
< COMPONENT DIAGNOSIS >

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to <u>PWC-175</u>, "<u>Removal and</u> <u>A</u> <u>Installation</u>". After that, Refer to <u>PWC-120</u>, "<u>POWER WINDOW MAIN SWITCH</u> : <u>Special Repair</u> <u>Requirement</u>".

 $2. {\sf CHECK \ DOOR \ KEY \ CYLINDER \ SIGNAL \ CIRCUIT}$

- 1. Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch connector and door lock assembly LH (key cylinder switch) connector.
- Check continuity between main power window and door lock/ unlock switch connector and door lock assembly LH (key cylinder switch) connector.



Main power window and door lock/ unlock switch connector	Terminal	Door lock assembly LH (key cylinder switch) con- nector	Terminal	Continuity
A: D7	4	B: D10	6	Yes
A. 07	6	B. 810	5	165

4. Check continuity between main power window and door lock/unlock switch connector and ground.

Power window main switch connec- tor	Terminal		Continuity	J
A: D7	4	Ground	No	_
	6		NO	- SE

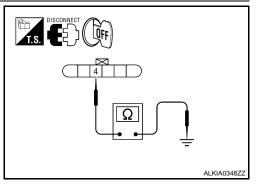
Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

$\mathbf{3}.$ Check door key cylinder switch ground circuit

Check continuity between door lock assembly LH connector and ground.



Door lock assembly LH connector	Terminal	Ground	Continuity
D10	Ground	Yes	

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

В

С

D

Е

F

Н



Μ

Ν

Ρ

< COMPONENT DIAGNOSIS >

CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch.

Refer to SEC-129, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to <u>GI-42, "Intermittent Incident"</u>.

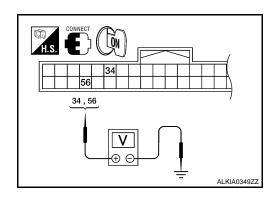
NO >> Replace door lock assembly LH (key cylinder switch). Refer to <u>DLK-198, "FRONT DOOR LOCK :</u> <u>Removal and Installation"</u>. After that, Refer to <u>DLK-11, "ADDITIONAL SERVICE WHEN</u> <u>REPLACING CONTROL UNIT : Special Repair Requirement"</u>.

Diagnosis Procedure (With LH Anti-Pinch Only)

INFOID:000000001836937

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

- 1. Turn ignition switch ON.
- 2. Check voltage between BCM connector and ground.



	Terminals			
(+)		()	Key position	Voltage (V) (Approx.)
BCM connector	Terminal	()		
	56	Ground	Lock	0
M18			Neutral / Unlock	Battery voltage
-	34		Unlock	0
	54		Neutral / Lock	Battery voltage

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to <u>PWC-51, "Removal and Instal-</u> lation". After that, Refer to <u>PWC-19, "POWER WINDOW MAIN SWITCH : Special Repair Require-</u> ment".

NO >> GO TO 2

2. CHECK DOOR KEY CYLINDER SWITCH GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect door lock assembly LH (key cylinder switch) connector.
- 3. Check continuity between door lock assembly LH (key cylinder
- switch) connector and ground.

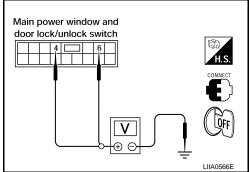
D10 4 Yes	Door lock assembly LH con- nector	Terminal	Ground	Continuity
	D10	4		Yes

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3.CHECK DOOR KEY CYLINDER SIGNAL CIRCUIT



KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

[COUPE]

Ε

F

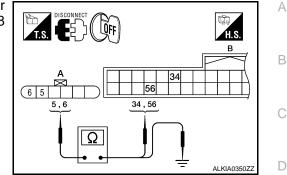
SEC

L

Μ

INFOID:000000001836938

- 1. Disconnect BCM connector M18.
- Check continuity between door lock assembly LH (key cylinder switch) connector D(10) terminals 5, 6 and BCM connector M18 (B) terminals 34, 56.



Door lock assembly LH connector	Terminal	BCM connector	Terminal	Continuity
A: D10	5	B. M18	34	Yes
	6	B: M18	56	

3. Check continuity between door lock assembly LH (key cylinder switch) connector D10 (A) terminals 5, 6 and ground.

Door lock assembly LH connector	Terminal		Continuity	
A: D10	5	Ground	No	Н
A. D10	6		NO	

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

4.CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch.

Refer to SEC-129, "Component Inspection".

Is the inspection result normal?

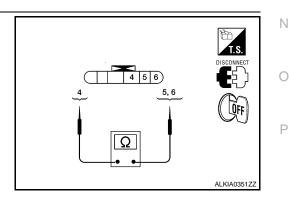
- YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".
- NO >> Replace door lock assembly LH (key cylinder switch). Refer to <u>DLK-198, "FRONT DOOR LOCK :</u> <u>Removal and Installation"</u>. After that, Refer to <u>PWC-137, "Special Repair Requirement"</u>.

Component Inspection

COMPONENT INSPECTION

1. CHECK DOOR KEY CYLINDER SWITCH

Check door lock assembly LH (key cylinder switch).



KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

Terminal		Kay position	Continuity	
Door lock assembly LH	I (key cylinder switch)	Key position	Continuity	
5		Unlock	Yes	
5	4	4	Neutral / Lock	No
<u>^</u>		Lock	Yes	
6	Neutral / Unlock	No		

Is the inspection result normal?

YES >> Key cylinder switch is OK.

NO >> Replace door lock assembly LH (key cylinder switch). Refer to <u>DLK-198, "FRONT DOOR LOCK :</u> <u>Removal and Installation"</u>. After that, refer to <u>DLK-11, "ADDITIONAL SERVICE WHEN REPLAC-ING CONTROL UNIT : Special Repair Requirement"</u>.

|--|

< COMPONENT DIAGNOSIS >
HORN

Description

Horn (high/low) is located inside of front bumper and operates when theft warning system is in alarm phase.

Component Function Check

1. CHECK FUNCTION

1. Select HORN in "ACTIVE TEST" mode with CONSULT-III.

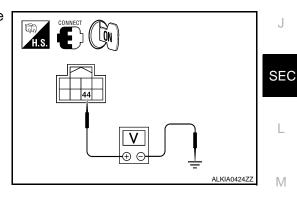
2. Check the horn (high/low) operation.

Test item			Description		
HORN	ON	Horn relay	ON (for 20 ms)		
Is the operation no	rmal?				b
	CTION END. to <u>SEC-131, "Diac</u>	nosis Procedure".			F
Diagnosis Pro	cedure			INFOID:000000001836942	
1.CHECK HORN	FUNCTION				(
Check horn function	n with horn switch	1			

Do the horns sound?

YES	>> GO TO 2.
-----	-------------

- NO >> Refer to <u>HRN-3, "Wiring Diagram Coupe"</u>.
- 2. CHECK HORN RELAY POWER SUPPLY
- 1. Turn ignition switch ON.
- 2. Perform "ACTIVE TEST" ("HORN") with CONSULT-III.
- 3. Using an analog voltmeter or an oscilloscope, check voltage between IPDM E/R connector E17 terminal 44 and ground.



IPD	M E/R	Ground	Test item		Ground Test item		Voltage (V)	N
Connector	Terminal	Ground			(Approx.)			
E17	44	Ground	HORN	ON	Battery voltage $\rightarrow 0 \rightarrow$ Battery voltage			
	44	Ground	HORN	Other than above	Battery voltage	0		

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

3.CHECK HORN RELAY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect IPDM E/R and horn relay connector.

INFOID:000000001836940

INFOID:000000001836941

А

В

С

Н

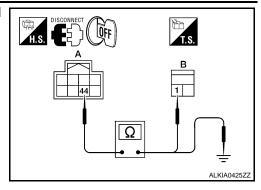


HORN

< COMPONENT DIAGNOSIS >

[COUPE]

3. Check continuity between IPDM E/R harness connector and horn relay harness connector.



IPD	IPDM E/R		Horn relay	
Connector	Terminal	Connector	Terminal	Continuity
A: E17	44	B: H-1	1	Yes

4. Check continuity between IPDM E/R harness connector and ground.

IPD	M E/R	Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: E17	44	Ground	No	

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace IPDM E/R.Refer to PCS-43. "Removal and Installation".

NO >> Repair or replace the malfunctioning part.

HEADLAMP

< COMPONENT DIAGNOSIS > [COUPE]	_
HEADLAMP	А
Description INFOID:000000001344603	
Headlamp lighting when theft warning system is alarm phase.	В
Component Function Check	t
1.CHECK HEADLAMP OPERATION	С
Check if headlamp operate by lighting switch.	
Does headlamp come on when turning switch "ON"? YES >> Headlamp circuit is OK.	D
NO >> Check headlamp system. Refer to <u>SEC-133, "Diagnosis Procedure"</u> .	
Diagnosis Procedure	5 E
1.CHECK HEADLAMP OPERATION	
Refer to EXL-36, "Diagnosis Procedure".	F
<u>Is the inspection result normal?</u> YES >> GO TO 2.	
NO >> Repair or replace.	G
2.CHECK INTER MITTENT INCIDENT	_
Refer to <u>GI-42, "Intermittent Incident"</u> .	Н
<u>Is the inspection result normal?</u> >> INSPECTION END.	

J

SEC

L

 \mathbb{N}

Ν

0

Ρ

WARNING LAMP

< COMPONENT DIAGNOSIS >

WARNING LAMP

Description

- Warning lamp is built in combination meter.
- Intelligent Key system malfunction is reported to the driver by the warning lamp illumination.

Component Function Check

1.CHECK FUNCTION

- 1. Perform "INDICATOR" in the "Active Test" mode with CONSULT-III.
- 2. Check warning lamp operation.

Test	item	Description			
INDICATOR	ON	Warning Jamp	ON		
INDICATOR	OFF	Warning lamp	OFF		

Is the inspection result normal?

YES >> INSPECTION END.

NO >> Go to <u>SEC-134</u>, "Diagnosis Procedure".

Diagnosis Procedure

1.CHECK "COMBINATION METER."

Check combination meter function. Refer to MWI-4, "Work Flow".

Is the inspection result is normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

INFOID:000000001344606

INFOID:000000001344607

INFOID:000000001344608

VEHICLE SECURITY INDICATOR

< COMPONENT DIAGNOSIS >

VEHICLE SECURITY INDICATOR

Description

- Vehicle security indicator is built in combination meter.
- В • NVIS (Infinity Vehicle Immobilizer System-NATS) and vehicle security system conditions are indicated by blink or illumination of vehicle security indicator.

Component Function Check

1.CHECK FUNCTION

- 1. Perform "THEFT IND" in the "ACTIVE TEST" mode with CONSULT-III.
- 2. Check vehicle security indicator operation.

Test	tem	Des	scription		E
	ON		ON		
THEFT IND	OFF	Vehicle security indicator	OFF		
Is the inspection result norm	al?				F
YES >> INSPECTION E NO >> Go to <u>SEC-135</u> ,	ND. "Diagnosis Procedure"				G
Diagnosis Procedure				INFOID:000000001344611	C
1.CHECK COMBINATION	METER				F
Check combination meter. R		low".			
<u>ls the inspection result is no</u> YES >> GO TO 2. NO >> Repair or replac	r <u>mal?</u> e the malfunctioning pa	rts.			
2. CHECK INTERMITTENT	• •				

>> INSPECTION END.

[COUPE]

INFOID:000000001344609

INFOID:000000001344610

А

С

D

L

Μ

Ν

Ο

Ρ

< ECU DIAGNOSIS >

ECU DIAGNOSIS BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL Refer to <u>BCS-41, "Reference Value"</u>.

Terminal Layout

Refer to <u>BCS-45, "Terminal Layout"</u>. Physical Values

Refer to BCS-45, "Physical Values".

INFOID:000000001344613

INFOID:000000001344612

INFOID:000000001344614

< ECU DIAGNOSIS >

Wiring Diagram - INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION -



[COUPE]

А INFOID:000000001344615



В





J

SEC

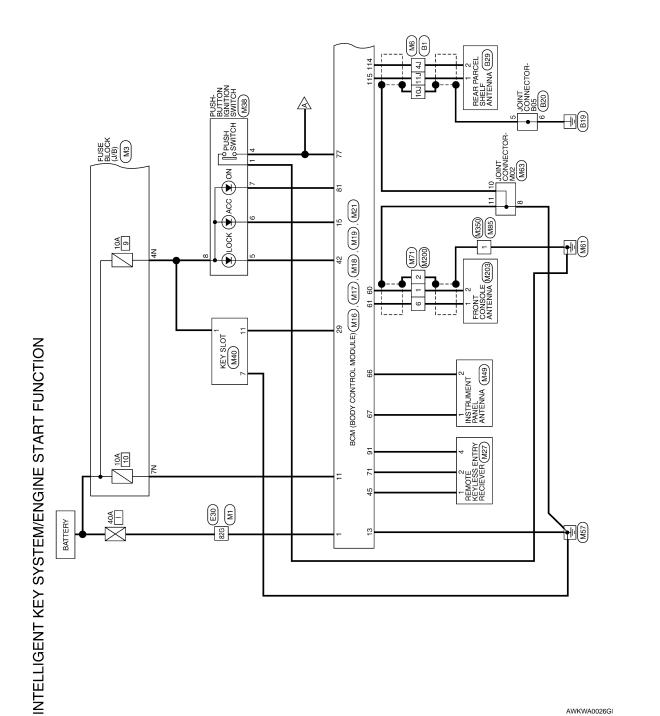
L

Μ

Ν

0

Ρ



BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

M → MITH M/T
VT → WITH CVT
T → DATA LINE METER M24 A A AΔ ∕ୠ A A FUSE BLOCK (J/B) M3 M4 23 UNIFIED METER CONTROL UNIT (WITH INFORMATION DISPLAY) e IGNITION SWITCH ACC OR ON ₹<u>1</u> SN 4 22 SECURITY 5 Z 88 64 2 82 132 BCM (BODY CONTROL MODULE) (M18), (M19), (M21) 27 ç ELECTRONIC STEERING COLUMN LOCK (M32) 7 2 3 8 1 5 ŝ 94 99 85 86 8 8 (≥ DETENT SWITCH) M23 M23 ğ 26 2Р 87 N ₽ STOP LAMP SWITCH E38 8 <u>__</u> Ю OPEN ЮЮ 0 DOOR SWITCH RH B108 CLOSED С 10 B104 BATTERY g 24 ŝ \$

AWKWA0027G

OO GEN

B8 CLOSED OPE

B1 M6

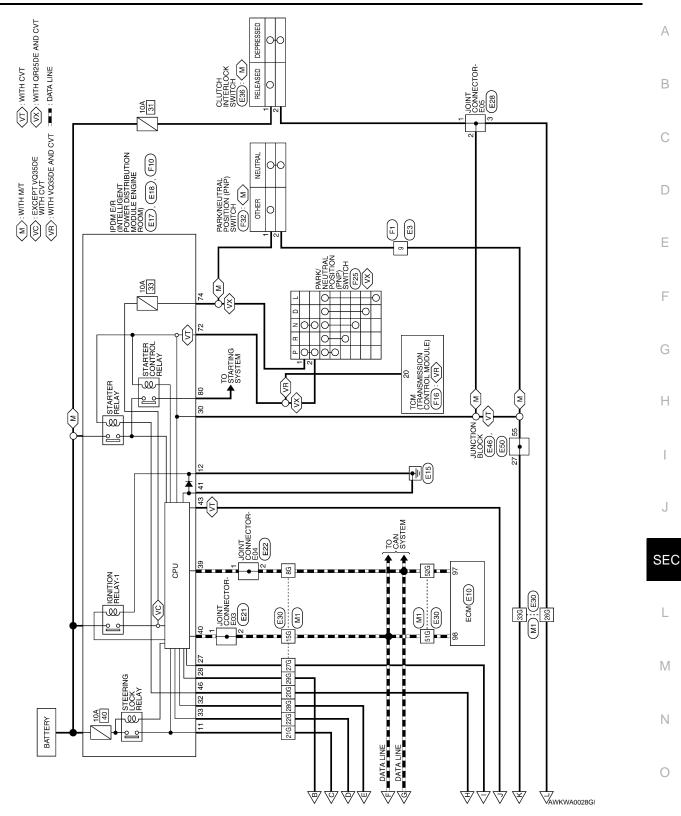
58

✌

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[COUPE]



Ρ

BCM (BODY CONTROL MODULE)

Signal Name

Color of Wire

Terminal No.

W/L G∕ ≿ Y/R

ž

3N 2N 1N 8N 7N 6N 5N 4N

H.S. 佢

Т

7N 4N

I. T

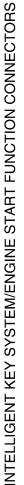
T

< ECU DIAGNOSIS >

Connector Name FUSE BLOCK (J/B)

Connector No. M3

Connector Color WHITE



No. Color of Wire- Wire- Mire- Mire- BR/W BR/W BR/W BR/W BR/W BR/W BR/W BR/W		Signal Name		I	1	1	1	I	I	1	1	I	1	1	I
ninal No. Co 8G No. Co 15G 1 15G 1 22G 2 22G 2 22G 1 22G 2 233G 1 82G 1 82 82G 1 82 82G 1 82 82 82 82 82 82 83 83 83 83 83 84 83 84 84 84 84 84 84 84 84 84 84 84 84 84	-		Р	_	н	P/L	3/R	۲Y	R/W	0/-	BR	3/G	_	д.	N/B
		ninal No. Co	8G	15G	20G	21G	22G (26G	27G B	28G	29G	33G F	51G	52G	82G \

9G 8G 7G 6G 5G 4G 3G 176 166 156 146 138 126 116 106 2G 1G

H.S.

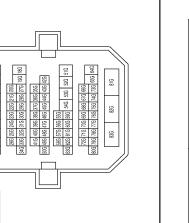
E

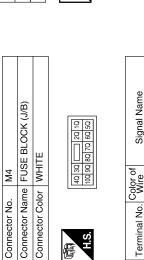
Connector Name WIRE TO WIRE

ž

Connector No.

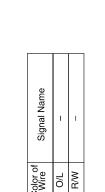
Connector Color WHITE





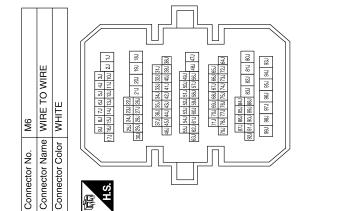
H.S.

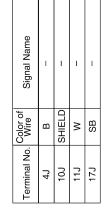
E



ğ g

AWKIA0152GB





[COUPE]

AGNOSIS >			[COUPE]
DY CONTROL	Signal Name BAT_BCM_FUSE GND1 ACC_LED		
Connector No. M17 Connector Name BCM (BODY CONTROL Connector Color WHITE Connector Color WHITE	Color of Wire B Y/R V/I		
Connector Nan Connector Nan Connector Col	Terminal No. 11 15		
CONTROL	Signal Name BAT_POWER_F/L	Signal Name CLUTCH_SW STOP_LAMP_LOW_SW STOP_LAMP_HIGH_SW FOB_IN_SW AS_DOOR_SW S/L_LOCK_LED GND_RF2_A/L SHIFT_N/P IMM0_LED DR_DOOR_SW	
Vo. M16 Vame BCM (BODY CONTROL Color BLACK	Color of Wife W/B	Color of Wire Wire R/W R/W R/W R/W R/W R/W O/L V/W R/B R/B R/G R/G S/B	
Connector No. Connector Name Connector Color H.S.	Terminal No.	Terminal No. 22 24 26 27 28 45 48 49 58 58	_
NIRE	Signal Name	Connector No. M18 Connector Name BCM (BODY CONTROL Connector Color GREN Image: Solution of the second of the seco	
Connector No. M10 Connector Name WIRE TO WIRE Connector Color BROWN	Color of Wire R/B	Connector No. M18 Connector Name BCM (BOD Connector Color GREEN 38 37 38 34 33 23 13 23 24 39 38 57 56 55 45 32 25 1 50 48 48	
Connector No. Connector Nam Connector Colo	Terminal No. 10	Connector No. Connector Nar Connector Nar Connector Col Second Se	153GB

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[COUPE]

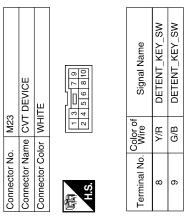
SEC-141

Connector No. M21	Connector Name BCM (BODY CONTROL	MODULE)	Connector Color GRAY	4	(<u> <u> </u> <u> </u> </u>	H.S.		131 130 129 128 127 126 125 124 123 122 121 120 119 118 117 116 115 114	151 150 149 148 147 146 145 144 143 142 141 140 139 138 137 136 135 134		Terminal No. Color of Signal Name	В	115 W TRUNK_ANT_1_A	127 BR/W IGN_USM_CONT1	132 R ST_CONT_USM
	Signal Name	RF1_TUNER_SIGNAL	ENG_START_SW	CAN-L	CAN-H	IGN_ON_LED	AT_DEVICE_OUT	S/L_CONDITION_1	S/L_CONDITION_2	SHIFT_P	RF1_POWER_SUPPLY	S/L POWER SUPPLY_12V	S/L_K-LINE		
Color of	Wire	Г/О	BR	Р		ГG	Y/R	Г/О	G/R	G/B	L/R	G/Y	ΓΛ		
Torminal No Color of	I ETTIINAI NO.	71	17	78	62	81	84	85	86	87	91	94	66		
	Y CONTROL							8 67 66 65 64 63 62 61 60	8 87 86 85 84 83 82 81 80		nal Name	OM_ANT_2_B	OM_ANT_2_A	OM_ANT_1_B	OM_ANT_1_A

					1 60	81 80]					
					2 6	82 8						
					66 65 64 63 62 61	8			m	<	m	<
	BCM (BODY CONTROL MODULE)				64	8			ROOM_ANT_2_B	ROOM_ANT_2_A	ROOM_ANT_1_B	ROOM_ANT_1_A
	E				65	85		Signal Name	Ξ	Ξ	1	Ę
	ð					86		Ra	◄	₹	₹	⋖
	Ō				68 67	87		a a	N	N	N	N
	6					88		igr	ŏ	ŏ	ŏ	ŏ
				1K	70 69	88		0	۳ ۳	۳ ۳	۳ سا	œ
	50	Ò			N N	90						
M19	Ďб	BLACK		Ц	72 71	92 91		Color of Wire		~		
2		-			23 7	93 9		Pin N	B/B	W/R	ш	G
.	ше Ш	p			4	2		ပိ>	-	-		
2	Ra	ပိ			78 77 76 75 74 73	95		<u>o</u>				
đ	ţ	đ			76	96						
lec	lec	ec	, vi		1	97		ji ŝ	00	61	99	67
Connector No.	Connector Name	Connector Color	H.S.H		9 78	98		Terminal No.				
Ŭ	Ŭ	Ŭ	le le		79	66		Ĕ				

			_						
Signal Name	BAT	GND	ACC	CAN-H	CAN-L		GIND		SECURITY
Color of Wire	M/L	В	۲/۷	L	٩	٥	D	ç	Ç
Terminal No.	٢	3	14	21	22	66	50	00	٥Z
						Г	_		
							00	3	36 37 38 39 40
							16 17 18 10 20	2	8
	Т						F	-	37 3
							4	2	8
<u>a</u>							E	_	

				18 1	38 3
				17 1	37 3
				16 1	36 3
	۲ ۲			F.	3
	COMBINATION METER			15	35
	Ψ			14	34
	2		l i	13	30 31 32 33 34
	⊡			10 11 12	32
	L ↓			÷	31
	Z			10	30
	ΨB	WHITE		6	28 29
M24	õ	王		∞	28
2		5		4	26 27
	лe	r		9	26
o	a	18			
z	Z	0		2	25
đ	ğ	ğ		4	24
ec	l Ö	l Ö		e	23
Connector No.	Connector Name	Connector Color	H.S.	N	21 22
ပြီ	ပြီ	ပြီ	晤王	-	21



Signal Name	DETENT_KEY_SW	DETENT_KEY_SW	
Color of Wire	Y/R	G/B	
Terminal No.	8	6	

AWKIA0154GB

< ECU DIAGNOSIS >

[COUPE]

								1		11								
M38 PUSH-BUTTON IGNITION SWITCH BROWN	4 5 6 7 8 7 8	Signal Name	GND	START_SW	LOCK	AUC	5 ±			JOINT CONNECTOR-M02	ш		7 6 5 4 3 2 1	Signal Name	I	I	1	
		Color of Wire	в	BB	r Ş	- 10	2 ∑		o. M63	_	olor BLUE		12 11 10 9 8	Color of Wire	в	GR	GR	
Connector No. Connector Name Connector Color	品.R.	Terminal No.	-	4	n N	0 1	~ ∞		Connector No.	Connector Name	Connector Color	E	H.S.	Terminal No.	œ	10	1	
									_			_					-	
M32 ELECTRONIC STEERING COLUMN LOCK WHITE		Signal Name	S/L_12V_MECHANICAL	S/L_COM	S/L_CONDITION_1	GND	GND	S/L_CONDITION_2	M49 INSTRUMENT PANEL ANTENNA GRAY		Signal Name	ANT+	ANT-					
M32 ELECTRO COLUMN WHITE	4 8						_	+	M49		GRAY	<	-			н	-	
		No. Color of Wire	P/L		Г/О	В	8	G/R		e		-		L No. Color of	Ű		-	
Connector No. Connector Name Connector Color	品. H.S.	Terminal No.	-	2	с	£	9	~ 8	Connector No.	Connect	Connector Color	þ	H.S.	Terminal No.	-	2		
									—							1		
M27 REMOTE KEYLESS ENTRY RECIEVER BLACK	3	Signal Name	GND	GND SIGNAL 12V		4 5 10 11	Signal Name	ъ В+	GND	CARD_SW_1								
		Color of Wire	۵.	P 10	H				M40		r WHITE		1 2 3 7 8 9	Color of Mire	G/Y	В	>	
Connector No. Connector Name Connector Color	H.S.	Terminal No.	-	2	4				Connector No.	Connector Name	Connector Color		H.S.	Terminal No.	-	7	1	

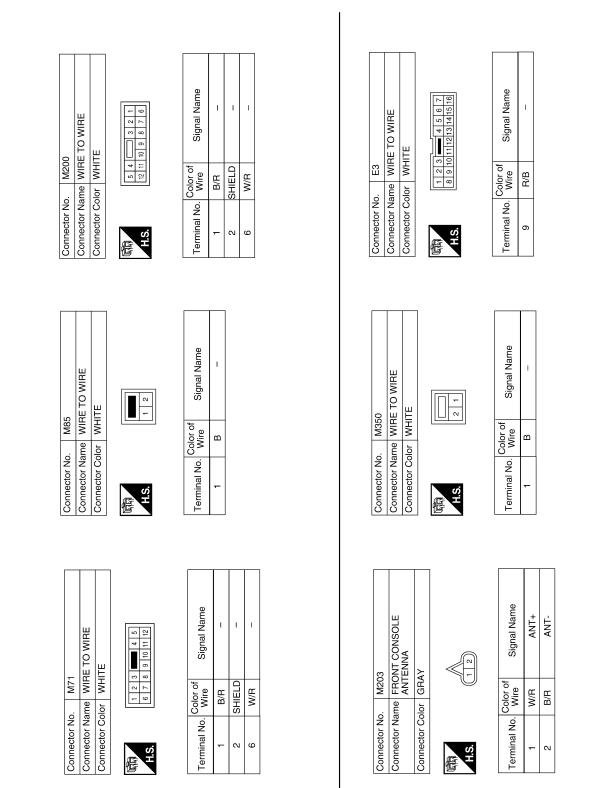
PCM (PODY CONTROL MODULE)

< EC

SEC-143

BCM (BODY CONTROL MODULE)

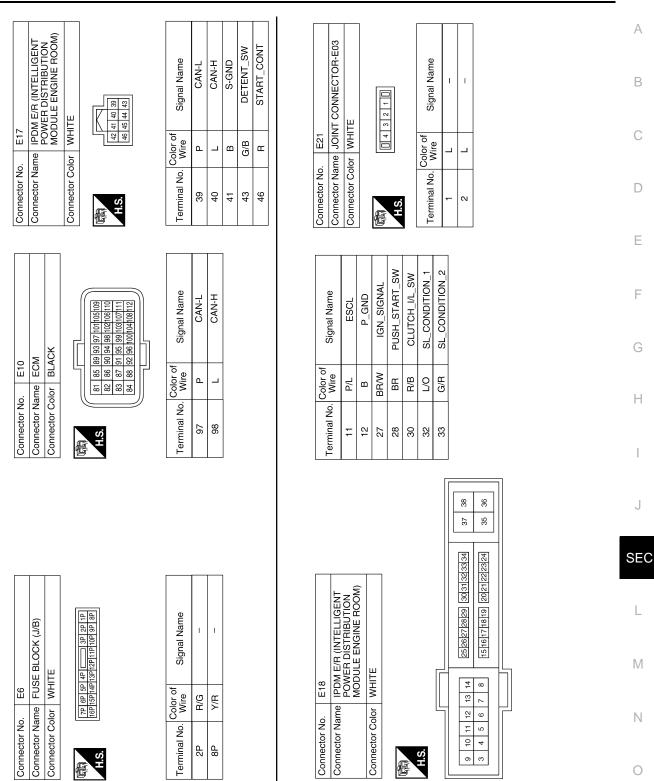
< ECU DIAGNOSIS >



ALKIA0138GB



< ECU DIAGNOSIS >



ALKIA0139GB

Ρ

[COUPE]

Т

N

I.

I I

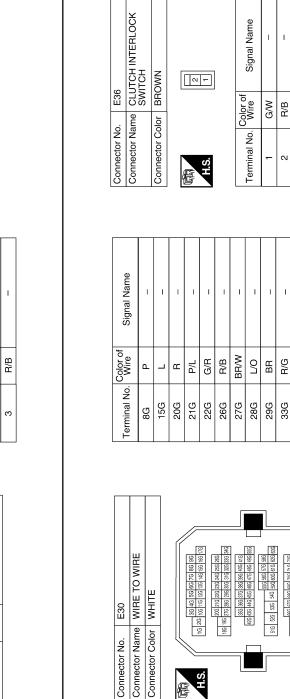
W/B

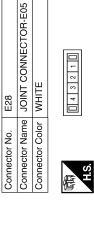
۵ _

1

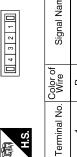
R/G

33G 51G 52G 82G









Signal Name

Color of Wire

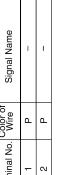
Terminal No.

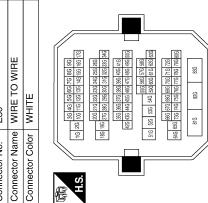
I. Т

R/B R/B

-

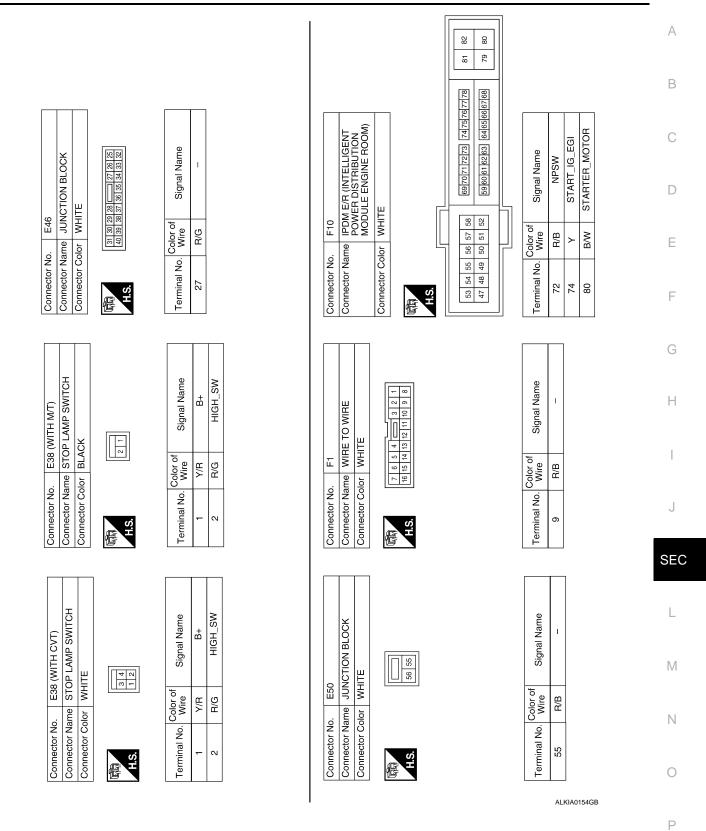
N



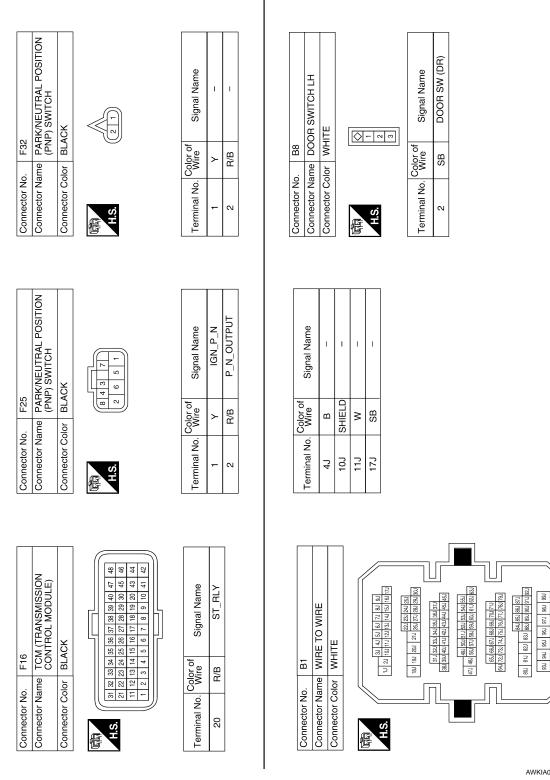


AWKIA0155GB

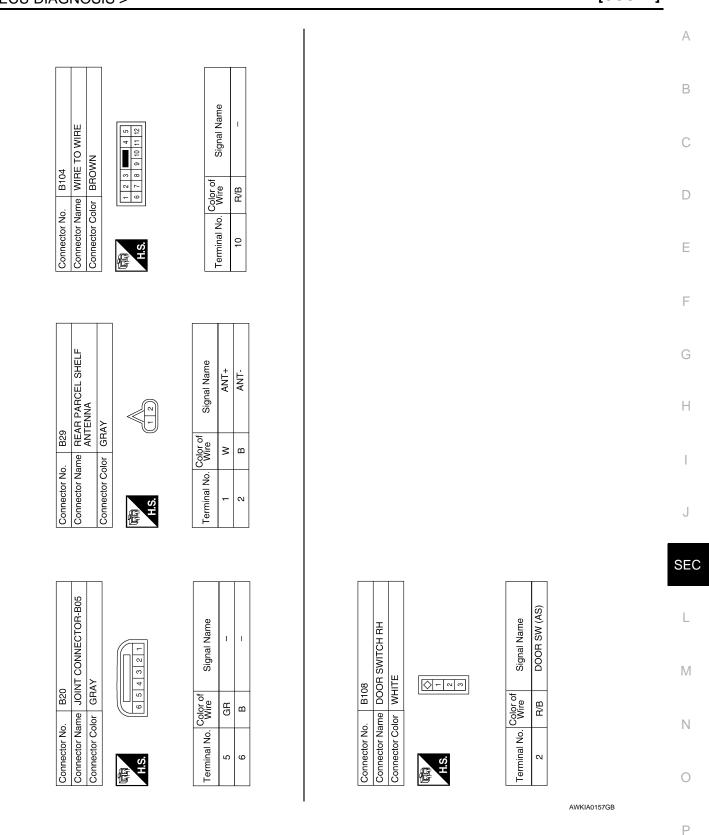
< ECU DIAGNOSIS >



[COUPE]



AWKIA0156GB



< ECU DIAGNOSIS >

[COUPE]

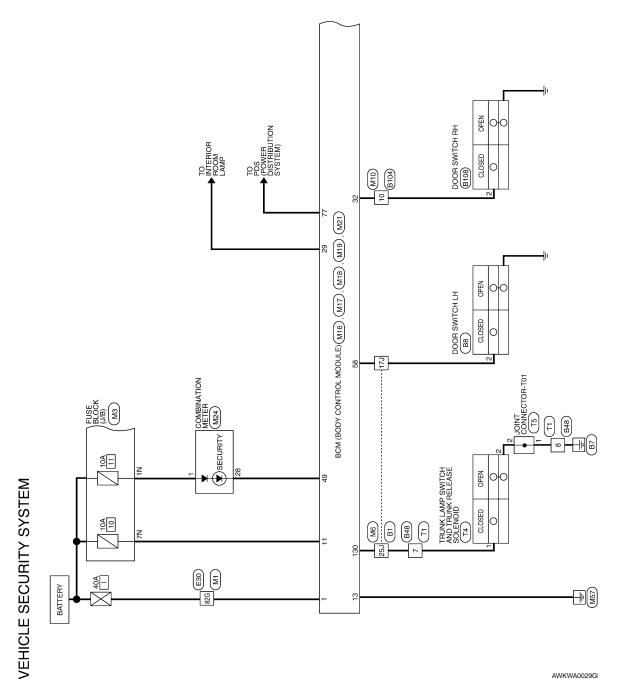
SEC-149

< ECU DIAGNOSIS >

Wiring Diagram - VEHICLE SECURITY SYSTEM -



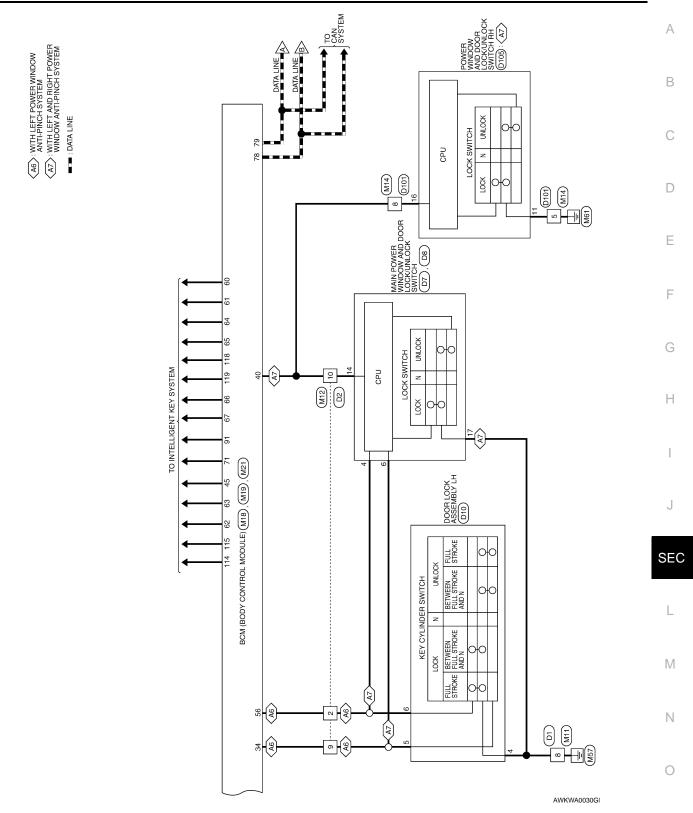
[COUPE]



AWKWA0029G

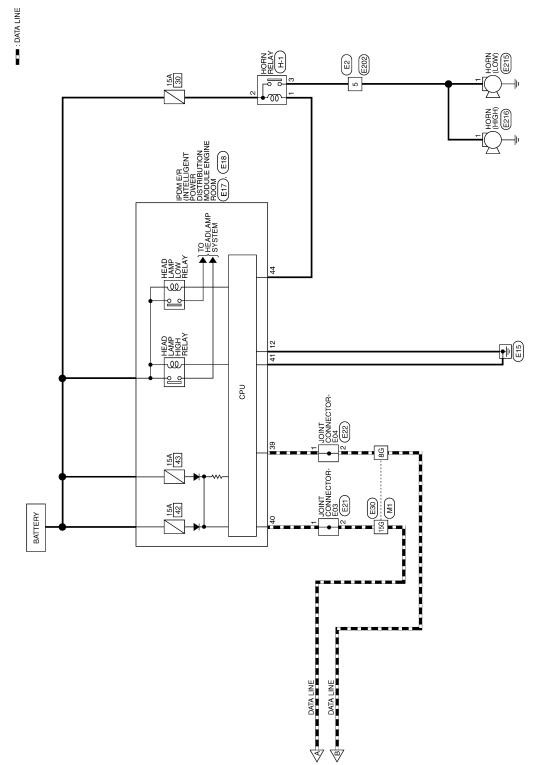
< ECU DIAGNOSIS >

[COUPE]



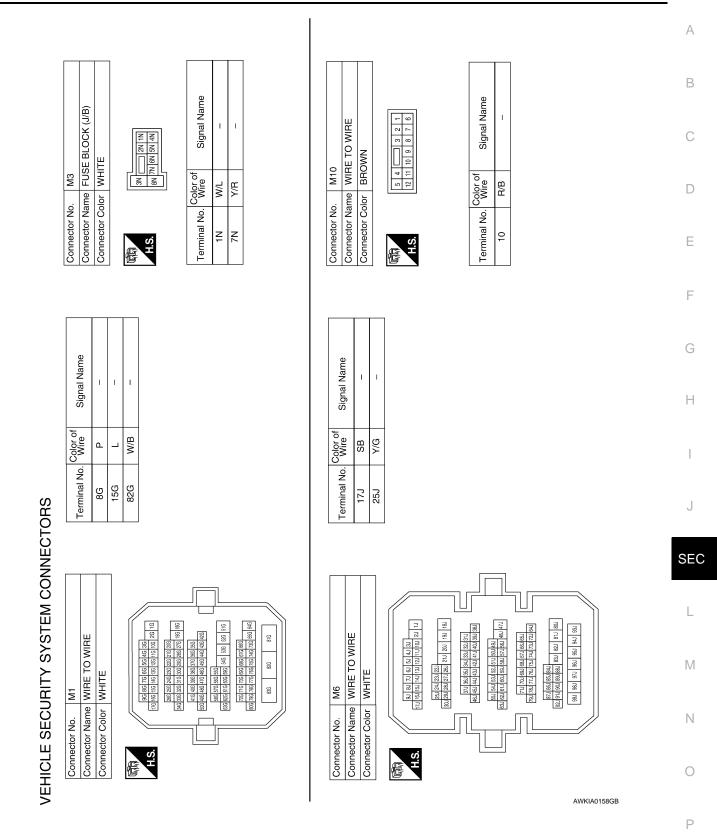
Ρ





ALKWA0008GE

< ECU DIAGNOSIS >



< ECU DIAGNOSIS >

[COUPE]

DR_DOOR_SW

SB

58

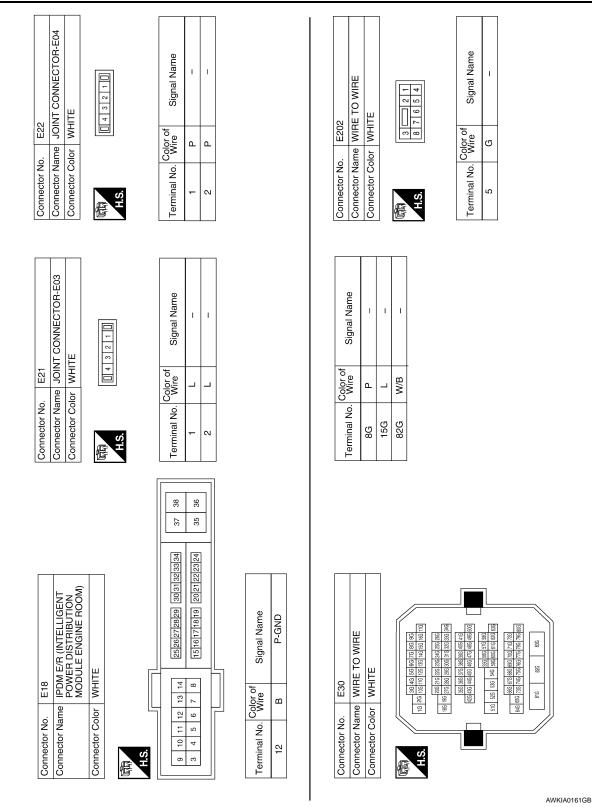
AWKIA0159GB

< ECU DIAGNOSIS >

Connector No. M24 Connector Name COMBINATION METER Connector Color WHITE	1 2 3 4 5 6 7 8 9 10 11 12 13 14 16 17 18 9 21 22 23 24 25 26 7 8 9 10 11 12 13 14 16 17 18 10 Terminal No. Color of Signal Name Signal Name 28 LO SECURITY 28 LO SECURITY BAT	Terminal No. Color of Wire Signal Name 39 P CAN-L 39 L CAN-L 40 L CAN-H 41 B S-GND 44 G/W HORN_RLY	
TROL	Image: 100 minute		
Connector No. M21 Connector Name BCM (BODY CONTROL MODULE) Connector Color GRAY	133 133 131 131 131 131 131 131 131 131 131 131 132 131 133 14 13 11 119 BR/W 130 V/G 130 V/G	E17 POWER DISTRIBUTION MODULE ENGINE ROOM) WHITE 42 41 40 33 46 44 43 46 44 44 46 44 45 46 44 45 46 44 45 46 44 45 46 44 45 46 46 46 46 46 46 46 46 46 46 46 46 46 4	
Vo. M21 Vame BCM (I Dolor GRAY			
Connector No. Connector Name Connector Color	HS 131 131 131 131 131 131 131 131 131 131 131 130	Connector No Connector Name Connector Color	
M19 BCM (BODY CONTROL MODULE) BLACK	Image: Bit of the second sec	O WIRE Signal Name	
M19 BCM (BODY MODULE) BLACK			
Connector No. W Connector Name B Connector Color B	73 77 73 72 73 72 73 72 73 72 73 72 73 72 73 72 73 72 73 72 73 72 73 72 73 72 74 76 77<	Connector No. E2 Connector Name WIF Connector Color WH H.S. E4 Terminal No. Color of S. G. G	
- - -	ALS 70 70 70 70 70 70 70 70 70 70 70 70 70 7		

Ρ

< ECU DIAGNOSIS >



GNOSIS >	[COUPE]
Connector No. B1 Connector Name WIRE TO WIRE Connector Name WIRE TO WIRE Onnector Name Wire Onnector Name Wire Onnector Name Wire Main Statistical Main Main Main Main Main Main Main Main Main Main Main Main Main Main Main Main Main Main Main Main Main Main Main Main Main	Connector No. B104 Connector Name WIRE TO WIRE Connector Name WIRE TO WIRE Connector Name Image: Second seco
Connector Name E216 Connector Name HORN Connector Name HORN Connector Color BLACK Image: Algorithm of the state of the stat	Connector No. B48 Connector Name WIRE TO WIRE Connector Color WHITE Connector Color WHITE Mile 1 Mile 1 Mile 1 Mile 1 Mile 1 Mile 1 Mile Signal Name 7 V/G 8 B
Connector No. E215 Connector Name HORN Connector Name HORN Connector Color BLACK Image: Signal Name 1	Connector No. B8 Connector Name DOOR SWITCH LH Connector Color WHITE Terminal No. Color of Wire 3ignal Name 2 SB DOOR SW (DR)

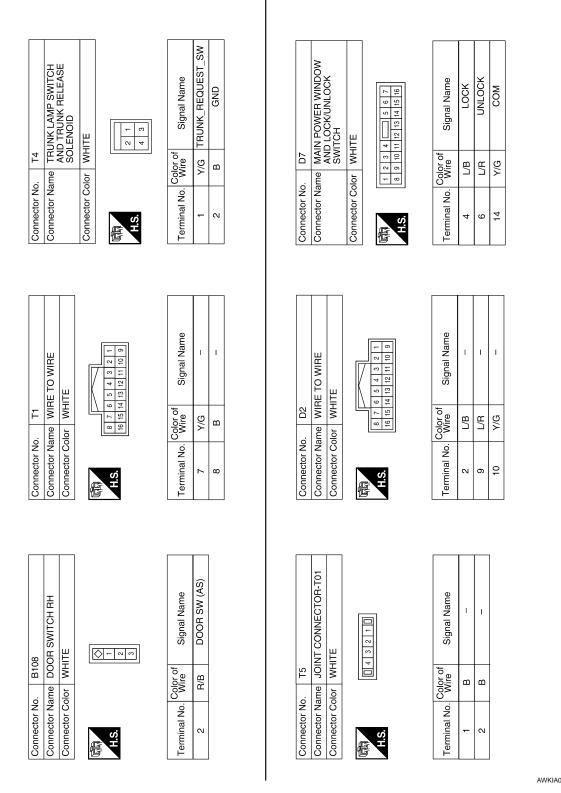
< ECU

[COUPE]

Ρ

< ECU DIAGNOSIS >

[COUPE]



AWKIA0163GB

GNOSIS >					[COOFL]
WIRE 001	Signal Name				
Connector Name WIRE TO WIRE Connector Color WHITE	Color of Wire B Y/G				
Connector Nan Connector Colo H.S.	Terminal No. 5 8				
LOCK BLVLH	Signal Name GND DOOR KEY/C- UNLOCK_SW LOCK SW				
GRAY 2 3 2 3	Color of Wire B B LB				
Connector Name Connector Color	Terminal No. 4 6				
2					
Wain Power Window Switch White	Signal Name GND LOCK	D105 POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH (WITH LEFT AND RIGHT WINDOW	NCH SYSTEM)	Signal Name GND COM	
	Color of Wire B GR	0. D105 ame POWER SWITCH AND RIG	ANTI-PINCH SY VHITE 1 2 3 4 5 6 8 9 10 11 12 13 14 15	Color of Wire B Y/G	
Connector Name Connector Color	Terminal No. 17 18	Connector No. Connector Name	Connector Color H.S.	Terminal No. 11 16	
				AWKIA01	164GB

< ECU DIAGNOSIS >

[COUPE]

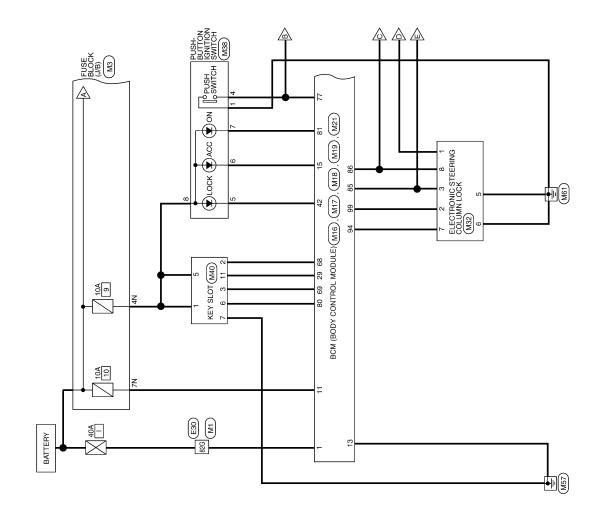
SEC-159

< ECU DIAGNOSIS >

Wiring Diagram - NVIS -

INFOID:000000001344617

[COUPE]

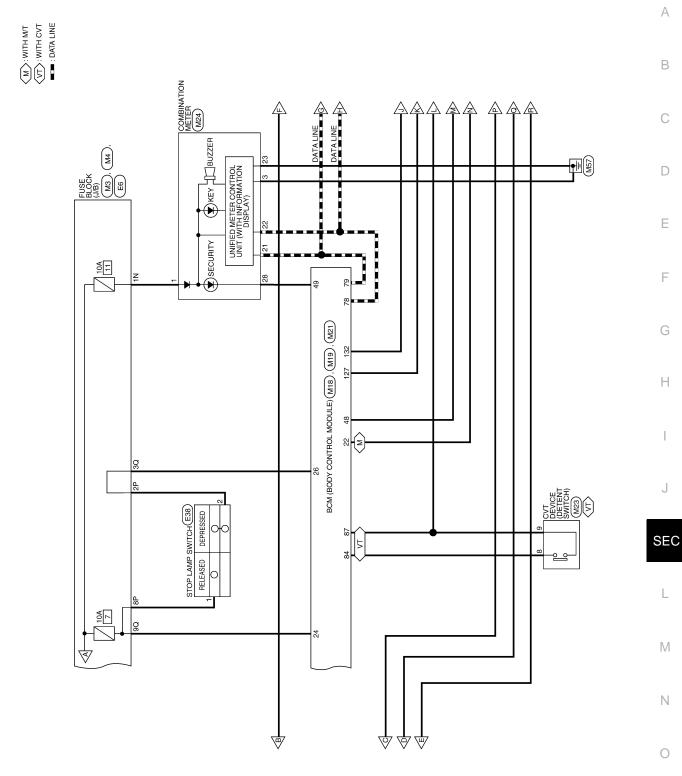


NVIS

AWKWA0031G

< ECU DIAGNOSIS >

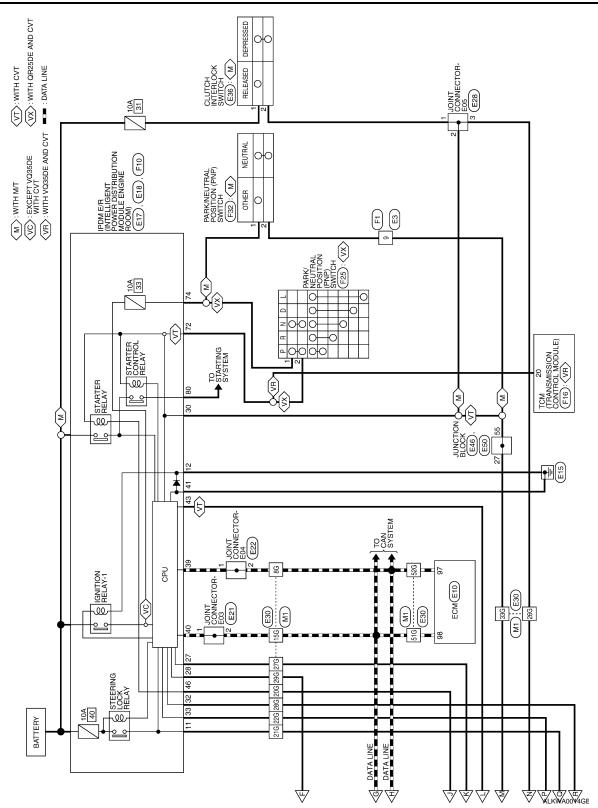
[COUPE]



AWKWA0032GI

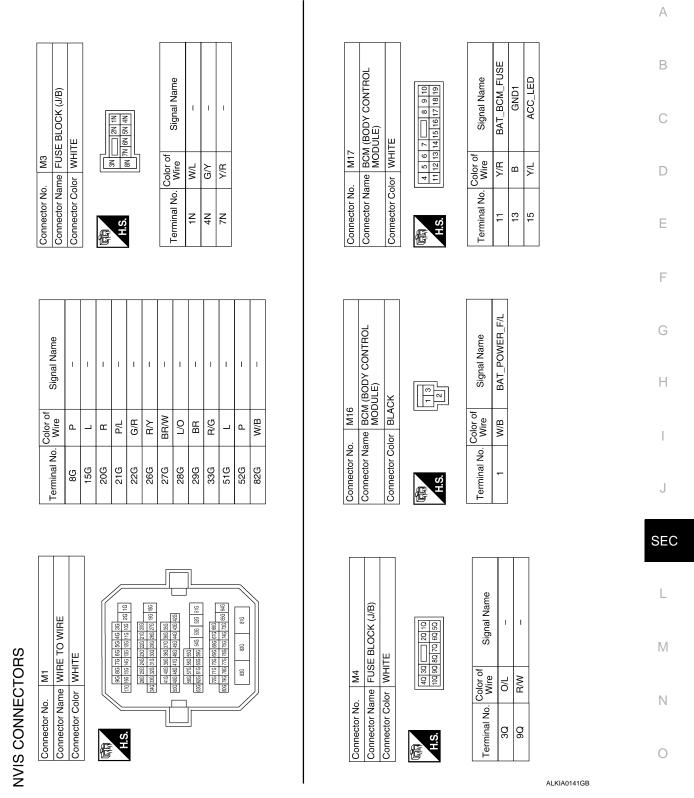
Ρ

< ECU DIAGNOSIS >



< ECU DIAGNOSIS >

[COUPE]



Ρ

Signal Name	ENG_START_SW	CAN-L	CAN-H	FOB SLOT ILLUMINATION	IGN_ON_LED	AT_DEVICE_OUT	S/L_CONDITION_1	S/L_CONDITION_2	SHIFT_P	S/L_POWER SUPPLY_12V	S/L_K-LINE	
Color of Wire	ВВ	٩	_	R/L	Ľ	Y/R	L/0	G/R	G/B	G/Y	Z	
Terminal No.	77	78	62	80	81	84	85	86	87	94	66	

Т

Т Т

Т Т Т Т Т

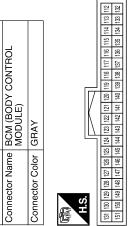
			_			61 60	81 80]			
	BCM (BODY CONTROL MODULE)				$\overline{\nabla}$	69 68 67 66 65 64 63 62 6	89 88 87 86 85 84 83 82 8		Signal Name	FOB_READER_CLOCK	FOB_READER_DATA
6	M (B	BLACK				71 70	91 90			Ū	R
. M19						74 73 72	94 93 92 9		Color of Wire	G/O	0
Connector No.	Connector Name	Connector Color		晤	Ņ.	79 78 77 76 75	66 96 97 96 95		Terminal No.	68	69

	1		1	21 20 41 40		r		r		
ω	BCM (BODY CONTROL MODULE)	GREEN		32 31 30 29 28 27 26 25 24 23 22 52 51 50 49 48 47 46 45 44 43 42	Signal Name	CLUTCH_SW	STOP_LAMP_LOW_SW	STOP_LAMP_HIGH_SW	FOB_IN_SW_1	S/L_LOCK_LED
. M18				34 33 32 54 53 52	Color of Wire	RV	R/W	0/F	≻	æ
Connector No.	Connector Name	Connector Color	मिन्न H.S.	39 38 37 36 35 59 58 57 56 55	Terminal No.	22	24	26	29	42

Ι.								
	Signal Name	CLUTCH_SW	STOP_LAMP_LOW_SW	STOP_LAMP_HIGH_SW	FOB_IN_SW_1	S/L_LOCK_LED	SHIFT_N/P	IMMO_LED
	Color of Wire	R/Y	R/W	0/L	≻	œ	R/G	Г/О
	Terminal No.	22	24	26	29	42	48	49

M23	CVT DEVICE	WHITE	1 3 7 9 2 4 5 6 8 10
Connector No.	Connector Name CVT DEVICE	Connector Color WHITE	国 H.S.

Connector No. M21



Signal Name	IGN_USM_CONT1	ST_CONT_USM	
Color of Wire	BR/W	В	
Terminal No.	127	132	

	Signal Name	DETENT_KEY_SW	DETENT_KEY_SW
10,000	Wire	Y/R	G/B
	Terminal No.	8	6

BCM (BODY CONTROL	MODULE)
--------------------------	---------

[COUPE]

AWKIA0165GB

< ECU DIAGNOSIS >

ELECTRONIC STEERING COLUMN LOCK

Connector Name

Signal Name

Color of Wire

Ferminal No.

Connector Name COMBINATION METER

M24

Connector No.

Connector Color WHITE

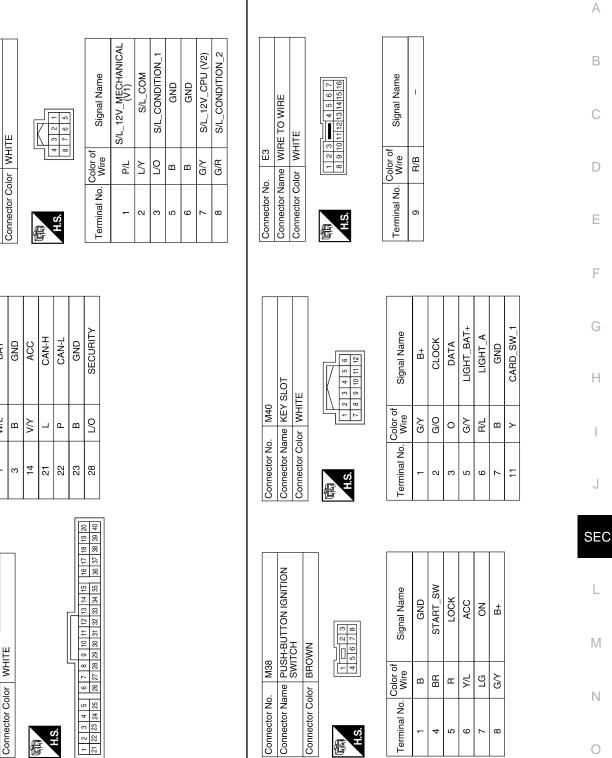
BAT

W/L

M32

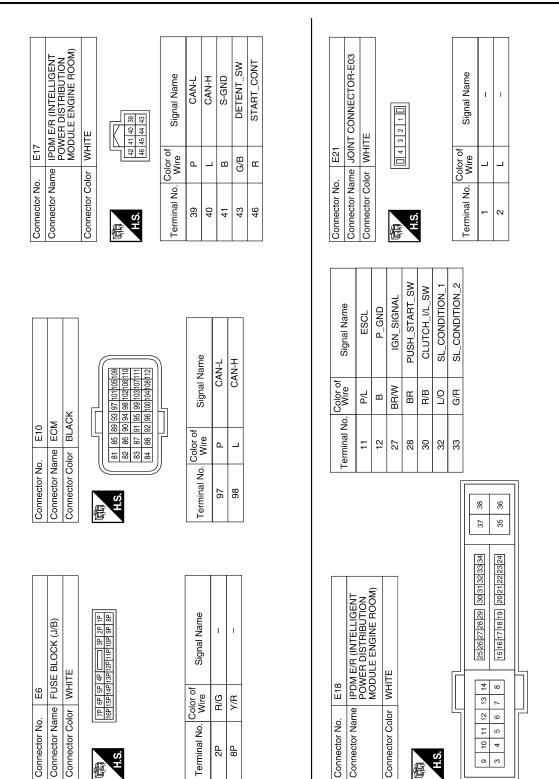
Connector No.

[COUPE]



ALKIA0143GB

Ρ



< ECU DIAGNOSIS >

[COUPE]

ALKIA0144GB

SEC-166

	E36	Connector Name CLUTCH INTERLOCK	SWITCH	BROWN	[5	-			Vire Signal Name	G/W –	R/B –	
	Connector No.	Connector Name		Connector Color	ą		H.S.		Ö	Terminal No. Wire	1	5	
	i	Signal Name	I	I	1	I	I	I	I	I	-	I	I
	Color of	Wire	Ч		œ	P/L	G/R	R/B	BR/W	Г/О	BR	R/G	
	Color of	l erminal No.	98	15G	20G	21G	22G	26G	27G	28G	29G	33G	51G
									Γ				
	Connector No. E30	4				30 46		200 210 220 220 240 256 266 266 266 266 266 266 366 366 346	366 386 376 386 396 406 416	420 430 440 450 460 470 480 490 500	51G 52G 53G 54G 59G 51G 52G 55G		64G 65G 73G 74G 76G 76G 76G 77G 76G 80G



< ECU DIAGNOSIS >

[COUPE]

А

В

С

D

Е

F

G

Н

J

SEC

L

M

Ν

Ο

 Connector No.
 E28

 Connector Name
 JOINT CONNECTOR-E05

 Connector Color
 WHITE

WHITE	
Connector Color	国 H.S.

	Signal Name	I
	Color of Wire	R/B
2	Terminal No.	1

L ī

R/B RУ

> N Э

Connector No. E22 Connector Name (OINT CONNECTOR-E04	Connector No. E22 Connector Name JOINT CONNECTOR-E04 Connector Color WHITE
	Connector Color WHITE
Connector Name IOINT CONNECTOR-F04	Connector Name JOINT CONNECTOR-E04

Signal Name	I	I
Color of Wire	٩	٩
Terminal No.	1	2

Signal Name	-	-	
Wire	Р	Р	
nal No.	1	2	

AWKIA0166GB

I. Т 1

51G 52G 82G

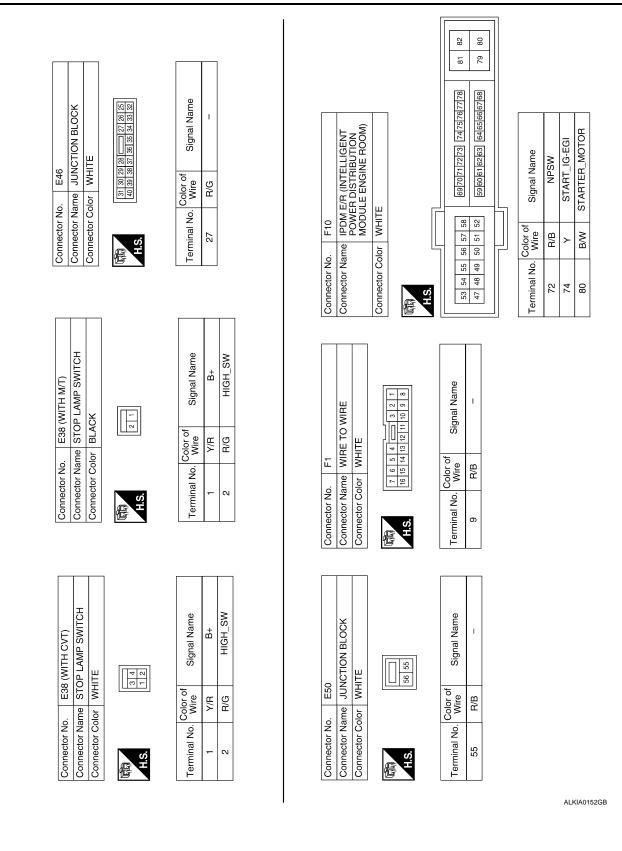
806

82G

81G

W/B ۵. _

< ECU DIAGNOSIS >



F32 PARK/NEUTRAL POSITION (PNP) SWITCH BLACK		Signal Name -	
PARK/NEUTR (PNP) SWITCI BLACK			
		o. Color of Wire R/B	
Connector No. Connector Name Connector Color	国 H.S.	Terminal No. 1 2	
NO			
F25 PARK/NEUTRAL POSITION (PNP) SWITCH BLACK		Signal Name NPSW START IG EGI	
	8	Color of Wire P/B	
Connector No. Connector Name Connector Color	H.S.	Terminal No. O	
	E	Te	
NULE)	39 40 47 48 29 30 45 46 19 20 43 44 9 10 41 42	Jame RLY	
ANSMIS	37 38 27 28 7 8	Signal Name ST_RLY	
F16 TCM (TF CONTR(BLACK	8 34 35 36 24 25 26 1 14 15 16 4 5 6	m e of	
No. Name Color	31 32 33 21 22 33 11 12 13	lo. Color of Wire R/B	
Connector No. F16 Connector Name TCM (TRANSMISSION CONNECTOR NOTHOL MODULE) Connector Color BLACK	H.S.	Terminal No. 20	
<u>ὄ ὄ ὄ</u>	E	Ľ Ĕ	ALKIA0153GB
			ALKIAU153GB INFOID:000000001344618

Fail Safe

Display contents of CONSULT	Fail-safe	Cancellation
B2013: ID DISCORD BCM-S/L	Inhibit engine cranking	Erase DTC
B2014: CHAIN OF S/L-BCM	Inhibit engine cranking	Erase DTC
B2190: NATS ANTTENA AMP	Inhibit engine cranking	Erase DTC

SEC-169

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

< ECU DIAGNOSIS >

Display contents of CONSULT	Fail-safe	Cancellation
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI-SCANNING	Inhibit engine cranking	Erase DTC
B2197: BCM-ENG-ST ID NG	Inhibit engine cranking	Erase DTC
B2557: VEHICLE SPEED	Inhibit electronic steering column lock	When normal vehicle speed signals have been received from ABS actuator and electric unit (control unit) for 500 ms
B2560: STARTER CONT RELAY	Inhibit engine cranking	 500 ms after the following CAN signal communication status has become consistent Starter control relay signal Starter relay status signal
B2562: LO VOLTAGE	 Inhibit engine cranking Inhibit electronic steering column lock 	100 ms after the power supply voltage increases to more than 8.8 V
B2563: HI VOLTAGE	 Inhibit engine cranking Inhibit electronic steering column lock 	500 ms after the power supply voltage decreases to less than 18 V
B2601: SHIFT POSITION	Inhibit electronic steering column lock	 500 ms after the following signal reception status becomes consistent Selector lever P position switch signal P range signal (CAN)
B2602: SHIFT POSITION	Inhibit electronic steering column lock	 5 seconds after the following BCM recognition conditions are fulfilled Ignition switch is in the ON position Selector lever P position switch signal: Except P position (battery voltage) Vehicle speed: 4 /h or more
B2603: SHIFT POSI STATUS	Inhibit electronic steering column lock	 500 ms after the following BCM recognition conditions are fulfilled Ignition switch is in the ON position Selector lever P position switch signal: Except P position (battery voltage) Selector lever P/N position signal: Except P and N positions (0 V)
B2604: PNP SW	Inhibit electronic steering column lock	 500 ms after any of the following BCM recognition conditions is fulfilled Status 1 Ignition switch is in the ON position Selector lever P/N position signal: P and N position (battery voltage) P range signal or N range signal (CAN): ON Status 2 Ignition switch is in the ON position Selector lever P/N position signal: Except P and N positions (0 V) P range signal and N range signal (CAN): OFF
B2605: PNP SW	Inhibit electronic steering column lock	 500 ms after any of the following BCM recognition conditions is fulfilled Ignition switch is in the ON position Power position: IGN Selector lever P/N position signal: Except P and N positions (0 V) Interlock/PNP switch signal (CAN): OFF Status 2 Ignition switch is in the ON position Selector lever P/N position signal: P or N position (battery voltage) PNP switch signal (CAN): ON
B2606: S/L RELAY	Inhibit engine cranking	 500 ms after the following CAN signal communication status has become consistent Electronic steering column lock relay signal (Request signal) Electronic steering column lock relay signal (Condition signal)

< ECU DIAGNOSIS >

[COUPE]

INFOID:000000001344619

Display contents of CONSULT	Fail-safe	Cancellation
B2607: S/L RELAY	Inhibit engine cranking	 500 ms after the following CAN signal communication status has become consistent Electronic steering column lock relay signal (Request signal) Electronic steering column lock relay signal (Condition signal)
B2608: STARTER RELAY	Inhibit engine cranking	 500 ms after the following signal communication status becomes consistent Starter motor relay control signal Starter relay status signal (CAN)
B2609: S/L STATUS	 Inhibit engine cranking Inhibit electronic steering column lock 	 When the following electronic steering column lock conditions agree BCM electronic steering column lock control status Electronic steering column lock condition No. 1 signal status Electronic steering column lock condition No. 2 signal status
B260A: IGNITION RELAY	Inhibit engine cranking	 500 ms after the following conditions are fulfilled IGN relay (IPDM E/R) control signal: OFF (Battery voltage) Ignition ON signal (CAN to IPDM E/R): OFF (Request signal) Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions is fulfilledPower position changes to ACCReceives engine status signal (CAN)
B2612: S/L STATUS	 Inhibit engine cranking Inhibit electronic steering column lock 	 When any of the following conditions is fulfilled Electronic steering column lock unit status signal (CAN) is received normally The BCM electronic steering column lock control status matches the electronic steering column lock status recognized by the electronic steering column lock unit status signal (CAN from IPDM E/R)
B2617: STARTER RELAY CIRC	Inhibit engine cranking	1 second after the starter motor relay control inside BCM becomes normal
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM be- comes normal
B2619: BCM	Inhibit engine cranking	1 second after the electronic steering column lock unit power sup- ply output control inside BCM becomes normal
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization
B26E1: ENG STATE NO RECIV	Inhibit engine cranking	When any of the following conditions is fulfilledPower position changes to ACCReceives engine status signal (CAN)

DTC Inspection Priority Chart

If some DTCs are displayed at the same time, perform inspections one by one based on the following priority $\hfill M$ chart.

Priority	DTC	
1	B2562: LOW VOLTAGE B2563: HI VOLTAGE B261E: VEHICLE TYPE	
2	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)	
3	 B2190: NATS ANTTENA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM 	

< ECU DIAGNOSIS >

Priority	DTC
4	 B2013: ID DISCORD BCM-S/L B2014: CHAIN OF S/L-BCM B2553: IGNITION RELAY B2555: STOP LAMP B2556: PUSH-BTN IGN SW B2557: VEHICLE SPEED B2560: STARTER CONT RELAY B2601: SHIFT POSITION B2602: SHIFT POSITION B2603: SHIFT POSI STATUS B2604: PNP SW B2605: SVL RELAY B2606: S/L RELAY B2607: S/L RELAY B2608: STARTER RELAY B2609: S/L STATUS B26004: IGNITION RELAY B2609: S/L STATUS B26005: STERING LOCK UNIT B26005: STERING LOCK UNIT B26007: STEERING LOCK UNIT B26005: STEERING LOCK UNIT B26007: STEERING LOCK UNIT B26015: STEERING LOCK UNIT B260207: STATUS B2604: IGNITION RELAY B2605: STEERING LOCK UNIT B2605: STEERING LOCK UNIT B2607: STEERING LOCK UNIT B2607: STATUS B2607: STATUS B2607: STEERING LOCK UNIT B2607: STATUS B2607: STEERING LOCK UNIT B2607: STATES RELAY B2607: STATUS B2611: ACC RELAY B2612: SL STATUS B2611: ACC RELAY CIRC B2611: ACC RELAY CIRC B2615: BLOWER RELAY CIRC B2615: BLOWER RELAY CIRC B2616: IGN RELAY CIRC B2616: IGN RELAY CIRC B2617: STARTER RELAY CIRC B2618: BCM B2618: BCM B2619: BCM B2619: BCM B2619: BCM B2614: ACC RELAY CIRC B2615: BLOWER RELAY CIRC B2616: IGN RELAY CIRC B2616: IGN RELAY CIRC B2617: STARTER RELAY CIRC B2618: BCM B2618: BCM B2619: BCM B2619: BCM B2619: BCM B2619: BCM B2614: ACC RELAY CIRC B2615: BLOMER RELAY CIRC B2616: IGN RELAY CIRC B2617: BCM B2618: BCM <li< th=""></li<>
5	 C1704: LOW PRESSURE FL C1705: LOW PRESSURE FR C1706: LOW PRESSURE RR C1707: LOW PRESSURE RL C1708: [NO DATA] FL C1709: [NO DATA] FR C1710: [NO DATA] RR C17112: [CHECKSUM ERR] FL C17113: [CHECKSUM ERR] FR C1714: [CHECKSUM ERR] RR C1715: [CHECKSUM ERR] RR C1716: [PRESSDATA ERR] FL C171719: [PRESSDATA ERR] FR C1719: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RR C1719: [CODE ERR] RR C1720: [CODE ERR] FR C1721: [CODE ERR] RR C1722: [CODE ERR] RR C1722: [CODE ERR] RR C1723: [CODE ERR] RR C1724: [BATT VOLT LOW] FL C1725: [BATT VOLT LOW] FR C1727: [BATT VOLT LOW] RR C1727: [BATT VOLT LOW] RR C1727: [BATT VOLT LOW] RL C1724: CONTROL UNIT
6	 B2621: INSIDE ANTENNA B2622: INSIDE ANTENNA B2623: INSIDE ANTENNA

< ECU DIAGNOSIS >

DTC Index

INFOID:000000001344620

NOTE:

Details of time display

- CRNT: Displays when there is a malfunction now or after returning to the normal condition until turning ignition switch OFF → ON again.
- 1 39: Displayed if any previous malfunction is present when current condition is normal. It increases like 1
 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The counter
 remains at 39 even if the number of cycles exceeds it. It is counted from 1 again when turning ignition switch
 OFF → ON after returning to the normal condition if the malfunction is detected again.

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	_	_	_	_
U1000: CAN COMM CIRCUIT	_	—	_	PCS-54
U1010: CONTROL UNIT (CAN)	—	—		PCS-55
U0415: VEHICLE SPEED SIG	_	—	—	BCS-33
B2013: ID DISCORD BCM-S/L	×		_	<u>SEC-41</u>
B2014: CHAIN OF S/L-BCM	×	—	—	<u>SEC-42</u>
B2190: NATS ANTTENA AMP	×	—	_	<u>SEC-34</u>
B2191: DIFFERENCE OF KEY	×	—	—	<u>SEC-38</u>
B2192: ID DISCORD BCM-ECM	×	—	_	<u>SEC-39</u>
B2193: CHAIN OF BCM-ECM	×	—	—	<u>SEC-40</u>
B2553: IGNITION RELAY	—	—	—	PCS-56
B2555: STOP LAMP	_	—	—	<u>SEC-46</u>
B2556: PUSH-BTN IGN SW	_	×	_	<u>SEC-49</u>
B2557: VEHICLE SPEED	×	×	—	<u>SEC-51</u>
B2560: STARTER CONT RELAY	×	×	—	<u>SEC-52</u>
B2562: LOW VOLTAGE	_	—	—	BCS-34
B2563: HI VOLTAGE	×	×	—	BCS-35
B2601: SHIFT POSITION	×	×	—	<u>SEC-53</u>
B2602: SHIFT POSITION	×	×	_	<u>SEC-57</u>
B2603: SHIFT POSI STATUS	×	×	—	<u>SEC-60</u>
B2604: PNP SW	×	×	—	<u>SEC-64</u>
B2605: PNP SW	×	×	_	<u>SEC-66</u>
B2606: S/L RELAY	×	×	_	<u>SEC-68</u>
B2607: S/L RELAY	×	×	_	<u>SEC-69</u>
B2608: STARTER RELAY	×	×	_	<u>SEC-71</u>
B2609: S/L STATUS	×	×	_	<u>SEC-73</u>
B260A: IGNITION RELAY	×	×	_	PCS-58
B260B: STEERING LOCK UNIT	—	×	—	<u>SEC-78</u>
B260C: STEERING LOCK UNIT	-	×	_	<u>SEC-79</u>
B260D: STEERING LOCK UNIT	_	×	_	<u>SEC-80</u>
B260F: ENG STATE SIG LOST	×	×	—	<u>SEC-81</u>
B2611: ACC RELAY	_	—	_	PCS-59
B2612: S/L STATUS	×	×	_	SEC-83

[COUPE]

А

< ECU DIAGNOSIS >

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2614: ACC RELAY CIRC	—	×	_	PCS-61
B2615: BLOWER RELAY CIRC	_	×	_	PCS-64
B2616: IGN RELAY CIRC		×	_	PCS-67
B2617: STARTER RELAY CIRC	×	×	_	<u>SEC-88</u>
B2618: BCM	×	×	_	PCS-70
B2619: BCM	×	×	_	<u>SEC-90</u>
B261A: PUSH-BTN IGN SW		×	_	<u>SEC-91</u>
B261E: VEHICLE TYPE	×	× (Turn ON for 15 seconds)	_	<u>SEC-94</u>
B2621: INSIDE ANTENNA		—	_	<u>DLK-44</u>
B2622: INSIDE ANTENNA		_	_	DLK-47
B2623: INSIDE ANTENNA	—	_	_	DLK-50
B26E1: ENG STATE NO RES	×	×	—	<u>SEC-82</u>
C1704: LOW PRESSURE FL		—	×	<u>WT-23</u>
C1705: LOW PRESSURE FR		_	×	<u>WT-23</u>
C1706: LOW PRESSURE RR		—	×	<u>WT-23</u>
C1707: LOW PRESSURE RL	_	_	×	<u>WT-23</u>
C1708: [NO DATA] FL		_	×	<u>WT-13</u>
C1709: [NO DATA] FR	_	_	×	<u>WT-13</u>
C1710: [NO DATA] RR	_	_	×	<u>WT-13</u>
C1711: [NO DATA] RL	_	_	×	<u>WT-13</u>
C1712: [CHECKSUM ERR] FL	_	_	×	<u>WT-14</u>
C1713: [CHECKSUM ERR] FR	_	_	×	<u>WT-14</u>
C1714: [CHECKSUM ERR] RR	_	_	×	<u>WT-14</u>
C1715: [CHECKSUM ERR] RL	_	_	×	<u>WT-14</u>
C1716: [PRESSDATA ERR] FL	_	_	×	<u>WT-15</u>
C1717: [PRESSDATA ERR] FR	_	_	×	<u>WT-15</u>
C1718: [PRESSDATA ERR] RR	—	—	×	<u>WT-15</u>
C1719: [PRESSDATA ERR] RL	_	_	×	<u>WT-15</u>
C1720: [CODE ERR] FL	_	_	×	<u>WT-14</u>
C1721: [CODE ERR] FR		_	×	<u>WT-14</u>
C1722: [CODE ERR] RR	_	_	×	<u>WT-14</u>
C1723: [CODE ERR] RL	_	_	×	<u>WT-14</u>
C1724: [BATT VOLT LOW] FL	_	_	×	<u>WT-14</u>
C1725: [BATT VOLT LOW] FR	_	_	×	<u>WT-14</u>
C1726: [BATT VOLT LOW] RR		_	×	<u>WT-14</u>
C1727: [BATT VOLT LOW] RL		_	×	<u>WT-14</u>
C1729: VHCL SPEED SIG ERR		_	×	<u>WT-16</u>

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) [COUPE]

< ECU DIAGNOSIS >

IPDM E/R	(INTELLIGENT	POWER	DISTRIBUTION	MODULE	ENGINE
ROOM)					
Reference V	عاييم				

Reference value	INFOID:000000001344621	В
VALUES ON THE DIAGNOSIS TOOL Refer to <u>PCS-20, "Reference Value"</u> .		С
TERMINAL LAYOUT Refer to <u>PCS-20, "Reference Value"</u> .		C
PHYSICAL VALUES Refer to <u>PCS-20, "Reference Value"</u> .		D
FAIL SAFE Refer to <u>PCS-39, "Fail_Safe"</u> .		Е
DTC INDEX Refer to <u>PCS-41, "DTC_Index"</u> .		F

J

G

Н

А

L

Μ

Ν

Ο

Ρ

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION SYMPTOMS < SYMPTOM DIAGNOSIS > [COUPE]

SYMPTOM DIAGNOSIS

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION SYMPTOMS

Symptom Table

INFOID:000000001344627

Engine can not be started with all Intelligent Keys. **CAUTION:**

- Follow Trouble Diagnosis Flowchart referring to "<u>SEC-8, "Work Flow"</u>". Determine malfunctioning condition before performing this diagnosis.
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis.
- Check systems shown in the "Diagnosis/service procedure" column in this order.

CONDITIONS OF VEHICLE (OPERATING CONDITIONS)

- Engine start function is ON when setting on CONSULT-III.
- Use Intelligent Key with registered Intelligent Key ID.
- One or more of Intelligent Keys with registered Intelligent Key ID is in the passenger compartment.

Diagnosis/service procedure		Reference page
1. Check power curply and ground circuit	BCM	<u>SEC-121</u>
1. Check power supply and ground circuit	IPDM E/R	<u>SEC-121</u>
2. Check push button ignition switch		PCS-75
3. Check Intermittent Incident		<u>GI-42</u>

VEHICLE SECURITY SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

VEHICLE SECURITY SYSTEM SYMPTOMS

Symptom Table

....

INFOID:000000001344628

[COUPE]

	Proced	lure	Diagnostia presedure	Refer to page	
	Sympt	om	– Diagnostic procedure	Relet to page	
		Door switch	Check door switch	<u>DLK-54</u>	
		Trunk	Check trunk room lamp switch	DLK-84	
t	Vehicle security sys- tem cannot be set by	Door outside key	Check key cylinder switch	<u>SEC-126</u> , or <u>SEC-128</u>	
1		Intelligent Key	Check Intelligent Key.	DLK-113	
		—	Check Intermittent Incident	<u>GI-42</u>	
		a not turn ON	Check vehicle security indicator	<u>SEC-135</u>	
`	Security indicator does	s not turn On.	Check Intermittent Incident	<u>GI-42</u>	
	* Vehicle security		Check door switch	<u>DLK-54</u>	
	system does not sound alarm when	Any door is opened.	Check Intermittent Incident	<u>GI-42</u>	
		Horn alarm	Check horn	<u>SEC-131</u>	
	Vehicle security alarm does not acti-		Check Intermittent Incident	<u>GI-42</u>	
	vate.	Head lamp alarm	Check head lamp alarm	<u>SEC-133</u>	
		neau iamp aiami	Check Intermittent Incident	<u>GI-42</u>	
,	Vehicle security sys-	Door outside key	Check key cylinder switch	<u>SEC-126</u> , or <u>SEC-128</u>	
	tem cannot be can-		Check Intermittent Incident	<u>GI-42</u>	
C	celed by ····	Intelligent Koy	Check Intelligent Key	DLK-113	
		Intelligent Key	Check Intermittent Incident	<u>GI-42</u>	

*: Check the system is in the armed phase.

SEC

L

Μ

Ν

Ο

Ρ

А

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS SYMPTOMS

< SYMPTOM DIAGNOSIS >

[COUPE]

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS SYMPTOMS

Symptom Table

INFOID:000000001344629

Security indicator does not turn ON or flash. CAUTION:

- Follow Trouble Diagnosis Flowchart referring to "<u>SEC-8, "Work Flow"</u>". Determine malfunctioning condition before performing this diagnosis.
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis.
- Check systems shown in the "Action" column in this order.

CONDITIONS OF VEHICLE (OPERATING CONDITIONS)

- Intelligent Key is not inserted into key slot.
- Engine switch is not depressed.

Action	Reference page
1. Check vehicle security indicator	<u>SEC-135</u>
2. Check Intermittent Incident	<u>GI-42</u>

ON-VEHICLE MAINTENANCE PRE-INSPECTION FOR DIAGNOSTIC

Basic In

NOTE:

А

[COUPE]

Basic Inspection Basic Inspection
The engine start function, door lock function, power distribution system and NATS-IVIS/NMS in the Intelligent Key system are closely related to each other regarding control. Narrow down the functional area in question by performing basic inspection to identify which function is malfunctioning. The vehicle security function can operate only when the door lock and power distribution system are operating normally. Therefore, it is easy to identify any factor unique to the vehicle security system by performing the vehicle security operation check after basic inspection.
1. CHECK DOOR LOCK OPERATION
 Check the door lock for normal operation with the Intelligent Key controller and door request switch. Successful door lock operation with the Intelligent Key and request SW indicates that the remote keyless entry receiver is functioning normally. Identify the malfunctioning point by referring to the DLK section if the door cannot be unlocked.
Can the door be locked with the Intelligent Key and door request switch?
YES >> GO TO 2. NO >> Refer to <u>DLK-163, "Symptom Table"</u> . 2. CHECK ENGINE STARTING
1. Checks that the engine starts when operating the Intelligent Key inserted into the key slot.
Does the engine start? H YES >> GO TO 3. NO >> Refer to SEC-176. "Symptom Table".
3. CHECK STEERING LOCKING
 Does the steering lock when operating door switch after switching the power supply from ON position (or ACC position) to LOCK position? If door switch is malfunctioning, BCM cannot lock the steering. If BCM does not detect DTC, steering lock J unit is normal.
Does steering lock?
YES >> GO TO 4. SEC NO >> Refer to <u>DLK-54, "Component Function Check"</u> .
4.CHECK POWER SUPPLY INDICATOR SWITCHING
 Press push-button ignition switch and position indicator will switch from LOCK, ACC to ON gradually when steering is locked. Checks that the position indicator is illuminated at different positions of the circuit. Is each position indicator illuminating? YES >> GO TO 5.
NO >> Refer to <u>PCS-75, "Component Function Check"</u> .
5. CHECK VEHICLE SECURITY SYSTEM
 Check the vehicle security system for normal operation. The vehicle security function can operate only when the door lock and power distribution functions are operating normally. Therefore, it is easy to identify any factor unique to the vehicle security by performing the vehicle security operation check after this basic inspection.
>> Go to <u>SEC-179, "Vehicle Security Operation Check"</u> .
Vehicle Security Operation Check
1.INSPECTION START
Turn ignition switch "OFF" and pull out Intelligent Key from key slot.

SEC-179

PRE-INSPECTION FOR DIAGNOSTIC

< ON-VEHICLE MAINTENANCE >

[COUPE]

Before starting operation check, open front windows.

>> GO TO 2.

2. CHECK SECURITY INDICATOR LAMP

- 1. Lock doors using Intelligent Key or mechanical key.
- 2. Check that security indicator lamp illuminates for 30 seconds.

Security indicator lamp should illuminate.

OK >> GO TO 3.

NG >> Perform diagnosis and repair. Refer to <u>SEC-135, "Component Function Check"</u>.

3.CHECK ALARM FUNCTION

- 1. After 30 seconds, security indicator lamp will start to blink.
- 2. Open any door or hood before unlocking with Intelligent Key or mechanical key, or open trunk lid without Intelligent Key or mechanical key.

Do alarm function properly.

- OK >> GO TO 4.
- NG >> Check the following.
 - The vehicle security system does not phase in alarm mode. Refer to <u>SEC-177. "Symptom</u> <u>Table"</u>.
 - Alarm (horn, headlamp and hazard lamp) do not operate. Refer to SEC-177, "Symptom Table".

4.CHECK ALARM CANCEL OPERATION

Unlock any door or open trunk lid using Intelligent Key or mechanical key. Alarm (horn, headlamp and hazard lamp) should stop.

- OK >> INSPECTION END.
- NG >> Check door lock function. Refer to <u>DLK-19</u>, "INTELLIGENT KEY : System Description".

KEY SLOT

< ON-VEHICLE REPAIR >

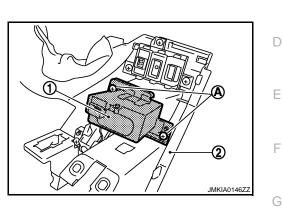
ON-VEHICLE REPAIR KEY SLOT

REMOVAL

- 1. Remove the instrument lower panel LH. Refer to IP-11, "Removal and Installation".
- 2. Disconnect key slot connector.
- 3. Remove the key slot screw (A), and then remove key slot (1) from instrument lower panel LH (2).

INSTALLATION

Install in the reverse order of removal.





L

Μ

Ν

Ο

Ρ

J

Н

[COUPE]

INFOID:000000001344632

А

В

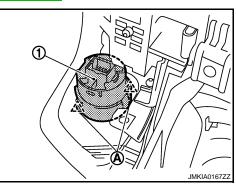
С

PUSH BUTTON IGNITION SWITCH

Removal and Installation

REMOVAL

- 1. Remove the cluster lid A assembly. Refer to IP-11, "Removal and Installation".
- 2. Remove the push-button ignition switch (1) from cluster lid A assembly, and then remove pawl (A). Press push-button ignition switch (1) back to disengage from cluster lid A assembly.



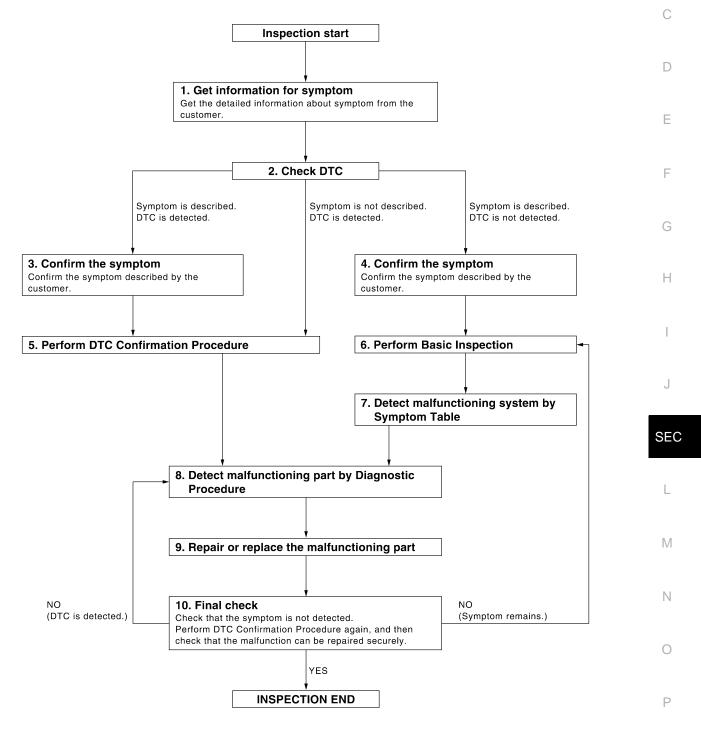
INSTALLATION Install in the reverse order of removal. INFOID:000000001344633

< BASIC INSPECTION >

BASIC INSPECTION DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

OVERALL SEQUENCE



INFOID:000000003185359

А

В

< BASIC INSPECTION >

1.GET INFORMATION FOR SYMPTOM

Get the detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurred).

>> GO TO 2.

2.CHECK DTC WITH BCM AND IPDM E/R

- 1. Check "Self Diagnostic Result" with CONSULT-III.
- 2. Perform the following procedure if DTC is displayed.
- Record DTC and freeze frame data (Print them out with CONSULT-III.)
- Erase DTC.
- Study the relationship between the cause detected by DTC and the symptom described by the customer.
- 3. Check related service bulletins for information.

Is any symptom described and any DTC detected?

Symptom is described, DTC is displayed>>GO TO 3. Symptom is described, DTC is not displayed>>GO TO 4. Symptom is not described, DTC is displayed>>GO TO 5.

3.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

Connect CONSULT-III to the vehicle in "Data Monitor" mode and check real time diagnosis results. Verify relation ship between the symptom and the condition when the symptom is detected.

>> GO TO 5.

4.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

Connect CONSULT-III to the vehicle in "Data Monitor" mode and check real time diagnosis results. Verify relation ship between the symptom and the condition when the symptom is detected.

>> GO TO 6.

5.PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again. At this time, always keep CONSULT-III connected to the vehicle, and check diagnostic results in real time. If two or more DTCs are detected, refer to <u>SEC-347</u>, "<u>DTC Inspection Priority Chart</u>" and determine trouble diagnosis order.

NOTE:

- Freeze frame data is useful if the DTC is not detected.
- Perform Component Function Check if DTC Confirmation Procedure is not included in Service Manual. This
 simplified check procedure is an effective alternative though DTC cannot be detected during this check.
 If the result of Component Function Check is NG, it is the same as the detection of DTC by DTC Confirmation Procedure.

Is DTC detected?

Yes >> GO TO 8.

No >> Refer to <u>GI-42, "Intermittent Incident"</u>.

6.PERFORM BASIC INSPECTION

Perform SEC-355, "Basic Inspection".

Inspection End>>GO TO 7.

7. DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

Detect malfunctioning system according to following symptom tables based on the confirmed symptom in step 4, and determine the trouble diagnosis order based on possible causes and symptoms.

- Intelligent Key system/engine start function: <u>SEC-352</u>, "Symptom Table".
- Vehicle security system: <u>SEC-353, "Symptom Table"</u>.

SEC-184

DIAGNOSIS AND REPAIR WORKFLOW
< BASIC INSPECTION > [SEDAN]
 Nissan vehicle immobilizer system-NATS: <u>SEC-354, "Symptom Table"</u>.
>> GO TO 8.
8.DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE
Inspect according to Diagnostic Procedure of the system. NOTE:
The Diagnostic Procedure described based on open circuit inspection. A short circuit inspection is also required for the circuit check in the Diagnostic Procedure.
Is malfunctioning part detected?
Yes >> GO TO 9. No >> Check voltage of related BCM terminals using CONSULT-III.
9. REPAIR OR REPLACE THE MALFUNCTIONING PART
1. Repair or replace the malfunctioning part.
2. Reconnect parts or connectors disconnected during Diagnostic Procedure again after repair or replace- ment.
3. Check DTC. If DTC is displayed, erase it.
>> GO TO 10.
10.FINAL CHECK
When DTC was detected in step 2, perform DTC Confirmation Procedure or Component Function Check
again, and then check that the malfunction have been fully repaired. When symptom was described from the customer, refer to confirmed symptom in step 3 or 4, and check that
the symptom is not detected.
Is the inspection result normal?
NO (DTC is detected)>>GO TO 8. NO (Symptom remains)>>GO TO 6.
YES >> INSPECTION END

M

Ν

0

Ρ

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

INSPECTION AND ADJUSTMENT

ECM RE-COMMUNICATING FUNCTION

ECM RE-COMMUNICATING FUNCTION : Description

Performing following procedure can automatically perform re-communication of ECM and BCM, but only when the ECM has been replaced with a new one (*1).

*1: New one means an ECM which has never been energized on-board.

(In this step, initialization procedure by CONSULT-III is not necessary)

NOTE:

- When registering new Key IDs or replacing the ECM that is not brand new, refer to CONSULT-III Operation Manual.
- If multiple keys are attached to the key holder, separate them before work.
- Distinguish keys with unregistered key ID from those with registered ID.

ECM RE-COMMUNICATING FUNCTION : Special Repair Requirement

INFOID:000000003185361

1.PERFORM ECM RE-COMMUNICATING FUNCTION

1. Install ECM.

- Insert the registered Intelligent Key (*2), turn ignition switch to "ON".
 *2: To perform this step, use the key that has been used before performing ECM replacement.
- 3. Maintain ignition switch in "ON" position for at least 5 seconds.
- 4. Turn ignition switch to "OFF".
- 5. Start engine.

Can engine be started?

- YES >> Procedure is completed.
- NO >> Initialize control unit.Refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

INFOID:000000003185360

< FUNCTION DIAGNOSIS >

[SEDAN]

INFOID:00000003185363

Н

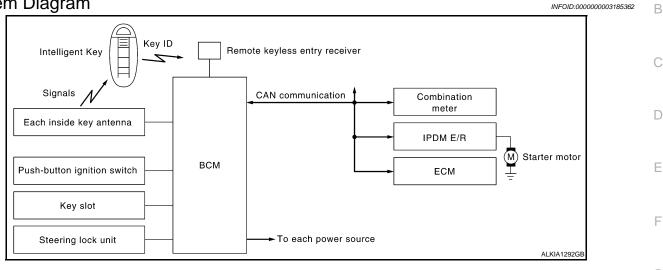
M

Ν

Ρ

FUNCTION DIAGNOSIS INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

System Diagram



System Description

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM function	Actuator	
Push-button ignition switch	Push switch			
CVT device (CVT models)	P range	_		
PNP switch (CVT models)	N, P range	_	 Steering lock relay 	
Clutch interlock switch (M/T mod- els)	Clutch ON/OFF	_	Steering lock unitStarter relay (IPDM E/R)	
Stop lamp switch	Brake ON/OFF	Engine start function	 Starter control relay (IPDM E/ R) 	S
Each inside key antenna	Request signal	_	Starter motor	
Remote keyless entry receiver	Key ID	_	KEY warning lamp	
Each door switch	Door open/close			
ECM	Engine status signal	-		

SYSTEM DESCRIPTION

• The engine start function of Intelligent Key system is a system that makes it possible to start and stop the engine without removing the key. It verifies the electronic ID using two-way communications when pressing the push-button ignition switch while carrying the Intelligent Key, which operates based on the results of electronic ID verification for Intelligent Key using two-way communications between the Intelligent Key and the vehicle.

NOTE:

The driver should carry the Intelligent Key at all times.

- Intelligent Key has 2 IDs [for Intelligent Key and for NVIS (NATS)]. It can perform the door lock/unlock operation and the push-button ignition switch operation when the registered Intelligent Key is carried.
- When the Intelligent Key battery is discharged, it can be used as emergency back-up by inserting the Intelligent Key to the key slot. At that time, perform the NVIS (NATS) ID verification. If it is used when the Intelligent Key is carried, perform the Intelligent Key ID verification.
- If the ID is successfully verified, and when push-button ignition switch is pressed, steering lock will be released and initiating the engine will be possible.
- If the door lock/unlock operation is performed when the Intelligent Key battery is discharged, all doors lock/ unlock can be performed by operating the driver door key cylinder using the mechanical key set in the Intelligent Key.

А

< FUNCTION DIAGNOSIS >

- Intelligent Key can be registered up to 4 keys (Including the standard Intelligent Key) on request from the owner.
 NOTE:
 - Refer to <u>DLK-217</u>, "INTELLIGENT KEY : <u>System Description</u>" for any functions other than engine start function of Intelligent Key system.

PRECAUTIONS FOR INTELLIGENT KEY SYSTEM

• In the Intelligent Key system of model L32, the transponder [the chip for NVIS (NATS) ID verification] is integrated into the Intelligent Key. (For the conventional models, it is integrated into the mechanical key.) Therefore, the mechanical key cannot perform the ID verification, and thus it cannot start the engine. Instead, the NVIS (NATS) ID verification can be performed by inserting the Intelligent Key into the key slot, and then it can start the engine.

OPERATION WHEN INTELLIGENT KEY IS CARRIED

- 1. When the push-button ignition switch is pressed and brake pedal is depressed, the BCM signals the inside key antenna and transmits the request signal to the Intelligent Key.
- 2. The Intelligent Key sends the request signal and transmits the Intelligent Key ID signal to the BCM via the remote keyless entry receiver.
- 3. The BCM receives the Intelligent Key ID signal and verifies it with the registered ID.
- 4. BCM transmits the steering lock unlock signal to steering lock unit and IPDM E/R if the verification results are OK.
- 5. IPDM E/R turns the steering lock relay ON and supplies power to the steering lock unit.
- 6. Release of the steering lock.
- 7. BCM transmits the power supply stop signal to IPDM E/R when it confirms that the steering lock is in the unlock condition.
- 8. IPDM E/R turns the steering lock relay OFF and stops power supply to the steering lock unit.
- 9. BCM turns ACC relay ON and transmits the ignition power supply ON signal to IPDM E/R.
- 10. IPDM E/R turns the ignition relay ON and starts the ignition power supply.
- 11. BCM confirms that the shift position is P or N (CVT models).
- 12. BCM transmits the starter request signal via CAN communication to IPDM E/R and turns the starter relay in IPDM E/R ON if BCM judges that the engine start condition is satisfied.
- 13. IPDM E/R turns the starter control relay ON when receiving the starter request signal.
- 14. Battery power is supplied through the starter relay and the starter control relay to operate the starter motor and to start the cranking. CAUTION:

If a malfunction is detected in the Intelligent Key system, the "KEY" warning lamp in the combination meter illuminates. At that time, the engine cannot be started.

15. When BCM received feedback signal from ECM acknowledging the engine has been initiated, the BCM transmits a stop signal to IPDM E/R and stops the cranking by turning OFF the starter motor relay. (If the engine initiating has failed, the cranking will stop automatically within 5 seconds.)

When the Intelligent Key is carried outside of the vehicle (inside key antenna detection area) with the power supply in ACC or ON position, even if the engine start condition* is satisfied, the engine cannot be started.

*: For the engine start condition, refer to "PUSH-BUTTON IGNITION SWITCH OPERATION PROCEDURE".

OPERATION RANGE

Engine can be started when Intelligent Key is inside the vehicle. However, sometimes engine might not start when Intelligent Key is on instrument panel or in glove box.

OPERATION WHEN KEY SLOT IS USED

When the Intelligent Key battery is discharged, it performs the NVIS (NATS) ID verification between the integrated transponder and BCM by inserting the Intelligent Key into the key slot, and then the engine can be started.

For details relating to starting the engine using key slot, refer to SEC-187, "System Description".

BATTERY SAVER SYSTEM

When all the following conditions are met for 60 minutes, the battery saver system will cut off the power supply to prevent battery discharge.

SEC-188

INTE	LLIGENT KEY SYSTE	EM/ENGINE START FU	JNCTION
< FUNCTION DIAGNO	OSIS >		[SEDAN]
 The ignition switch is All doors are closed CVT selector lever is No Intelligent Key fail 		indicator is not ON)	
Reset Condition of Batte CVT models	ery Saver System		
In order to prevent the l doors are closed, the s any of the following cor matically to lock positio	elector lever is on P position nditions are met the battery sa	battery saver system will cut and the ignition switch is left aver system is released and t	on ACC position for 1 hour. If
 Opening any door Operating with reque	st switch on door lock		
		will change to ACC position	from OFF position.
	above is met the battery saving operation OFF to LOCK is	er system is released but the prohibited.	steering will not lock.
P position and any of the		n switch is in the OFF positior et.	n, CVT selector lever is in the
 Opening door Closing door Door is locked with re Door is locked with Ir 			
The power supply posit	ITION SWITCH OPERATIOn can be be a constrained at the second seco	ON PROCEDURE be performed with the following	ng operations.
	Key is within the detection and the operations below.	ea of inside key antenna or v	when it is inserted to the key
 When starting the en- Brake pedal operating CVT selector lever point 	gine, the BCM monitors unde g condition (CVT models)	er the engine start conditions,	
 Vehicle speed Steering lock condition Engine status 			
 Unless each start cor 		will not respond regardless o s the position in the order of L	
	Engine start/	stop condition	Push-button ignition switch op-
Power supply position	Brake pedal (CVT) /clutch pedal (M/T)	CVT selector lever position	eration frequency

Power supply position	Brake pedal (CVT) /clutch pedal (M/T) CVT selector lever position		Push-button ignition switch op- eration frequency	
$LOCK\toACC$	Not depressed	Any position	1	
$LOCK \to ACC \to ON$	Not depressed	Any position	2	
$\begin{array}{c} LOCK \to ACC \to ON \to \\ OFF \end{array}$	Not depressed	Any position	3	
$\begin{array}{l} \text{LOCK} \rightarrow \text{START} \\ \text{ACC} \rightarrow \text{START} \\ \text{ON} \rightarrow \text{START} \\ (\text{Engine start}) \end{array}$	Depressed	P or N position (*1)	1 [If the switch is pressed once, the engine starts from any pow- er supply position (LOCK, ACC, and ON)]	
Engine is running \rightarrow OFF (Engine stop)	_	Any position Vehicle speed < 4 km/h (2 MPH)	1	

< FUNCTION DIAGNOSIS >

	Engine start/	stop condition	Push-button ignition switch op-
Power supply position	Brake pedal (CVT) /clutch pedal (M/T)	CVT selector lever position	eration frequency
Engine is running → ACC (Engine stop)	_	Any position other than P (*2)	1
Engine stall return oper- ation while driving	_	P position	1

*1: When the CVT selector lever position is N position, the engine start condition is different according to the vehicle speed.

• At vehicle speed of 4 km/h (2 MPH) or less, the engine can start only when the brake pedal is depressed.

• At vehicle speed of 4 km/h (2 MPH) or more, the engine can start even if the brake pedal is not depressed. (It is the same as "Engine stall return operation while driving".)

*2: When the CVT selector lever position is in any position other than P position and when the vehicle speed is 5 km/h (3 MPH) or more, the engine stop condition is different.

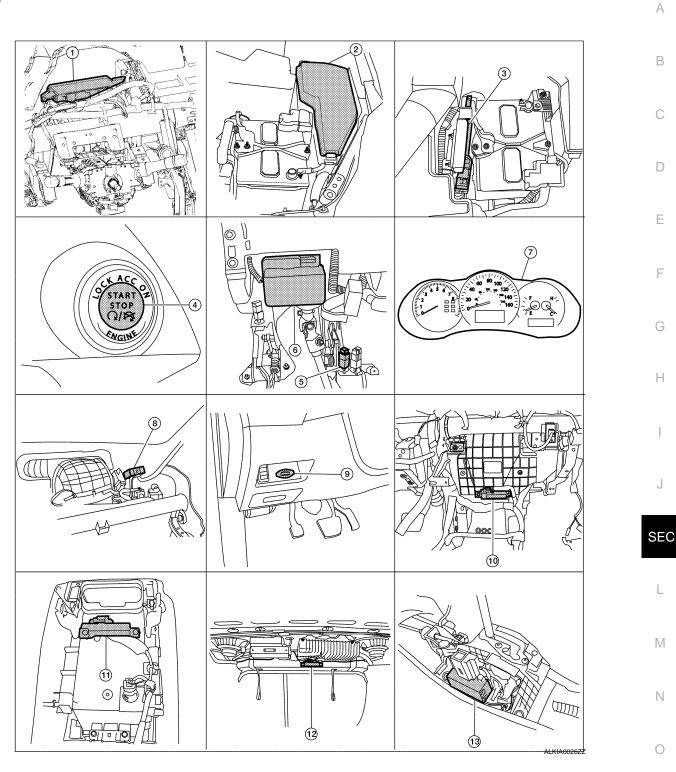
- Press and hold the push-button ignition switch for 2 seconds or more. (When the push-button ignition switch is pressed for too short a time, the operation may be invalid, so properly press and hold to prevent an incorrect operation.)
- Press the push-button ignition switch 3 times or more within 1.5 seconds. (Emergency stop operation)

< FUNCTION DIAGNOSIS >

Component Parts Location

[SEDAN]

INFOID:000000003185364



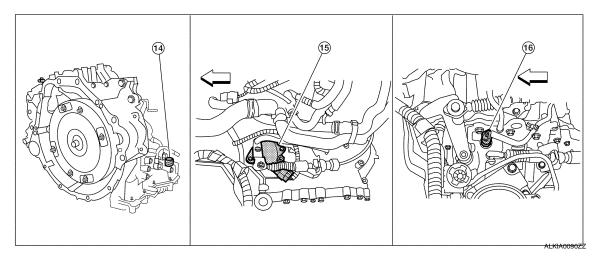
- 1. Body control module (view with instrument panel removed)
- Push button ignition switch 4.
- 7. Combination meter
- 10. Instrument panel antenna (view with instrument panel removed)
- 13. Detente switch (CVT device)

- 2. IPDM E/R
- Stop lamp switch (view with lower driv- 6. 5. er instrument panel removed)
- 8. Remote keyless entry receiver (view 9. with instrument panel removed)
- 11. Front console antenna (bottom view of 12. Rear parcel shelf antenna console)
- 3. ECM
 - Steering lock unit (steering column)

Ρ

- Key slot

< FUNCTION DIAGNOSIS >



- 14. Park neutral position switch connec- 15. Park neutral position switch (CVT/ tor (switch inside trans) (CVT/VQ)
- QR)
- 16. Park neutral position switch (M/T)

Component Description

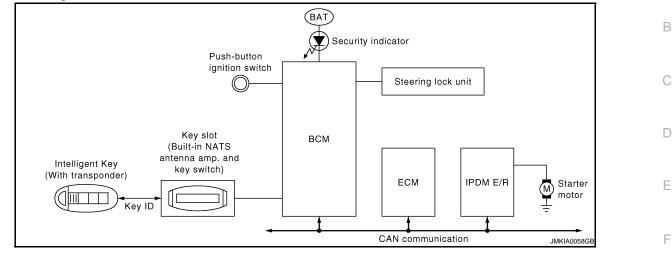
INFOID:000000003185365

Component	Reference
BCM	<u>SEC-265</u>
Steering lock unit	<u>SEC-253</u>
Push-button ignition switch	<u>SEC-224</u>
Door switch	<u>DLK-252</u>
CVT device (detention switch)	<u>SEC-228</u>
Inside key antenna	<u>DLK-242</u>
Remote keyless entry receiver	DLK-311
Stop lamp switch	<u>SEC-221</u>
Park/neutral position switch	<u>SEC-239</u>
Clutch switch	<u>SEC-284</u>
Steering lock relay	<u>SEC-271</u>
Starter relay	<u>SEC-279</u>
Starter control relay	<u>SEC-277</u>
Security indicator	<u>SEC-310</u>
Key warning lamp	<u>SEC-309</u>

< FUNCTION DIAGNOSIS >

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS)

System Diagram



System Description

INFOID:000000003185367

Ρ

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM function	Actuator	
Push-button ignition switch	Push switch			
CVT device (CVT models)	P range		Steering lock relay	
PNP switch (CVT models)	N, P range		Steering lock unit	
Clutch interlock switch (M/T models)	Clutch ON/OFF		 Starter relay (IPDM E/R) Starter control relay (IPDM E/R) 	
Stop lamp switch	Brake ON/OFF	NVIS (NATS)	 Starter control relay (IPDM E/R) Starter motor 	
Key slot	Key ID		KEY warning lamp	
Each door switch	Door open/close		Security indicator lamp	
ECM	Engine status signal			

SYSTEM DESCRIPTION

- The NVIS (NATS) is an anti-theft system by registering an Intelligent Key ID in to the vehicle and prevents L the engine being started by an unregistered Intelligent Key. It has a higher protection against auto thefts that duplicate mechanical key.
- It performs the ID verification when starting the engine in the same way as the Intelligent Key system. But, it Μ performs the NVIS (NATS) ID verification when inserting the Intelligent Key and performs the Intelligent Key ID verification when carrying the Intelligent Key.
- The Intelligent Key system of L32 is not the same as the conventional models. The mechanical key integrated in the Intelligent Key cannot start the engine. When the Intelligent Key battery is discharged, the NVIS Ν (NATS) ID verification memorized to the transponder integrated with Intelligent Key is performed by inserting the Intelligent Key into the key slot. If the verification results are OK, the engine start operation can be performed by the push-button ignition switch operation.
- Locate the security indicator and apply the anti-theft system equipment sticker, forewarn that the NVIS (NATS) is onboard with the model.
- The security indicator always blinks when the Intelligent Key is removed from the key slot and when the power supply position is in LOCK position.
- Intelligent Key can be registered up to 4 keys (Including the standard ignition key) on request from the owner.
- The specified registration is required when replacing ECM, BCM or Intelligent Key. The registrations procedure for NVIS (NATS) and registration procedure for Intelligent Key when installing the BCM, refer to CON-SULT-III Operation Manual NATS-IVIS/NVIS.

А

[SEDAN]

INFOID:000000003185366

< FUNCTION DIAGNOSIS >

- Possible symptom of NVIS (NATS) malfunction is "Engine cannot start". In L32, the engine can be started with the Intelligent Key system and NVIS (NATS). Identify the possible causes according to "Work Flow", Refer to <u>SEC-183, "Work Flow"</u>.
- If ECM other than Genuine NISSAN is installed, the engine cannot be started. For ECM replacement procedure, refer to <u>SEC-186, "ECM RE-COMMUNICATING FUNCTION : Special Repair Requirement"</u>.

PRECAUTIONS FOR KEY REGISTRATION

- The key registration is a procedure that erases the current NVIS (NATS) ID once, and then re-registers a new ID operation. Therefore the registered Intelligent Key is necessary for this procedure. Before starting the registration operation collect all registered Intelligent Keys from the customer
- When registering the Intelligent Key, performs only one procedure to register simultaneously both ID (NVIS "NATS" ID registration and Intelligent Key ID registration).
 The NVIS (NATS) ID registration is the procedure that registers the ID stored into the transponder (integrated in intelligent key) to BCM.

The Intelligent key ID registration is the procedure that registers the ID to BCM.

• When performing the Intelligent Key system registration only, the engine cannot be started by inserting the key into the key slot. When performing the NVIS (NATS) registration only, the engine cannot be started by the operation when carrying the key. The registrations of both systems should be performed.

SECURITY INDICATOR

- Warns that the vehicle is equipped with NVIS (NATS).
- The security indicator always blinks when the Intelligent Key is removed from the key slot and when the ignition switch is in LOCK position.

NOTE:

Because security indicator is highly efficient, the battery is barely affected.

< FUNCTION DIAGNOSIS >

1.

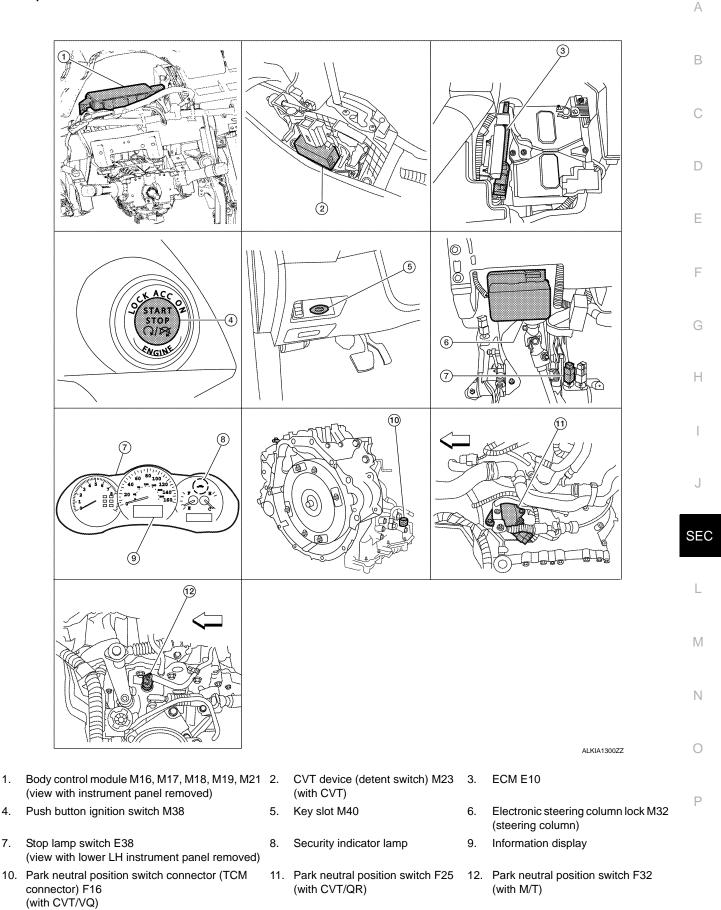
4.

7.

Component Parts Location

[SEDAN]

INFOID:000000003185368



SEC-195

< FUNCTION DIAGNOSIS >

Component Description

INFOID:000000003185369

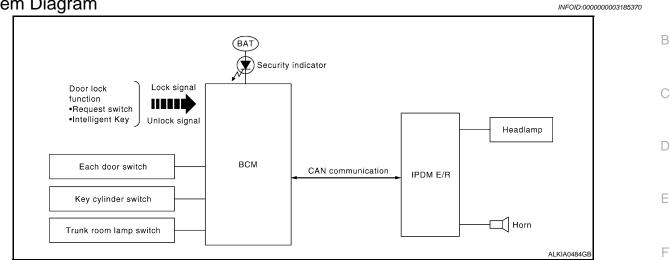
[SEDAN]

Component	Reference
BCM	<u>SEC-265</u>
Steering lock unit	<u>SEC-253</u>
Push-button ignition switch	<u>SEC-266</u>
Door switch	DLK-252
CVT device (detention switch)	<u>SEC-228</u>
Inside key antenna	DLK-242
Remote keyless entry receiver	DLK-311
Stop lamp switch	<u>SEC-221</u>
Park/neutral position switch	<u>SEC-239</u>
Clutch switch	<u>SEC-284</u>
Steering lock relay	<u>SEC-270</u>
Starter relay	<u>SEC-246</u>
Starter control relay	<u>SEC-227</u>
Security indicator	<u>SEC-310</u>
Key warning lamp	<u>SEC-309</u>

< FUNCTION DIAGNOSIS >

VEHICLE SECURITY SYSTEM

System Diagram



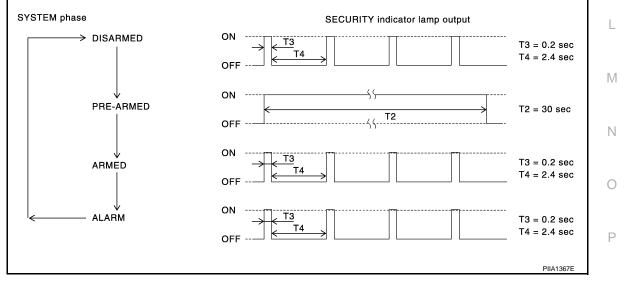
System Description

INFOID:000000003185371

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM system	Actuator	ŀ
All door switch	- Open or close			
Trunk room lamp switch				
Door key cylinder switch			IPDM E/R	
Door lock and unlock switch	Lock or unlock	Vehicle security system	Head lampHorn	
Door request switch	_		Security indicator lamp	
Intelligent Koy	Lock or unlock			
Intelligent Key	Panic alarm			S

OPERATION FLOW



SETTING THE VEHICLE SECURITY SYSTEM

Initial Condition

• Ignition switch is in OFF position.

Disarmed Phase

[SEDAN]

А

< FUNCTION DIAGNOSIS >

- When doors or trunk is open, the vehicle security system is set in the disarmed phase on the assumption that the owner is inside or near the vehicle.
- When the vehicle security system is in the disarmed phase, the security indicator lamp blinks every 2.4 seconds.

Pre-armed Phase and Armed Phase

When the following operation 1 or 2 is performed, the vehicle security system turns into the "pre-armed" phase. (The security indicator lamp illuminates.)

- 1. BCM receives LOCK signal from front door key cylinder switch or Intelligent Key, after trunk and all doors are closed.
- Trunk and all doors are closed after front doors are locked by key or door lock and unlock switch. The security indicator lamp illuminates for 30 seconds. Then, the system automatically shifts into the "armed" phase.

CANCELING THE SET VEHICLE SECURITY SYSTEM

When one of the following operations is performed, the armed phase is canceled.

- 1. Unlock the doors with the key or Intelligent Key.
- 2. Turn ignition switch "ON" or "ACC" position.

CANCELING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM

When unlocking the door with the key or Intelligent Key the alarm operation is canceled.

ACTIVATING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM

Check that the system is in the armed phase. (The security indicator lamp blinks every 2.4 seconds.) When the following operation 1 or 2 is performed, the system sounds the horns and flashes the headlamps for about 50 seconds.

- 1. Hood, trunk or any door is opened during armed phase.
- 2. Disconnecting and connecting the battery connector before canceling armed phase.

PANIC ALARM OPERATION

Intelligent Key system will not operate horn and headlamps if the ignition switch is in the ACC or ON position. When the Intelligent Key system is triggered, ground is supplied intermittently to both headlamp relay and horn relay.

When headlamp relay and horn relay are energized, then power is supplied to headlamps (LH and RH) and horns (HIGH and LOW).

The headlamp flashes and the horn sounds intermittently.

The alarm automatically turns off after 50 seconds or when BCM receives any signal from Intelligent Key.

< FUNCTION DIAGNOSIS >

1.

4.

7.

10. Trunk lid lock assembly

Component Parts Location

INFOID:000000003185372

А

В

С

D

Ε

F

Н

(1 3 4 (5) 6 斎 園 R 10 ່ 9 ्रिके (8) (7 (12) 1 ALKIA0025ZZ Body control module (view with instru-2. IPDM E/R 3. Key slot ment panel removed) Remote keyless entry receiver (view with 5. Front power window switch RH Main power window switch 6. instrument panel removed) Front door lock assembly LH (key cylin-8. Front door switch LH 9. Rear door switch LH der switch)

11. Horn (high) (view with front fender pro- 12. Horn (low) tector LH removed)

SEC-199

- J
 - SEC

L

Μ

Ν

0

Ρ

< FUNCTION DIAGNOSIS >

Component Description

INFOID:000000003185373

[SEDAN]

Component	Reference
BCM	<u>SEC-197</u>
Horn relay	<u>SEC-306</u>
Security indicator	<u>SEC-310</u>
Door switch	DLK-252
Door lock actuator	<u>DLK-295</u>
Trunk lid lock assembly	DLK-301
Door key cylinder switch	DLK-269
Door lock and unlock switch	DLK-256

DIAGNOSIS SYSTEM (BCM) COMMON ITEM

COMMON ITEM : Diagnosis Description

BCM CONSULT-III FUNCTION

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description	
WORK SUPPORT	Changes the setting for each system function.	
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM.	
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from BCM.	
DATA MONITOR	The BCM input/output signals are displayed.	
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.	
ECU IDENTIFICATION	The BCM part number is displayed.	
CONFIGURATION	This function is not used even though it is displayed.	

SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

It can perform the diagnosis modes except the following for all sub system selection items.

Sustem	Sub system coloction item		Diagnosis mode	
System	Sub system selection item	WORK SUPPORT	DATA MONITOR	ACTIVE TEST
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
Air conditioner	AIR CONDITONER		×	
Intelligent Key system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
BCM	BCM	×		
Immobilizer	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Trunk open	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	AIR PRESSURE MONITOR	×	×	×

COMMON ITEM : CONSULT-III Function

ECU IDENTIFICATION

Displays the BCM part No.

SELF-DIAG RESULT Refer to <u>SEC-349, "DTC Index"</u>. INTELLIGENT KEY INFOID:000000003185374

INFOID:000000003185375

А

В

С

1.1

< FUNCTION DIAGNOSIS >

INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY) INFOLD:000000003185376

BCM CONSULT-III FUNCTION

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.

WORK SUPPORT

Monitor item	Description
REMO CONT ID CONFIR	It can be checked whether Intelligent Key ID code is registered or not in this mode.
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch (driver side, passenger side and trunk) mode can be changed to operate (ON) or not operate (OFF) in this mode.
ENGINE START BY I-KEY	Engine start function mode can be changed to operate (ON) or not operate (OFF) with this mode.
TRUNK/GLASS HATCH OPEN	Buzzer reminder function mode by trunk opener request switch can be changed to operate (ON) or not operate (OFF) with this mode.
PANIC ALARM SET	 Panic alarm button pressing time on Intelligent Key remote control button can be selected from the following with this mode. 0.5 sec. 1.5 sec. OFF: Non-operation
PW DOWN SET	 Unlock button pressing time on Intelligent Key button can be selected from the following with this mode. 3 sec. 5 sec. OFF: Non-operation
TRUNK OPEN DELAY	 Trunk button pressing time on Intelligent Key button can be selected from the following with this mode. 0.5 sec. 1.5 sec. OFF: Non-operation
LO- BATT OF KEY FOB WARN	Intelligent Key low battery warning mode can be changed to operate (ON) or not operate (OFF) with this mode.
ANTI KEY LOCK IN FUNCTI	Key reminder function mode can be changed to operate (ON) or not operate (OFF) with this mode.
HORN WITH KEYLESS LOCK	Horn reminder function mode by Intelligent Key button can be changed to operate (ON) or not operate (OFF) with this mode.
HAZARD ANSWER BACK	 Hazard reminder function mode can be selected from the following with this mode. LOCK ONLY: Door lock operation only UNLOCK ONLY: Door unlock operation only LOCK AND UNLOCK: Lock/unlock operation OFF: Non operation
ANS BACK I-KEY LOCK	 Buzzer reminder function (lock operation) mode by door request switch (driver side and passenger side) can be selected from the following with this mode. HORN CHIRP: Sound horn BUZZER: Sound Intelligent Key warning buzzer OFF: Non-operation
ANS BACK I-KEY UNLOCK	Buzzer reminder function (unlock operation) mode by door request switch can be changed to operate (ON) or not operate (OFF) with this mode.

< FUNCTION DIAGNOSIS >

[SEDAN]

С

Monitor item	Description	٨
SHORT CRANKING OUTPUT	Starter motor can operate during the times below. • 70 msec • 100 msec • 200 msec	B
INSIDE ANT DIAGNOSIS	This function allows inside key antenna self-diagnosis.	

SELF-DIAG RESULT

Refer to SEC-349, "DTC Index".

DATA MONITOR

Monitor Item	Condition
REQ SW-DR	Indicates [ON/OFF] condition of door request switch (driver side).
REQ SW-AS	Indicates [ON/OFF] condition of door request switch (passenger side).
REQ SW-BD/TR	Indicates [ON/OFF] condition of trunk opener request switch.
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch.
CLUCH SW	Indicates [ON/OFF] condition of clutch switch.
BRAKE SW 1	Indicates [ON/OFF] condition of brake switch.
DETE/CANCL SW	Indicates [ON/OFF] condition of P position.
SFT PN/N SW	Indicates [ON/OFF] condition of P or N position.
S/L -LOCK	Indicates [ON/OFF] condition of steering lock (LOCK).
S/L -UNLOCK	Indicates [ON/OFF] condition of steering lock (UNLOCK).
S/L RELAY-F/B	Indicates [ON/OFF] condition of ignition switch.
UNLK SEN-DR	Indicates [ON/OFF] condition of driver door UNLOCK status.
PUSH SW -IPDM	Indicates [ON/OFF] condition of push-button ignition switch.
IGN RLY1 F/B	Indicates [ON/OFF] condition of ignition relay 1.
DETE SW -IPDM	Indicates [ON/OFF] condition of P position.
SFT PN -IPDM	Indicates [ON/OFF] condition of P or N position.
SFT P -MET	Indicates [ON/OFF] condition of P position.
SFT N -MET	Indicates [ON/OFF] condition of N position.
ENGINE STATE	Indicates [STOP/START/CRANK/RUN] condition of engine states.
S/L LOCK-IPDM	Indicates [ON/OFF] condition of steering lock (LOCK).
S/L UNLOCK-IPDM	Indicates [ON/OFF] condition of steering lock (UNLOCK).
S/L RELAY-REQ	Indicates [ON/OFF] condition of steering lock relay.
VEH SPEED 1	Display the vehicle speed signal received from combination meter by numerical value [Km/h].
VEH SPEED 2	Display the vehicle speed signal received from ABS or VDC or CVT by numerical value [Km/h].
DOOR STAT-DR	Indicates [LOCK/READY/UNLK] condition of driver side door status.
DOOR STAT-AS	Indicates [LOCK/READY/UNLK] condition of passenger side door status.
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.
RKE OPE COUN1	When remote keyless entry receiver receives the signal transmitted while operating on Intelligent Key, the numerical value start changing.
RKE OPE COUN2	NOTE: This item is displayed, but cannot be monitored.
TRNK/HAT MNTR	Indicates [ON/OFF] condition of trunk lid.
RKE-LOCK	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.
RKE-UNLOCK	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.
RKE-TR/BD	Indicates [ON/OFF] condition of TRUNK OPEN signal from Intelligent Key.
RKE-PANIC	Indicates [ON/OFF] condition of PANIC button of Intelligent Key.

SEC-203

< FUNCTION DIAGNOSIS >

Monitor Item	Condition
RKE-P/W OPEN	Indicates [ON/OFF] condition of P/W DOWN signal from Intelligent Key.
RKE-MODE CHG	Indicates [ON/OFF] condition of MODE CHANGE signal from Intelligent Key.

ACTIVE TEST

Test item	Description
BATTERY SAVER	This test is able to check interior room lamp operation. The interior room lamp will be activated after "ON" on CONSULT-III screen is touched.
PW REMOTO DOWN SET	This test is able to check power window down operation. The power window down will be activated after "ON" on CONSULT-III screen is touched.
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation. Intelligent Key warning buzzer sounds when "ON" on CONSULT-III screen is touched.
INSIDE BUZZER	 This test is able to check warning chime in combination meter operation. Take away warning chime sounds when "TAKE OUT" on CONSULT-III screen is touched. Key warning chime sounds when "KEY WARN" on CONSULT-III screen is touched. P position warning chime sounds when "P RNG WARN" on CONSULT-III screen is touched. ACC warning chime sounds when "ACC WARN" on CONSULT-III screen is touched.
INDICATOR	 This test is able to check warning lamp operation. "KEY" Warning lamp illuminates when "KEY IND ON" on CONSULT-III screen is touched. "KEY" Warning lamp flashes when "KEY IND FSH" on CONSULT-III screen is touched.
INT LAMP	This test is able to check interior room lamp operation. The interior room lamp will be activated after "ON" on CONSULT-III screen is touched.
LCD	 This test is able to check meter display information Engine start information displays when "BRAKE/P" on CONSULT-III screen is touched. Engine start information displays when "BRAKE/P/ON" on CONSULT-III screen is touched. Key ID warning displays when "KEY ID NG" on CONSULT-III screen is touched. Steering lock information displays when "STLCK RELES" on CONSULT-III screen is touched. P position warning displays when "P RNG IND" on CONSULT-III screen is touched. Intelligent Key insert information displays when "INSERT KEY" on CONSULT-III screen is touched. Intelligent Key low battery warning displays when "KEY BAT LOW" on CONSULT-III screen is touched. Take away through window warning displays when "TK AWAY WDW" on CONSULT-III screen is touched. Take away warning display when "TAKE AWAY" on CONSULT-III screen is touched. OFF position warning display when "IGN OFF WARN" on CONSULT-III screen is touched.
TRUNK/GLASS HATCH	This test is able to check trunk lid opener actuator open operation. This actuator opens when "ON" on CONSULT-III screen is touched.
FLASHER	This test is able to check security hazard lamp operation. The hazard lamps will be activated after "ON" on CONSULT-III screen is touched.
HORN	This test is able to check horn operation. The horn will be activated after "ON" on CONSULT-III screen is touched.
IGN CONT2	This test is able to check security hazard lamp operation. The hazard lamps will be activated after "ON" on CONSULT-III screen is touched.
P RANGE	This test is able to check A/T device power supply A/T device power is supplied when "ON" on CONSULT-III screen is touched.
ENGINE SW ILLUMI	This test is able to check push-ignition switch illumination operation. Push-ignition switch illumination illuminates when "ON" on CONSULT-III screen is touched.
LOCK INDCATOR	This test is able to check LOCK indicator in push-ignition switch operation. LOCK indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched.
ACC INDCATOR	This test is able to check ACC indicator in push-ignition switch operation. LOCK indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched.
IGNITION ON IND	This test is able to check INGITION ON indicator in push-ignition switch operation. LOCK indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched.
KEY SLOT ILLUMI	This test is able to check key slot illumination operation. Key slot illumination flash when "ON" on CONSULT-III screen is touched.

SEC-204

< FUNCTION DIAGNOSIS >

THEFT ALM

THEFT ALM : CONSULT-III Function (BCM - THEFT)

INFOID:000000003185377

[SEDAN]

А

В

Ν

APPLICATION ITEM

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description	С
WORK SUPPORT	Changes the setting for each system function.	
DATA MONITOR	The BCM input/output signals are displayed.	
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.	D

DATA MONITOR

Monitored Item	Description	
REQ SW-DR	Indicates [ON/OFF] condition of door request switch (driver side).	
REQ SW-AS	Indicates [ON/OFF] condition of door request switch (passenger side).	F
REQ SW-BD/TR	Indicates [ON/OFF] condition of trunk opener request switch.	
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch	0
UNLK SEN-DR	Indicates [ON/OFF] condition of driver door UNLOCK status.	G
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.	
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.	Н
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch RH.	
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.	
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.	
DOOR SW-BK	This is displayed even when it is not equipped.	
CDL LOCK SW	Indicates [ON/OFF] condition of lock signal from door lock/unlock switch LH and RH.	J
CDL UNLOCK SW	Indicates [ON/OFF] condition of unlock signal from door lock/unlock switch LH and RH.	
KEY CYL LK-SW	Indicates [ON/OFF] condition of lock signal from front door key cylinder switch.	
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from front door key cylinder switch.	SEC
KEY CYL SW-TR	This is displayed even when it is not equipped.	
TR/BD OPEN SW	Indicates [ON/OFF] condition of trunk lid opener switch.	L
TRNK/HAT MNTR	Indicates [ON/OFF] condition of trunk room lamp switch.	
RKE-LOCK	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.	
RKE-UNLOCK	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.	M
RKE-TR/BD	Indicates [ON/OFF] condition of TRUNK OPEN signal from Intelligent Key.	

WORK SUPPORT

Test Item	Description	
SECURITY ALARM SET	This mode is able to confirm and change security alarm ON-OFF setting.	0
THEFT ALM TRG	The switch which triggered vehicle security alarm is recorded. This mode is able to confirm and erase the record of vehicle security alarm. The trigger data can be erased by touching "CLEAR" on CONSULT-III screen.	Р

ACTIVE TEST

< FUNCTION DIAGNOSIS >

INFOID:000000003185378

Test Item	Description
THEFT IND	This test is able to check security indicator lamp operation. The lamp will be turned on when "ON" on CONSULT-III screen is touched.
VEHICLE SECURITY HORN	This test is able to check vehicle security horn operation. The horns will be activated for 0.5 sec- onds after "ON" on CONSULT-III screen is touched.
HEADLAMP(HI)	This test is able to check vehicle security lamp operation. The headlamps will be activated for 0.5 seconds after "ON" on CONSULT-III screen is touched.
FLASHER	This test is able to check vehicle security hazard lamp operation. The hazard lamps will be activated after "ON" on CONSULT-III screen is touched.

IMMU

IMMU : CONSULT-III Function (BCM - IMMU)

APPLICATION ITEM

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.

DATA MONITOR

Monitor item	Content
CONFRM ID ALL	
CONFIRM ID4	
CONFIRM ID3	Indicates [YET] at all time. Switch to [DONE] when a registered Intelligent Key is inserted into the key slot.
CONFIRM ID2	
CONFIRM ID1	
TP 4	Indicates the number of ID which has been registered.
TP 3	
TP 2	
TP 1	
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch.
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.

ACTIVE TEST

Test item	Description
THEFT IND	This test is able to check security indicator lamp operation. The lamp will be turned on when "ON" on CONSULT-III screen touched.

COMPONENT DIAGNOSIS U1000 CAN COMM CIRCUIT

Description

Refer to LAN-7, "System Description".

DTC Logic

DTC DETECTION LOGIC

CONSULT-III dis- play description	DTC Detection Condition	Possible cause	
CAN COMM CIR- CUIT [U1000]	When BCM cannot communicate CAN communication signal continuously for 2 seconds or more	In CAN communication system, any item (or items) of the following listed below is malfunctioning. • Transmission • Receiving (ECM) • Receiving (VDC/TCS/ABS) • Receiving (METER/M&A) • Receiving (TCM) • Receiving (MULTI AV) • Receiving (IPDM E/R)	E F G
Diagnosis Pro	cedure	INFOID:000000003185381	
1			Н

1.PERFORM SELF DIAGNOSTIC

1. Turn ignition switch ON and wait for 2 second or more.

2. Check "Self Diagnostic Result".

Is "CAN COMM CIRCUIT" displayed?

- YES >> Refer to LAN-8, "CAN Communication Control Circuit".
- NO >> Refer to GI-42, "Intermittent Incident".

[SEDAN]

А

D

INFOID:000000003185379

INFOID:000000003185380

- J
- SEC

- ...
- Ν
- 0
- Р

M

L

U1010 CONTROL UNIT (CAN)

< COMPONENT DIAGNOSIS >

U1010 CONTROL UNIT (CAN)

DTC Logic

DTC DETECTION LOGIC

CONSULT-III display description	DTC Detection Condition	Possible cause
CAN COMM CIRCUIT [U1010]	BCM detected internal CAN communication circuit malfunction.	ВСМ

Diagnosis Procedure

INFOID:000000003185383

1. REPLACE BCM

When DTC U1010 is detected, replace BCM.

>> Replace BCM. Refer to <u>BCS-88, "Removal and Installation"</u>.

SEC-208

[SEDAN]

INFOID:000000003185382

< COMPONENT DIAGNOSIS >

B2013 ID DISCORD, IMMU-STRG

Description

BCM performs the ID verification with the steering lock unit and releases the steering lock if both BCM and steering lock unit ID are same. BCM starts the communication with the steering lock unit when Intelligent Key is carried into the passenger compartment and the push-button ignition switch is pressed.

DTC Logic

INFOID:000000003185385

INFOID:000000003185384

DTC DETECTION LOGIC

	Trouble diagnosis			
DTC No.	name	DTC detecting condition	Possible cause	
B2013	ID DISCORD, IMMU- STRG	The ID verification results between BCM and steer- ing control unit are NG. The registration is neces- sary.	Steering wheel lock unit	
DTC CONFI	RMATION PROC	EDURE		
1.PERFORM	M DTC CONFIRMA	TION PROCEDURE		
	e push-button ignitio	on switch " with CONSULT-III.		
Is DTC detec				
	Go to <u>SEC-209, "Dia</u> NSPECTION END.	agnosis Procedure".		
Diagnosis	Procedure		INFOID:000000003185386	
1.PERFORM	M INITIALIZATION			
		JLT-III. Re-register all Intelligent Keys.	noration Manual"	
	-	of Intelligent Key. Refer to "CONSULT-III O		
YES >> S	Steering lock unit wa		<u>stered intelligent Key?</u>	00
NO >> F	Replace steering wh	eel lock unit.		

А

С

Μ

Ν

Ο

Ρ

Description

BCM performs the ID verification with the steering lock unit to release the steering. BCM starts the communication with the steering lock unit when Intelligent Key is carried into the passenger compartment and the pushbutton ignition switch is pressed.

DTC Logic

INFOID:000000003185388

INFOID:000000003185389

INFOID:000000003185387

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2014	CHAIN OF STRG- IMMU	Inactive communication between steering control unit and BCM	 Harness or connectors (steering lock unit circuit is open or short- ed) Steering lock unit BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Lock steering.
- 2. Press the push-button ignition switch.
- 3. Check "Self diagnostic result" with CONSULT-III.

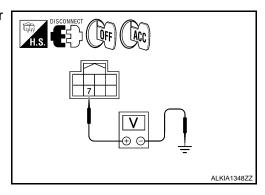
Is DTC detected?

- YES >> Go to <u>SEC-210, "Diagnosis Procedure"</u>.
- NO >> INSPECTION END.

Diagnosis Procedure

1. CHECK STEERING LOCK UNIT POWER SUPPLY

- 1. Turn ignition switch OFF.
- 2. Disconnect steering lock unit harness connector.
- Check voltage between steering lock unit harness connector and ground while turning ignition switch from OFF to ACC.



Steering lock unit		Ground	Ignition switch position	Voltage [\/]	
Connector	Terminal	Ground	ignition switch position	Voltage [V]	
M32	7	Ground	$OFF \to ACC$	Battery voltage	
10152	Ι	Ground	OFF or ON	0	

Is the inspection normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.check steering lock unit power supply circuit

1. Turn ignition switch OFF.

< COMPONENT DIAGNOSIS >

[SEDAN]

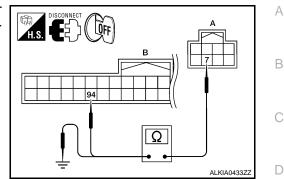
Ε

F

Н

Ρ

- 2. Disconnect BCM harness connector.
- Check continuity between steering lock unit harness connector M32 (A) terminal 7 and BCM harness connector M19 (B) terminal 94.



Steering	lock unit	B	СМ	Continuity	
Connector	Terminal	connector	Terminal	Continuity	
A: M32	7	B: M19	94	Yes	

4. Check continuity between steering lock unit harness connector M32 (A) terminal 7 and ground.

Steering	lock unit	Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: M32	7	Ground	No	

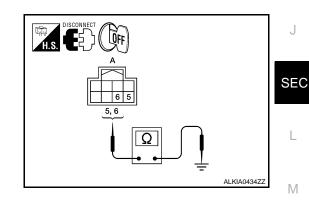
Is the inspection normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

3. check steering lock unit ground circuit

- 1. Turn ignition switch OFF.
- 2. Check continuity between steering lock unit and ground.



Steering lock unit			Ground	Continuity	NI
	Connector	Terminal	Ground	Continuity	N
	M32	5	Ground	Yes	
	IVI32	6	Giouna	165	0

Is the inspection normal?

YES >> GO TO 4.

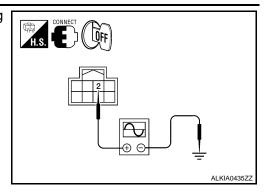
NO >> Repair harness or connector.

4.CHECK STEERING LOCK UNIT COMMUNICATION SIGNAL

1. Connect steering lock unit harness connector.

< COMPONENT DIAGNOSIS >

2. Using an oscilloscope, read voltage signal between steering lock unit harness connector and ground.



Steering	lock unit	Ground	Steering lock unit condi-	Value	
Connector	Terminal	Ground	tion	value	
			Lock	Battery voltage	
M32	2	Ground	Lock or unlock	(V) 15 0 50 ms JMKIA0066GB	
				For 15 seconds after un- lock	Battery voltage
			15 seconds or later after unlock.	0 V	

Steering is locked Steering is unlocked

: Opening the door when ignition switch is ON to OFF. : Ignition switch is OFF to ACC.

Is the inspection normal?

YES >> Replace steering lock unit.

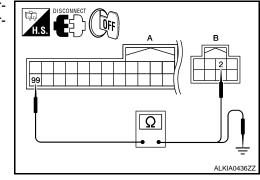
NO >> GO TO 5.

5. CHECK STEERING LOCK UNIT COMMUNICATION CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect BCM harness connector.

 Check continuity between BCM harness connector M19 (A) terminal 99 and steering lock unit harness connector M32 (B) terminal 2.



В	СМ	Steering	Steering lock unit	
Connector	Terminal	connector	Terminal	Continuity
A: M19	99	B: M32	2	Yes

4. Check continuity between BCM harness connector M19 (A) terminal 99 and ground.

SEC-212

< COMPONENT DIAGNOSIS >

[SEDAN]

BCM		Ground	Continuity
Connector	Terminal	Ground	Continuity
A: M19	99	Ground	No
the inspection normal?			
YES >> GO TO 6.			
NO >> Repair harness	or connector.		
CHECK INTERMITTENT	INCIDENT		
efer to GI-42, "Intermittent	Incident".		
>> INSPECTION E	ND.		

J

SEC

L

M

Ν

Ο

Ρ

G

Н

< COMPONENT DIAGNOSIS >

B2190, P1610 NATS ANTENNA AMP

Description

Performs ID verification through BCM and Intelligent Key when push-button ignition switch is pressed. Prohibits the release of steering lock or start of engine when an unregistered ID of Intelligent Key is used.

DTC Logic

INFOID:000000003185391

INFOID:000000003185392

INFOID:000000003185390

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2190			Harness or connectors
P1610	NATS ANTENNA AMP	Inactive communication between key slot and BCM.	(The key slot circuit is open or shorted)Key slotBCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Insert Intelligent Key into the key slot.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-214, "Diagnosis Procedure".
- NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press the push-button ignition switch.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-214, "Diagnosis Procedure".
- NO >> INSPECTION END.

Diagnosis Procedure

1. INSPECTION START

Check the case in which DTC is detected.

- Case1: It is detected when Intelligent Key is inserted into key slot.
- Case2: It is detected after Intelligent Key is inserted into key slot and push-button ignition switch is pressed.

In which case is DTC detected?

Case1. >> GO TO 2. Case2. >> GO TO 4.

2.CHECK KEY SLOT INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect key slot harness connector.
- 3. Check voltage between key slot harness connector and ground.

AI KIA042877

B2190, P1610 NATS ANTENNA AMP

< COMPONENT DIAGNOSIS >

[SEDAN]

С

ALKIA0430ZZ

•	Key slot		Ground	Voltage [V] (approx.)
Connector Terminal				
he inspection result no			Ground	Battery voltage
ES >> Replace key O >> GO TO 3.				
CHECK KEY SLOT CI	RCUIT			
Disconnect BCM har				
Check continuity bett terminal 2 and BCM I				VECT
			· H.S.	
				Ω
				• •
				ALKIA042
Key sl	-t		ЗСМ	
Connector	Terminal	Connector	Terminal	Continuity
A: M40	2	B: M19	68	Yes
Check continuity betw	veen key slot harne	ess connector M40 (A) terminal 2 an	d ground.
	Kayalat			
	Key slot	al	Ground	Continuity
Connector A: M40	Key slot Termina 2	al	Ground	
Connector	Termina 2	al		Continuity No
Connector A: M40 he inspection result nc ES >> GO TO 8.	Termina 2 rmal?	al		
Connector A: M40 he inspection result no ES >> GO TO 8. O >> Repair harne	Termina 2 rmal? ss or connector.			
Connector A: M40 he inspection result no ES >> GO TO 8. O >> Repair harne CHECK PUSH-IGNITI	Termina 2 rmal? ss or connector. ON SWITCH OPER	RATION		
Connector A: M40 he inspection result no ES >> GO TO 8. O >> Repair harne CHECK PUSH-IGNITI ess push-button ignition	Termina 2 rmal? ss or connector. ON SWITCH OPEF	RATION		
Connector A: M40 he inspection result no ES >> GO TO 8. O >> Repair harne CHECK PUSH-IGNITI ess push-button ignition es ignition switch turn	Termina 2 rmal? ss or connector. ON SWITCH OPEF	RATION		
Connector A: M40 he inspection result no ES >> GO TO 8. O >> Repair harne CHECK PUSH-IGNITI ess push-button ignition	Termina 2 rmal? ss or connector. ON SWITCH OPEF	RATION		
Connector A: M40 he inspection result no ES >> GO TO 8. O >> Repair harne CHECK PUSH-IGNITI ess push-button ignition es ignition switch turn f ES >> GO TO 5.	Termina 2 rmal? ss or connector. ON SWITCH OPER a switch and check to ON?	RATION if it turns ON.		
Connector A: M40 he inspection result no ES >> GO TO 8. O >> Repair harne CHECK PUSH-IGNITI ess push-button ignition es ignition switch turn for ES >> GO TO 5. O >> GO TO 5. O >> GO TO 7. CHECK KEY SLOT CO Turn ignition switch C	Termina 2 rmal? ss or connector. ON SWITCH OPER switch and check to ON? OMMUNICATION S	RATION if it turns ON.		
Connector A: M40 he inspection result no ES >> GO TO 8. O >> Repair harne CHECK PUSH-IGNITI ess push-button ignition es ignition switch turn for ES >> GO TO 5. O >> GO TO 5. O >> GO TO 7. CHECK KEY SLOT CO Turn ignition switch C Disconnect key slot h	Termina 2 rmal? ss or connector. ON SWITCH OPER switch and check to ON? OMMUNICATION S OFF. arness connector.	RATION if it turns ON. SIGNAL	Ground	
Connector A: M40 he inspection result no ES >> GO TO 8. O >> Repair harne CHECK PUSH-IGNITI ess push-button ignition es ignition switch turn for ES >> GO TO 5. O >> GO TO 5. O >> GO TO 7. CHECK KEY SLOT CO Turn ignition switch C	Termina 2 rmal? ss or connector. ON SWITCH OPER switch and check to ON? OMMUNICATION S OFF. arness connector.	RATION if it turns ON. SIGNAL	Ground	No
Connector A: M40 he inspection result no ES >> GO TO 8. O >> Repair harne CHECK PUSH-IGNITI ess push-button ignition es ignition switch turn for ES >> GO TO 5. O >> GO TO 5. O >> GO TO 7. CHECK KEY SLOT CO Turn ignition switch C Disconnect key slot h	Termina 2 rmal? ss or connector. ON SWITCH OPER switch and check to ON? OMMUNICATION S OFF. arness connector.	RATION if it turns ON. SIGNAL	Ground	No
Connector A: M40 he inspection result no ES >> GO TO 8. O >> Repair harne CHECK PUSH-IGNITI ess push-button ignition es ignition switch turn for ES >> GO TO 5. O >> GO TO 5. O >> GO TO 7. CHECK KEY SLOT CO Turn ignition switch C Disconnect key slot h	Termina 2 rmal? ss or connector. ON SWITCH OPER switch and check to ON? OMMUNICATION S OFF. arness connector.	RATION if it turns ON. SIGNAL	Ground	No
Connector A: M40 he inspection result no ES >> GO TO 8. O >> Repair harne CHECK PUSH-IGNITI ess push-button ignition es ignition switch turn for ES >> GO TO 5. O >> GO TO 5. O >> GO TO 7. CHECK KEY SLOT CO Turn ignition switch C Disconnect key slot h	Termina 2 rmal? ss or connector. ON SWITCH OPER switch and check to ON? OMMUNICATION S OFF. arness connector.	RATION if it turns ON. SIGNAL	Ground	No
Connector A: M40 he inspection result no ES >> GO TO 8. O >> Repair harne CHECK PUSH-IGNITI ess push-button ignition es ignition switch turn for ES >> GO TO 5. O >> GO TO 5. O >> GO TO 7. CHECK KEY SLOT CO Turn ignition switch C Disconnect key slot h	Termina 2 rmal? ss or connector. ON SWITCH OPER switch and check to ON? OMMUNICATION S OFF. arness connector.	RATION if it turns ON. SIGNAL	Ground	
Connector A: M40 he inspection result no ES >> GO TO 8. O >> Repair harne CHECK PUSH-IGNITI ess push-button ignition es ignition switch turn for ES >> GO TO 5. O >> GO TO 5. O >> GO TO 7. CHECK KEY SLOT CO Turn ignition switch C Disconnect key slot h	Termina 2 rmal? ss or connector. ON SWITCH OPER switch and check to ON? OMMUNICATION S OFF. arness connector.	RATION if it turns ON. SIGNAL	Ground	

B2190, P1610 NATS ANTENNA AMP

< COMPONENT DIAGNOSIS >

[SEDAN]

Key	/ slot	Ground	Continuity
Connector	Terminal	Croana	
M40	3	Ground	Yes

Is the inspection result normal?

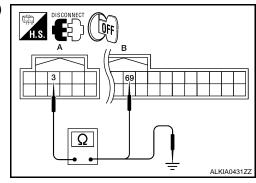
YES >> Replace key slot.

NO >> GO TO 6.

6. Check key slot communication signal circuit

1. Disconnect BCM harness connector.

2. Check continuity between key slot harness connector M40 (A) terminal 3 and BCM harness connector M19 (B) terminal 69.



Key slot		B	Continuity		
Connector	Terminal	Connector	Terminal	Continuity	
A: M40	3	B: M19	69	Yes	

3. Check continuity between key slot harness connector M40 (A) terminal 3 and ground.

Key	' slot	Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: M40	3	Ground	No	

Is the inspection result normal?

YES >> GO TO 8.

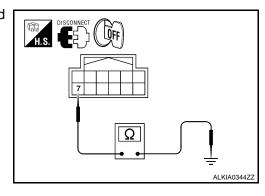
NO >> Repair harness or connector.

7. CHECK KEY SLOT GROUND CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect key slot harness connector.

3. Check continuity between key slot harness connector and ground.



Key	/ slot	Ground	Continuity
Connector	Terminal		
M40	7	Ground	Yes

SEC-216

B2190, P1610 NATS ANTENNA AMP

< COMPONENT DIAGNOSIS >	[SEDAN]
Is the inspection result normal?	
YES >> GO TO 8. NO >> Repair harness or connector.	A
8. CHECK INTERMITTENT INCIDENT	В
Refer to GI-42. "Intermittent Incident".	D
>> INSPECTION END.	С
	D
	E

J

F

G

Н

I

SEC

Μ

Ν

0

Ρ

B2191, P1615 DIFFERENCE OF KEY

Description

Performs ID verification through BCM and Intelligent Key when push-button ignition switch is pressed. Prohibits the release of steering lock or start of engine when an unregistered ID of Intelligent Key is used.

DTC Logic

INFOID:000000003185394

INFOID:000000003185395

INFOID:000000003185393

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2191	DIFFERENCE OF	The ID verification results between BCM and Intel-	Intelligent Key
P1615	KEY	ligent Key are NG. The registration is necessary.	• Intelligent Key

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press the push-button ignition switch

2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Go to <u>SEC-218, "Diagnosis Procedure"</u>. NO >> INSPECTION END.

Diagnosis Procedure

1.PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Re-register all Intelligent Keys. For initialization and registration of Intelligent Key. Refer to "CONSULT-III Operation Manual.

Can the system be initialized and can the engine be started with re-registered Intelligent Key?

- YES >> Intelligent Key was unregistered.
- NO >> BCM is malfunctioning.
 - Replace BCM
 - Perform initialization again

B2192, P1611 ID DISCORD, IMMU-ECM

Description

BCM performs the ID verification with ECM that allows the engine to start. Start the engine if the ID is OK. ECM prevents the engine from starting if the ID is not registered. BCM starts the communication with ECM if ignition switch is turned ON.

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2192 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-207, "DTC Logic"</u>.
- If DTC B2192 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-208, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	F
B2192	ID DISCORD, IMMU-	The ID verification results between BCM and ECM	• BCM	-
P1611	ECM	are NG. The registration is necessary.	• ECM	
	1			- G

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

		Н
 Turn ignition switch ON under the following conditions. A/T selector lever is in the P or N position 		11
- Do not depress the brake pedal		1
2. Check "Self diagnostic result" with CONSULT-III.		1
Is DTC detected?		
YES >> Go to <u>SEC-219, "Diagnosis Procedure"</u> .		
NO >> INSPECTION END.		J
Diagnosis Procedure	INFOID:000000003185398	
		SEC
1.PERFORM INITIALIZATION		SEC
Derform initialization with CONCLUT III. Do register all Intelligent Kova		
Perform initialization with CONSULT-III. Re-register all Intelligent Keys.		
For initialization and registration of Intelligent Key. Refer to "CONSULT-III Operation Manual".		L
Can the system be initialized and can the engine be started with re-registered Intelligent Key?		
YES >> ID was unregistered.		
NO >> BCM is malfunctioning.		Μ
Replace BCM		IVI
Perform initialization again		
5		
Replace ECM		Ν
		0

Ρ

INFOID:000000003185396

INFOID:000000003185397

A

В

С

D

B2193, P1612 CHAIN OF ECM-IMMU

Description

BCM performs the ID verification with ECM that allows the engine to start. Start the engine if the ID is OK. ECM prevents the engine from starting if the ID is not registered. BCM starts the communication with ECM if ignition switch is turned ON.

DTC Logic

INFOID:000000003185400

INFOID:000000003185399

DTC DETECTION LOGIC **NOTE**:

- If DTC B2193 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-207, "DTC Logic".
- If DTC B2193 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-208, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2193			Harness or connectors
P1612	CHAIN OF ECM- IMMU	Inactive communication between ECM and BCM	(The CAN communication line is open or shorted)BCMECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions.
- CVT selector lever is in the P or N position.
- Do not depress brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-220, "Diagnosis Procedure".
- NO >> INSPECTION END.

Diagnosis Procedure

1.REPLACE BCM

- 1. Replace BCM.
- 2. Perform initialization with CONSULT-III. For initialization, refer to "CONSULT-III Operation Manual".

Does the engine start?

NO

- YES >> BCM is malfunctioning.
 - Replace BCM.
 - Perform initialization again.
 - >> ECM is malfunctioning.
 - Replace ECM.
 - Perform ECM re-communicating function.

[SEDAN]

B2555 STOP LAMP

Description

BCM detects the stop lamp status and confirms the stop lamp switch ON/OFF status. BCM confirms the В engine start condition according to the stop lamp switch ON/OFF status.

DTC Logic

INFOID:000000003185403

INEOID:000000003185404

INFOID:00000003185402

DTC DETECTION LOGIC

DTC No.	Trouble diagno- sis name	DTC detecting condition	Possible cause	
B2555	STOP LAMP	BCM makes a comparison between the upper voltage and lower voltage of stop lamp switch. It judges from their values to detect the malfunctioning circuit.	 Harness or connectors (stop lamp switch circuit is open or shorted) Stop lamp switch Fuse 	E

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

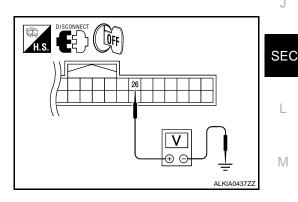
- 1. Depress the brake pedal and wait for at least 1 second.
- Check "Self diagnostic result" with CONSULT-III. 2.

Is DTC detected?

- YES >> Go to SEC-221, "Diagnosis Procedure".
- >> INSPECTION END. NO

Diagnosis Procedure

- 1. CHECK STOP LAMP SWITCH INPUT SIGNAL
- 1. Turn ignition switch OFF.
- 2. Disconnect BCM harness connector.
- 3. Check voltage between BCM harness connector and ground.



Ν	I

Ρ

Μ

BCM		Ground	Stop lamp switch position	Voltage [V]
Connector	Terminal	Ground	Stop lamp switch position	voliage[v]
M18	26	Ground	Depressed	Battery voltage
MITO	20	Cround	Released	0

Is the inspection normal?

YES >> Stop lamp switch is OK.

2. CHECK STOP LAMP SWITCH POWER SUPPLY CIRCUIT

1. Disconnect stop lamp switch harness connector.

F

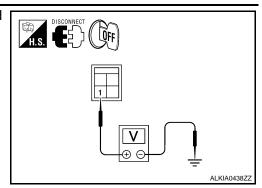
Н

А

B2555 STOP LAMP

< COMPONENT DIAGNOSIS >

2. Check voltage between stop lamp harness connector and ground.



Stop larr	Stop lamp switch		Voltage [V]
Connector	Terminal	Ground	voltage [v]
E38	1	Ground	Battery voltage

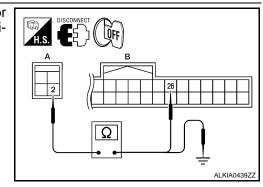
Is the inspection result normal?

YES >> GO TO 3.

NO >> Check harness for open or short between stop lamp switch and fuse.

3.CHECK STOP LAMP SWITCH CIRCUIT

 Check continuity between stop lamp switch harness connector E38 (A) terminal 2 and BCM harness connector M18 (B) terminal 26.



Stop lan	np switch	B	CM	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: E38	2	B: M18	26	Yes

2. Check continuity between stop lamp switch harness connector E38 (A) terminal 2 and ground.

Stop lar	Stop lamp switch		Ground Continuity	
Connector	Terminal	Ciouna	Continuity	
A: E38	2	Ground	No	

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

4.CHECK STOP LAMP SWITCH

Refer to SEC-223, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace stop lamp switch.

5. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

SEC-222

B2555 STOP LAMP

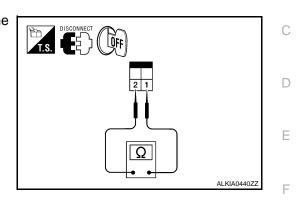
< COMPONENT DIAGNOSIS >

>> INSPECTION END.

Component Inspection

1.CHECK STOP LAMP SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect stop lamp switch harness connector.
- 3. Check continuity between stop lamp switch terminals under the following conditions.



Stop lar	np switch	Condition		Continuity	
Ter	minal		Condition	Continuity	
1	1 0	1 2 Brake pedal	Not depressed	No	
I	2	Brake pedar	Depressed	Yes	

Is the inspection result normal?

YES >> INSPECTION END.

NO >> Replace stop lamp switch.

J

Н

SEC

L

Μ

Ν

Ο

Ρ

[SEDAN]

А

В

B2556 PUSH-BUTTON IGNITION SWITCH

Description

The switch that changes the power supply position. BCM maintains the power supply position status. BCM changes the power supply position with the operation of the push-button ignition switch.

DTC Logic

INFOID:000000003185407

INFOID:000000003185408

INFOID:000000003185406

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2556	PUSH-BUTTON IG- NITION SWITCH	BCM detects the push-button ignition switch stuck to ON for 100 seconds or more	 Harness or connectors (Push-button ignition switch circuit is shorted.) Push-button ignition switch

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine and wait for at least 100 seconds.
- 2. Check "Self diagnostic result" with CONSULT-III.

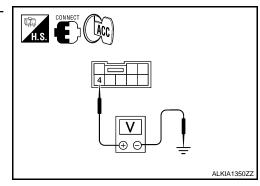
Is DTC detected?

- YES >> Go to SEC-224, "Diagnosis Procedure".
- NO >> INSPECTION END.

Diagnosis Procedure

1.CHECK PUSH-BUTTON IGNITION SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect push-button ignition switch harness connector.
- Check voltage between push-button ignition switch harness connector and ground.



Push-button	Push-button ignition switch Connector Terminal		Voltage [V]
Connector			vollage [v]
M38	4	Ground	Battery voltage

Is the inspection normal?

YES >> GO TO 2.

NO >> GO TO 4.

2. CHECK PUSH-BUTTON IGNITION SWITCH

Refer to SEC-225, "Component Inspection".

Is the inspection normal?

YES >> GO TO 3.

NO >> Replace push-button ignition switch. Refer to <u>SEC-358, "Removal and Installation"</u>.

SEC-224

B2556 PUSH-BUTTON IGNITION SWITCH

< COMPONENT DIAGNOSIS >

А

В

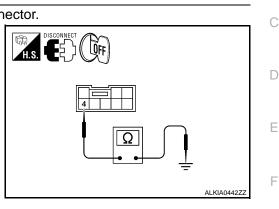
3.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

4. CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT FOR SHORT

- 1. Disconnect BCM harness connector and IPDM E/R harness connector.
- 2. Check continuity between push-button ignition switch harness connector and ground.



 Push-button	ignition switch	Ground	Continuity	G
 Connector	Terminal	Ground	Continuity	
 M38	4	Ground	No	Н

Is the inspection normal?

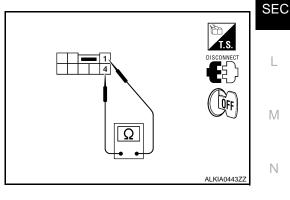


NO >> Repair harness or connector.

Component Inspection

1. CHECK PUSH-BUTTON IGNITION SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect push-button ignition switch harness connector.
- 3. Check continuity between push-button ignition switch terminals under the following conditions.



Push-button ignition switch Terminal		Condition	Continuity
		Condition	Continuity
1	Δ	Pressed	Yes
I	1 4	Not pressed	No

Is the inspection result normal?

YES >> INSPECTION END.

NO >> Replace push-button ignition switch. Refer to <u>SEC-358. "Removal and Installation"</u>.

SEC-225

.

INFOID:000000003185409

Ρ

B2557 VEHICLE SPEED

Description

INFOID:000000003185410

[SEDAN]

BCM receives the 2 vehicle speed signals via CAN communication. 1 signal is transmitted by the "unified meter" Another signal is transmitted by "ABS actuator and electric unit (control unit)". BCM compares both signals to detect the vehicle speed.

DTC Logic

INFOID:000000003185411

DTC DETECTION LOGIC

NOTE:

- If DTC B2557 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-207, "DTC Logic"</u>.
- If DTC B2557 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-208, "DTC Logic"</u>.

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B2557	VEHICLE SPEED	 BCM detects the following difference between the vehicle speed from "unified meter" and the one from "ABS actuator and electric unit" for 10 seconds continuously One is 10km/h or more and the other is 4km/h or less. 	 Wheel sensor Unified meter ABS actuator and electric unit (control unit)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Drive the vehicle at the vehicle speed of 10 km/h or more and wait for at least 10 seconds.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-226, "Diagnosis Procedure".
- NO >> INSPECTION END.

Diagnosis Procedure

INFOID:000000003185412

1.CHECK DTC WITH "ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)"

Check "Self diagnostic result" with CONSULT-III. Refer to <u>BRC-51, "DTC No. Index"</u> (ABS), <u>BRC-120, "DTC No. Index"</u> (TCS/ABS) or <u>BRC-222, "DTC No. Index"</u> (VDS/TCS/ABS).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace.

2.CHECK UNIFIED METER.

Check unified meter. Refer to <u>MWI-4, "Work Flow"</u>.

>> INSPECTION END.

B2560 STARTER CONTROL RELAY

< COMPONENT DIAGNOSIS >

B2560 STARTER CONTROL RELAY

Description

Starter control relay, integrated in IPDM E/R, permits the starter relay operation when in N or P position and the steering is locked or unlocked. It is installed in parallel with the starter relay.

DTC Logic

INFOID:000000003185414

INFOID:000000003185413

DTC DETECTION LOGIC

NOTE:

- If DTC B2560 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-207, "DTC Logic"</u>.
- If DTC B2560 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-208, "DTC Logic"</u>.

[OTC	Self-diagnosis name	DTC detecting condition	Possible causes	
B	2560	STARTER CONTROL RELAY	BCM detects a mismatch between the OFF re- quest of starter control relay to IPDM E/R and the feedback. (The feedback is ON instead of OFF.)	• IPDM E/R	F
DTC CON	VFIRMAT	ION PROCEDUR	E		G
1 .PERFC	ORM DTC	CONFIRMATION P	ROCEDURE		0
- A/T se - Depre	elector levess the brain	vitch ON under the for ver is in the P positio ake pedal gnostic result" with 0		seconds.	Η
<u>Is DTC de</u>		griedae reedate mart			
		EC-227, "Diagnosis CTION END.	Procedure".		
Diagnos	sis Proc	edure		INF0ID:00000003185415	J
1.снеси	K DTC WI	TH IPDM E/R			SEC
	•		SULT-III. Refer to PCS-41, "DTC Index".		
	<u>ection re</u> → GO TO	sult normal?			I
		or replace.			L
2. снеси		IITTENT INCIDENT			
Refer to G	61-42, "Inte	ermittent Incident".			Μ
>	> INSPE	CTION END.			Ν

С

Ε

Ο

Ρ

А

Description

BCM confirms the shift position with the following 2 signals.

- CVT selector lever
- P position signal from IPDM E/R (CAN)

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2601 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-207, "DTC Logic"</u>.
- If DTC B2601 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-208, "DTC Logic"</u>.
- If DTC B2601 is displayed with DTC B2605, first perform the trouble diagnosis for DTC B2605. Refer to <u>SEC-241. "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2601	SHIFT POSITION	BCM detects when a difference between the shift P input signal and the shift position signal re- ceived from IPDM E/R via CAN communication continues for 2 seconds or more	 Harness or connectors (CVT device circuit is open or short- ed.) CVT device (detention switch)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions, and wait for at least 2 seconds.
- CVT selector lever is in the P position.
- Do not depress the brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Turn ignition switch ON under the following conditions, and wait for at least 2 seconds.
- CVT selector lever is in other than P position.
- Do not depress the brake pedal.
- 4. Check "Self diagnostic result" with CONSULT-III.

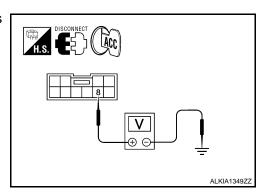
Is DTC detected?

- YES >> Go to SEC-228, "Diagnosis Procedure".
- NO >> INSPECTION END.

Diagnosis Procedure

1.CHECK CVT DEVICE POWER SUPPLY

- 1. Turn ignition switch to ACC.
- 2. Disconnect CVT device (detention switch) harness connector.
- 3. Check voltage between CVT device (detention switch) harness connector and ground.



INFOID:000000003185416

INFOID:000000003185417

< COMPONENT DIAGNOSIS >

[SEDAN]

Ground	Voltago [V/]	A
Giodila	vonage [v]	
Ground	Battery voltage	-
	Ground	

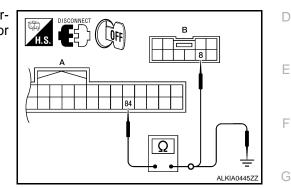
Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK CVT DEVICE POWER SUPPLY CIRCUIT

- 1. Disconnect BCM harness connector.
- Check continuity between BCM harness connector M19 (A) terminal 84 and CVT device (detention switch) harness connector M23 (B) terminal 8.



В	BCM		CVT device (detention switch)	
Connector	Terminal	Connector	Terminal	Continuity
A: M19	84	B: M23	8	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 84 and ground.

BCM		Ground	Continuity	-
Connector	Terminal	Ground	Continuity	J
A: M19	84	Ground	No	-

Is the inspection result normal?

YES >> Replace BCM.

M23 (B) terminal 9.

NO >> Repair harness or connector.

3.CHECK CVT DEVICE CIRCUIT (BCM)

1. Disconnect BCM harness connector and IPDM E/R harness connector.

- Check continuity between BCM harness connector M19 (A) terminal 87 and CVT device (detention switch) harness connector

В	CM	CVT device (detention switch)		Continuity
Connector	Terminal	Connector	Terminal	
A: M19	87	B: M23	9	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 87 and ground.

SEC-229

SEC

Н

< COMPONENT DIAGNOSIS >

[SEDAN]

BC	CM	Ground	Continuity	
Connector	Terminal	Ciouna	Continuity	
A: M19	87	Ground	No	

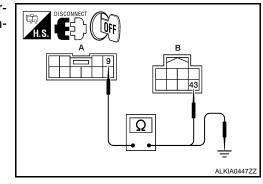
Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

4.CHECK CVT DEVICE CIRCUIT (IPDM E/R)

- 1. Disconnect BCM harness connector.
- Check continuity between CVT device (detention switch) harness connector M23 (A) terminal 9 and IPDM E/R harness connector E17 (B) terminal 43.



-	device on switch)	IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
A: M23	9	B: E17	43	Yes

3. Check continuity between CVT device (detention switch) harness connector M23 (A) terminal 9 and ground.

-	CVT device (detention switch)		Continuity	
Connector	Terminal	*		
A: M23	9	Ground	No	

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair harness or connector.

5. CHECK CVT DEVICE

Refer to SEC-230, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace CVT device. Refer to <u>TM-250, "Removal and Installation"</u> (RE0F09B), or <u>TM-426,</u> <u>"Removal and Installation"</u> (RE0F10A).

6.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

Component Inspection

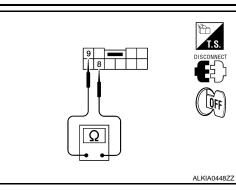
1.CHECK ECVT DEVICE (DETENTION SWITCH)

1. Turn ignition switch OFF.

2. Disconnect CVT device (detention switch) harness connector.

< COMPONENT DIAGNOSIS >

3. Check continuity between CVT device (detention switch) terminals as follows.



CVT device (detention switch) Terminal		Condition		Continuity
				Continuity
0	0	CVT selector lever	P position	No
8	9	CVT Selector level	Other than above	Yes

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace CVT device. Refer to <u>TM-250, "Removal and Installation"</u> (RE0F09B), or <u>TM-426</u>, _G <u>"Removal and Installation"</u> (RE0F10A).

Н

J

SEC

L

Μ

Ν

Ο

Ρ

[SEDAN]

В

А

С

D

Ε

F

Description

BCM confirms the shift position with the following 2 signals.

- CVT selector lever
- Speed signal from meter

DTC Logic

DTC DETECTION LOGIC **NOTE**:

- If DTC B2602 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-207, "DTC Logic".
- If DTC B2602 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-208, "DTC Logic"</u>.

	DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
_	B2602	SHIFT POSITION	 BCM detects the following status for 10 seconds. Shift position is in P position Vehicle speed is 4km/h (2 MPH) or more Ignition switch is in the ON position 	 Harness or connectors (CVT drive circuit is open or short- ed) CVT device (detention switch) Combination meter

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine under the following conditions and wait for at least 10 seconds.
- CVT selector lever is in the P or N position
- Depress the brake pedal.
- 2. Drive the vehicle for at least 10 seconds at a speed greater than 4 km/h (2 MPH).
- 3. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-232, "Diagnosis Procedure".
- NO >> INSPECTION END.

Diagnosis Procedure

1.CHECK DTC WITH "COMBINATION METER"

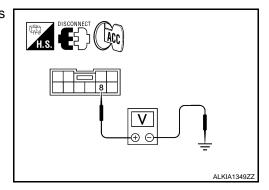
Check "Self diagnostic result" with CONSULT-III. Refer to MWI-92, "DTC Index".

Is the inspection result normal?

- YES >> GO TO 2.
- NO >> Repair or replace.

2.CHECK CVT DEVICE POWER SUPPLY

- 1. Turn ignition switch to ACC.
- 2. Disconnect CVT device (detention switch) harness connector.
- Check voltage between CVT device (detention switch) harness connector and ground.



INFOID:000000003185420

INFOID:000000003185421

< COMPONENT DIAGNOSIS >

[SEDAN]

	ice (detention switch)		a .	
Connector	Termin	al	Ground	Voltage [V]
M23	8		Ground	Battery voltage
	arness connector. etween BCM harnes device (detention sw	CIRCUIT s connector M19 (A) vitch) harness conne		
BC	CM Terminal	CVT device (d Connector	etention switch) Terminal	Continuity
A: M19	84	B: M23	8	Yes
Connector	BCM Termin	al	Ground	Continuity
A: M19	84			
			Ground	No
YES >> Replace BC NO >> Repair harr CHECK CVT DEVIC Disconnect BCM ha Check continuity b	CM. less or connector. E CIRCUIT arness connector.	(detention switch) I ector.		
YES >> Replace BO NO >> Repair harr 4.CHECK CVT DEVIC 1. Disconnect BCM ha 2. Check continuity b ness connector and	CM. less or connector. E CIRCUIT arness connector. etween CVT device	ector.		B P D D D D D D D D D D D D D D D D D D
NO >> Repair harr 4. CHECK CVT DEVIC 1. Disconnect BCM have 2. Check continuity b ness connector and	CM. hess or connector. E CIRCUIT arness connector. etween CVT device I BCM harness conn	ector.		

3. Check continuity between CVT device (detention switch) harness connector and ground.

SEC-233

< COMPONENT DIAGNOSIS >

[SEDAN]

B	BCM		Continuity	
Connector	Terminal	Ground	Continuity	
A: M19	87	Ground	No	

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair harness or connector.

5.CHECK CVT DEVICE

Refer to SEC-230, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace CVT device. Refer to <u>TM-250, "Removal and Installation"</u> (RE0F09B), or <u>TM-426,</u> <u>"Removal and Installation"</u> (RE0F10A).

 $6. {\sf CHECK} {\sf INTERMITTETNT} {\sf INCIDENT}$

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

B2603 SHIFT POSITION STATUS

Description

BCM confirms the shift position with the following 2 signals.

- CVT selector lever
- P/N position switch

DTC Logic

DTC DETECTION LOGIC **NOTE**:

- If DTC B2603 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-207, "DTC Logic".
- If DTC B2603 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-208, "DTC Logic"</u>.

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B2603	SHIFT POSITION STATUS	 BCM detects the followings status for 500 ms or more when shift is in P position and, ignition switch is in ON position. Park/neutral position (PNP) switch: approx. 0V CVT device (detention switch): approx 0V 	 Harness or connector (CVT device circuit is open or shorted.) Harness or connectors [Park/neutral position (PNP) switch circuit is open or shorted.] CVT device (detention switch) Park/neutral position (PNP) switch

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1. Start the engine under the following conditions and wait for at least 1 second. CVT selector lever is in the P position. SEC Do not depress the brake pedal. _ 2. Shift to N and wait for at least 1 second. 3. Shift to any gear other than P or N and wait for at least 1 second. Check "Self diagnostic result" with CONSULT-III. 4. Is DTC detected? YES >> Go to SEC-235, "Diagnosis Procedure". >> INSPECTION END. NO Μ Diagnosis Procedure INFOID:000000003185425 1. CHECK DTC WITH IPDM E/R Ν Check "Self diagnostic result" with CONSULT-III. Refer to PCS-41, "DTC Index". Is the inspection result normal? YES >> GO TO 2. NO >> Repair or replace malfunctioning parts. 2.check pNP switch circuit Ρ Turn ignition switch OFF. 1.

2. Disconnect TCM harness connector and BCM harness connector.

А

INFOID:000000003185423

INFOID:000000003185424

В

C

D

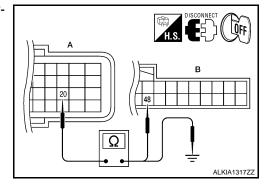
Е

B2603 SHIFT POSITION STATUS

< COMPONENT DIAGNOSIS >

[SEDAN]

3. Check continuity between TCM harness connector F16 (A) terminal 20 and BCM harness connector M18 (B) terminal 48.



T	СМ	BCM		Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: F16	20	B: M18	48	Yes

4. Check continuity between TCM harness connector F16 (A) terminal 20 and ground.

T	ТСМ		Continuity	
Connector	Terminal	Ground	Continuity	
A: F16	20	Ground	No	

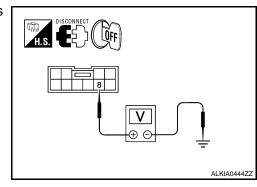
Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3.CHECK CVT DEVICE POWER SUPPLY

- 1. Turn ignition switch OFF.
- 2. Disconnect CVT device (detention switch) harness connector.
- 3. Check voltage between CVT device (detention switch) harness connector and ground.



CVT device (de	CVT device (detention switch)		Voltage [V]
Connector	Terminal	Ground	voltage [v]
M23	8	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

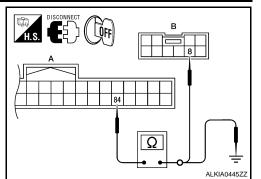
4.CHECK CVT DEVICE POWER SUPPLY CIRCUIT

1. Disconnect BCM harness connector.

B2603 SHIFT POSITION STATUS

< COMPONENT DIAGNOSIS >

2. Check continuity between BCM harness connector M19 (A) terminal 84 and CVT device (detention switch) harness connector M23 (B) terminal 8.



BC	CM	CVT device (d	etention switch)	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M19	84	B: M23	8	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 84 and ground.

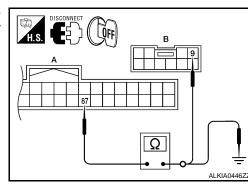
BCM		Ground	Continuity
Connector	Terminal	Ground	Continuity
A: M19	84	Ground	No

Is the inspection result normal?

- YES >> Replace BCM. Refer to BCS-88, "Removal and Installation".
- NO >> Repair harness or connector.

5. CHECK CVT DEVICE CIRCUIT

- 1. Disconnect BCM harness connector.
- Check continuity between BCM harness connector M19 (A) ter-2. minal 87 and CVT device (detention switch) harness connector M23 (B) terminal 9.



) <u>–</u>	
ALKIA0446ZZ	
	-

В	BCM		device on switch)	Continuity
Connector	Terminal	Connector	Terminal	
A: M19	87	B: M23	9	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 87 and ground.

BC	BCM Ground Continuity		Continuity	_
Connector	Terminal	Giouna	Continuity	F
A: M19	87	Ground	No	

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

6.CHECK CVT DEVICE

SEC-237

[SEDAN]

А

В

D

Ε

F

Н

SEC

Μ

Ν

Ρ

B2603 SHIFT POSITION STATUS

< COMPONENT DIAGNOSIS >

Refer to SEC-230, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 7.

NO >> Replace CVT device. Refer to <u>TM-250, "Removal and Installation"</u> (RE0F09B), or <u>TM-426,</u> <u>"Removal and Installation"</u> (RE0F10A).

7. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

B2604 PNP SWITCH

< COMPONENT DIAGNOSIS >

B2604 PNP SWITCH

Description

BCM confirms the shift position with the following 4 signals.

- CVT selector lever
- P/N position switch
- P position signal from IPDM E/R (CAN)
- P position signal from TCM (CAN)

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2604 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-207, "DTC Logic"</u>.
- If DTC B2604 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-208. "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2604	PNP SWITCH	 BCM detects the following status for 500 ms or more when the ignition switch is in the ON position. P/N switch indicates vehicle is in P or N shift position. Signal from TCM indicates vehicle is in forward or reverse gear. P/N switch indicates vehicle is in forward or reverse gear. Signal from TCM indicates vehicle is in P or N. 	-

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

I.PERFORM DTC CONFIRMATION PROCEDURE	
 Start the engine under the following conditions and wait for at least 1 seconds. CVT selector lever is in the P position Do not depress the brake pedal 	J
 Use CVT selector lever to select each gear one at a time. Wait at each gear for at least 1 second. Check "Self diagnostic result" with CONSULT-III. 	SEC
Is DTC detected?	
YES >> Go to <u>SEC-239, "Diagnosis Procedure"</u> . NO >> INSPECTION END.	L
Diagnosis Procedure	
1.снеск отс with тсм	Μ
Check "Self diagnostic result" with CONSULT-III. Refer to <u>TM-216, "DTC Index"</u> (RE0F09B) or <u>TM-394, "DTC Index"</u> (RE0F10A).	Ν
Is the inspection result normal?	
YES >> GO TO 2.	
NO >> Repair or replace.	0
2.CHECK PNP SWITCH CIRCUIT	
1. Turn ignition switch OFF.	Р
2 Disconnect TCM harness connector and BCM harness connector	

2. Disconnect TCM harness connector and BCM harness connector.

INFOID:000000003185426

INFOID:000000003185427

А

В

С

D

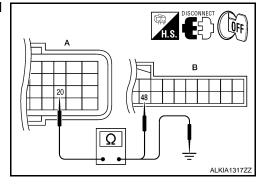
Ε

B2604 PNP SWITCH

< COMPONENT DIAGNOSIS >

[SEDAN]

3. Check continuity between TCM harness connector and BCM harness connector.



ТСМ		BCM		Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: F16	20	B: M18	48	Yes

4. Check continuity between TCM harness connector and ground.

ТСМ		Ground	Continuity	
Connector	Terminal	Ciouna	Continuity	
A: F16	20	Ground	No	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

B2605 PNP SWITCH

< COMPONENT DIAGNOSIS >

B2605 PNP SWITCH

Description

BCM confirms the shift position with the following 4 signals.

- AT selector lever
- P/N position switch
- P position signal from IPDM E/R (CAN)
- P position signal from TCM (CAN)

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2605 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-207, "DTC Logic"</u>.
- If DTC B2605 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-208, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B2605	PNP SWITCH	 BCM detects the following status for 500 ms or more when the ignition switch is in ON position N position input signal exists. Shift position signal from IPDM E/R does not exist. N position input signal does not exist. Shift posi- tion signal from IPDM E/R exists. 	 Harness or connectors [The park/neutral position (PNP) switch circuit is open or shorted.] Park/neutral position (PNP) switch IPDM E/R 	G

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions and wait for at least 1 seconds.
- CVT selector lever is in the P or N position
- Do not depress the brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-241, "Diagnosis Procedure".
- NO >> INSPECTION END.

Diagnosis Procedure

1.CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III. Refer to <u>PCS-41, "DTC Index"</u>. Is the inspection result normal?

2. CHECK PNP SWITCH CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect TCM harness connector and BCM harness connector.

INFOID:00000003185429

В

А

INFOID:00000003185430

D

Е

SEC

M

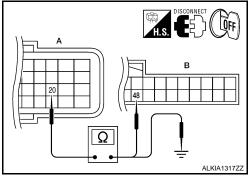
Ν

Ρ

B2605 PNP SWITCH

< COMPONENT DIAGNOSIS >

Check continuity between TCM connector and BCM harness 3. connector.



ТС	CM	B	CM	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: F16	20	B: M18	48	Yes

4. Check continuity between TCM harness connector and ground.

ТСМ		Ground	Continuity	
Connector	Terminal	Ciouna	Continuity	
A: F16	20	Ground	No	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

[SEDAN]

B2606 STEERING LOCK RELAY

< COMPONENT DIAGNOSIS >

B2606 STEERING LOCK RELAY

Description

The steering lock relay ON signal is transmitted to IPDM E/R by BCM via CAN communication. IPDM E/R turns the steering lock relay ON and transmits the release of the steering to BCM.

DTC Logic

INFOID:000000003185433

INFOID:00000003185432

DTC DETECTION LOGIC

NOTE:

- If DTC B2606 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-207, "DTC Logic"</u>.
- If DTC B2606 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-208, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B2606	STEERING LOCK RELAY	 BCM detects that there is a mismatch between the following statuses. Steering lock unit ON signal transmitted by IPDM E/R The steering lock unit status feedback 	Steering lock relay (in IPDM E/R)	F

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press the push-button ignition switch under the following conditions.
- CVT selector lever is in the P or N position.
- Do not depress the brake pedal.
- 2. Steering is locked.
- 3. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to <u>SEC-243</u>, "Diagnosis Procedure".
- NO >> INSPECTION END.

Diagnosis Procedure

1.CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III. Refer to <u>PCS-41, "DTC Index"</u>.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace.

2.INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

А

В

- E

Н

J

L

Μ

Ν

Ρ

B2607 STEERING LOCK RELAY

< COMPONENT DIAGNOSIS >

B2607 STEERING LOCK RELAY

Description

BCM requests to IPDM E/R to supply power to steering lock unit. IPDM E/R sends status of steering lock unit back to BCM.

DTC Logic

INFOID:000000003185436

INFOID:000000003185437

INFOID:00000003185435

DTC DETECTION LOGIC

NOTE:

- If DTC B2607 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-207, "DTC Logic"</u>.
- If DTC B2607 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-208, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2607	STEERING LOCK RELAY	 BCM detects that there is a difference between the following statuses. BCM request for steering lock unit power supply (ON/OFF) IPDM E/R status of steering lock unit power supply (ON/OFF) 	 Harness or connectors (steering lock unit power supply circuit is open or shorted) Steering lock relay (in IPDM E/R)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press the push-button ignition switch under the following conditions.
- A/T selector lever is in the P position
- Do not depress brake pedal
- 2. Steering lock is locked.
- 3. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-244, "Diagnosis Procedure".

NO >> INSPECTION END.

Diagnosis Procedure

1.CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III. Refer to PCS-41, "DTC Index".

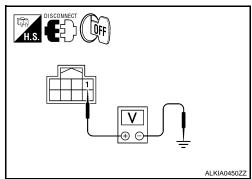
Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2. CHECK STEERING LOCK UNIT POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect steering lock unit harness connector.
- 3. Check voltage between steering lock unit and ground under the following conditions.



SEC-244

B2607 STEERING LOCK RELAY

< COMPONENT DIAGNOSIS >

[SEDAN]

Connector Terminal Ground Condition Voltage (V) M32 1 Ground Press push-button ignition switch when steering lock is in lock condition. Battery voltage Sthe inspection result normal2 YES >> GO TO 4. NO >> GO TO 3. Scheck STEERING LOCK UNIT POWER SUPPLY CIRCUIT . Turn ignition switch OFF. Disconnect IPDM E/R harness connector. Scheck continuity between steering lock unit and IPDM E/R har- ness connector. Image: Connector instance in the image: Connector instance i	Steering	lock unit				
M32 1 Ground Press push-button ignition switch when steering lock is in lock condition. Battery voltage a the inspection result normal? YES >> GO TO 4. NO >> GO TO 3. B.CHECK STEERING LOCK UNIT POWER SUPPLY CIRCUIT . . . Turn ignition switch OFF. . Disconnect IPDM E/R harness connector. . Check continuity between steering lock unit and IPDM E/R harness connector. . . M32 1 IPDM E/R . Connector Terminal Continuity . A: M32 1 B: E18 11 Yes . . Continuity Connector Terminal Ground Continuity Connector Terminal Ground Continuity A: M32 1 B: E18 11 Yes . Check continuity between steering lock unit and ground. Check continuity between steering lock unit and ground. 		1	Ground	Co	ndition	Voltage (V)
NO ⇒ GO TO 3. 3. CHECK STEERING LOCK UNIT POWER SUPPLY CIRCUIT 1. Turn ignition switch OFF. 2. Disconnect IPDM E/R harness connector. 3. Check continuity between steering lock unit and IPDM E/R harness connector. Image: steering lock unit IPDM E/R Image: steering lock unit IPDM E/R Connector Terminal Connector Terminal Connector Terminal A: M32 1 B: E18 11 Yes Steering lock unit Ground Continuity 4. Check continuity between steering lock unit and ground. Steering lock unit Ground Steering lock unit Ground Continuity Steering lock unit M32 1 Ground Steering lock unit Ground No s the inspection result normal? YES YES > Replace IPDM E/R. Refer to <u>PCS-43, "Removal and Installation"</u> . NO >> Repair harness or connector. 4. CHeck INTERMITTENT INCIDENT Refer to GI-42, "Intermittent Incident".			Ground			Battery voltage
Steering lock unit IPDM E/R Continuity Connector Terminal Connector Terminal A: M32 1 B: E18 11 Yes A: M32 1 B: E18 11 Yes Check continuity between steering lock unit and ground. Ground Continuity Steering lock unit Ground Continuity Connector Terminal Ground No Steering lock unit Ground No No sthe inspection result normal? YES >> Replace IPDM E/R. Refer to PCS-43. "Removal and Installation". NO >> Repair harness or connector. A: CHECK INTERMITTENT INCIDENT Refer to GI-42. "Intermittent Incident". Refer to GI-42. "Intermittent Incident".	YES >> GO TO NO >> GO TO CHECK STEER Turn ignition so Disconnect IPI Check continu	0 4. 0 3. ING LOCK UNI witch OFF. DM E/R harness ity between stee	connector.			
A: M32 1 B: E18 11 Yes 4. Check continuity between steering lock unit and ground. Image: Continuity between steering lock unit and ground. Image: Continuity between steering lock unit and ground. Steering lock unit Ground Continuity A: M32 1 Ground Continuity A: M32 1 Ground No s the inspection result normal? YES >> Replace IPDM E/R. Refer to PCS-43, "Removal and Installation". NO >> Repair harness or connector. A: CHECK INTERMITTENT INCIDENT Refer to GI-42, "Intermittent Incident". Refer to GI-42, "Intermittent Incident".		-				
4. Check continuity between steering lock unit and ground. Steering lock unit Ground Connector Terminal A: M32 1 Ground No s the inspection result normal? YES >> Replace IPDM E/R. Refer to PCS-43, "Removal and Installation". NO >> Repair harness or connector. 4. CHECK INTERMITTENT INCIDENT Refer to GI-42, "Intermittent Incident".			ı C			Vac
s the inspection result normal? YES >> Replace IPDM E/R. Refer to <u>PCS-43. "Removal and Installation"</u> . NO >> Repair harness or connector. CHECK INTERMITTENT INCIDENT Refer to <u>GI-42. "Intermittent Incident"</u> .		Steering lock unit				Continuity
YES >> Replace IPDM E/R. Refer to <u>PCS-43, "Removal and Installation"</u> . NO >> Repair harness or connector. 1. CHECK INTERMITTENT INCIDENT Refer to <u>GI-42, "Intermittent Incident"</u> .	A: M32			Ground		No
>> INSPECTION END.	YES >> Replac NO >> Repair 1. CHECK INTERI Refer to <u>GI-42, "Int</u>	ce IPDM E/R. Re harness or com MITTENT INCID	nector. ENT	3. "Removal and I	nstallation".	

B2608 STARTER RELAY

Description

INFOID:000000003185438

[SEDAN]

Located in IPDM E/R, it runs the starter motor. The starter relay is turned ON by the BCM when the ignition switch is in START position. IPDM E/R transmits the starter relay ON signal to BCM via CAN communication.

DTC Logic

INFOID:000000003185439

INFOID:000000003185440

DTC DETECTION LOGIC

NOTE:

- If DTC B2608 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-207, "DTC Logic"</u>.
- If DTC B2608 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-208, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2608	STARTER RELAY	BCM receives starter relay ON signal (CAN) from IPDM E/R even if BCM turns the starter relay OFF	 Harness or connectors (starter relay circuit is open or shorted.) IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press the push-button ignition switch under the following conditions.
- CVT selector lever is in the P or N position.
- Depress the brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.

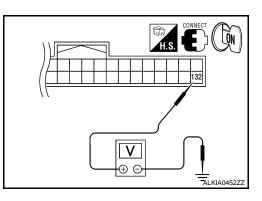
Is DTC detected?

- YES >> Go to SEC-246, "Diagnosis Procedure".
- NO >> INSPECTION END.

Diagnosis Procedure

1.CHECK STARTER RELAY

- 1. Turn ignition switch ON.
- 2. Check voltage between BCM harness connector and ground under the following condition.



BC	CM	Ground	Condition		Voltage (V)
Connector	Terminal	Ground			voltage (v)
			CVT selector lever	N or P position	Battery voltage
M21	132	Ground	Clutch pedal	Other than above	0
1012 1	152	Ground		Not depressed	0
				Depressed	Battery voltage

B2608 STARTER RELAY

< COMPONENT DIAGNOSIS >

[SEDAN]

А

В

С

D

Ε

F

Н

J

SEC

L

Μ

Ν

Ρ

Is the measurement value within the specification? YES >> GO TO 3. NO >> GO TO 2. 2. CHECK STARTER RELAY CIRCUIT 1. Turn ignition switch OFF. 2. Disconnect BCM harness connector M21 and IPDM E/R harness connector E17. 3. Check continuity between IPDM E/R harness connector and BCM harness connector. Ω AI KIA13187 IPDM E/R BCM Continuity Terminal Terminal Connector Connector 46 A: E17 B: M21 132 Yes Check continuity between IPDM E/R harness connector and ground. 4. IPDM E/R Ground Continuity Connector Terminal A: E17 46 Ground No Is the inspection result normal? YES >> Replace IPDM E/R. Refer to PCS-43, "Removal and Installation". NO >> Repair harness or connector. 3.CHECK INTERMITTENT INCIDENT Refer to GI-42, "Intermittent Incident". >> INSPECTION END.

Description

There are 2 switches in the steering lock unit (steering lock/unlock switch 1 and 2). BCM compares those two switches conditions to judge the present steering status.

DTC Logic

INFOID:000000003185442

INFOID:000000003185441

DTC DETECTION LOGIC

NOTE:

- If DTC B2609 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-207, "DTC Logic"</u>.
- If DTC B2609 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-208. "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2609	STEERING STATUS	BCM detects the malfunction of steering lock unit switches for 1 second.	 Harness or connectors [steering lock unit circuit (BCM side) is open or shorted] Harness or connectors [steering lock unit circuit (IPDM E/ R side) is open or shorted.] Steering lock unit IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

- 1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P position.
- Do not depress brake pedal
- Steering is locked
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-248, "Diagnosis Procedure".
- NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE 2

- 1. Turn ignition switch ON.
- 2. Turn ignition switch OFF.
- 3. Press door switch.
- 4. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to <u>SEC-248, "Diagnosis Procedure"</u>.
- NO >> INSPECTION END.

Diagnosis Procedure

1.INSPECTION START

Check the case in which DTC is detected.

- Case1: It is detected after ignition switch is changed from ON to OFF and door switch is pressed
- Case2: It is detected after ignition switch is changed from ON to OFF

In which case is DTC detected?

Case1 >> GO TO 2. Case2 >> GO TO 7.

2.CHECK BCM OUTPUT SIGNAL

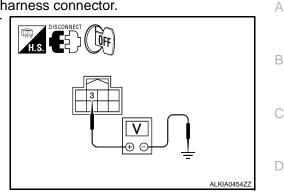
< COMPONENT DIAGNOSIS >

[SEDAN]

Ε

F

- 1. Turn ignition switch OFF.
- 2. Disconnect steering lock unit harness connector and IPDM E/R harness connector.
- 3. Check voltage between steering lock unit harness connector and ground.



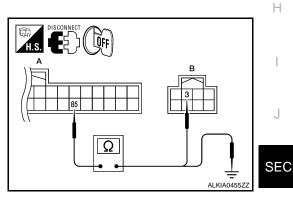
Steering	lock unit	Ground	Voltage [V]	
Connector	Terminal	Ground	voliage [v]	
M32	3	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 4. NO >> GO TO 3.

3. CHECK STEERING LOCK UNIT CIRCUIT-I

- 1. Disconnect BCM harness connector.
- Check continuity between BCM harness connector M19 (A) terminal 85 and steering lock unit harness connector M32 (B) terminal 3.



BC	CM	Steering) lock unit	Continuity	
 Connector	Terminal	Connector	Terminal	Continuity	
 A: M19	85	B: M32	3	Yes	M

3. Check continuity between BCM harness connector M19 (A) terminal 85 and ground.

N	Continuity	Ground	CM	BC
	Continuity	Ground	Terminal	Connector
	No	Ground	85	A: M19

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

4.CHECK IPDM E/R OUTPUT SIGNAL

1. Connect IPDM E/R harness connector.

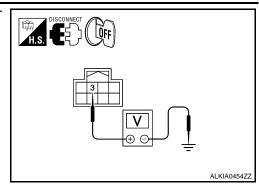
2. Disconnect BCM harness connector.

SEC-249

L

< COMPONENT DIAGNOSIS >

3. Check voltage between steering lock unit harness connector and ground.



Steering lock unit		Ground	Voltage [V]
Connector	Terminal	Ground	voltage [v]
M32	3	Ground	Battery voltage

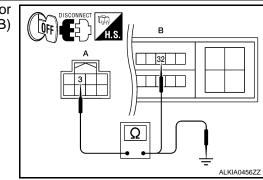
Is the inspection result normal?

YES >> Replace steering lock unit.

NO >> GO TO 5.

5. CHECK STEERING LOCK UNIT CIRCUIT-II

 Check continuity between steering lock unit harness connector M32 (A) terminal 3 and IPDM E/R harness connector E18 (B) termial 32.



Steering	Steering lock unit		M E/R	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M32	3	B: E18	32	Yes

2. Check continuity between steering lock unit harness connector M32 (A) terminal 3 and ground.

Steering	lock unit	Ground	Continuity
Connector	Terminal	Gibana	Continuity
A: M32	3	Ground	No

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

6. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

7. CHECK BCM OUTPUT SIGNAL

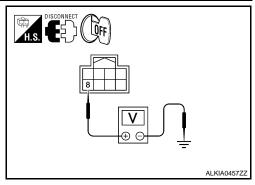
1. Turn ignition switch OFF.

2. Disconnect steering lock unit harness connector and IPDM E/R harness connector E5.

SEC-250

< COMPONENT DIAGNOSIS >

3. Check voltage between steering lock unit harness connector and ground.



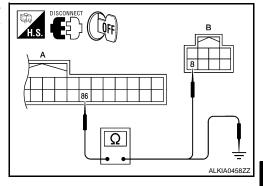
	Steering lock unit		Ground	Voltage [V]
	Connector	Terminal	Ground	voltage [v]
	M32	8	Ground	Battery voltage
1 -	(h. e. line and the second for a surger	- 10		

Is the inspection result normal?

YES >> GO TO 9. NO >> GO TO 8.

8. CHECK STEERING LOCK UNIT CIRCUIT-I

- 1. Disconnect BCM harness connector M19.
- Check continuity between BCM harness connector M19 (A) terminal 86 and steering lock unit harness connector M32 (B) terminal 8.



B	BCM		Steering lock unit	
Connector	Terminal	Connector	Terminal	Continuity
A: M19	86	B: M32	8	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 86 and ground.

BCM		Ground	Continuity
Connector	Terminal	Ground	Continuity
A: M19	86	Ground	No

Is the inspection result normal?

YES >> GO TO 11.

NO >> Repair harness or connector.

9.CHECK IPDM E/R OUTPUT SIGNAL

1. Connect IPDM E/R harness connector.

2. Disconnect BCM harness connector M19.

SEC-251

[SEDAN]

А

В

С

D

Ε

F

Н

SEC

L

Μ

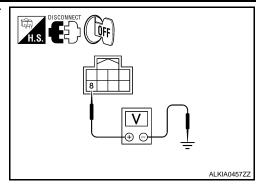
Ν

0

Ρ

< COMPONENT DIAGNOSIS >

3. Check voltage between steering lock unit harness connector and ground.



[SEDAN]

Steering lock unit		Ground	Voltage [V]
Connector	Terminal	Ground	voltage [v]
M32	8	Ground	Battery voltage

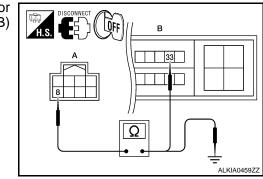
Is the inspection result normal?

YES >> Replace steering lock unit.

NO >> GO TO 10.

10. CHECK STEERING LOCK UNIT CIRCUIT-II

 Check continuity between steering lock unit harness connector M32 (A) terminal 8 and IPDM E/R harness connector E18 (B) terminal 33.



Steering	j lock unit	IPDN	M E/R	Continuity
Connector	Terminal	Connector	Terminal	
A: M32	8	B: E18	33	Yes

2. Check continuity between steering lock unit harness connector and ground.

Steering lock unit		Ground	Continuity	
Connector	Terminal	Gibunu	Continuity	
A: M32	8	Ground	No	

Is the inspection result normal?

YES >> GO TO 11.

NO >> Repair harness or connector.

11.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

B260B STEERING LOCK UNIT

< COMPONE	ENT DIAGNOSIS >	>	[SEDAN]	_
B260B S	TEERING LO	CK UNIT		
Descriptio	n		INFOID:000000003185444	A
•				
•		he check by itself according to the steering	status.	В
DTC Logic			INFOID:00000003185445	į
DTC DETEC	CTION LOGIC			С
DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	D
B260B	STEERING LOCK UNIT	BCM detects malfunctioning of steering lock unit before steering unlocking.	Steering lock unit	
OTC CONFI	IRMATION PROC	EDURE		E
1.PERFORM	M DTC CONFIRMA	TION PROCEDURE		
1. Press the	e push-button ignitio	on switch, when steering is locked.		F
	-	t" with CONSULT-III.		
l <u>s DTC detec</u> YES >> (agnosis Procedure".		G
	NSPECTION END.	ignosis riocodure.		
Diagnosis	Procedure		INFOID:000000003185446	зн
1.INSPECT	ION START			
	tion switch ON.			
2. Check "S	Self diagnostic resul	t" with CONSULT-III.		I
 Touch "E Perform 	RASE". DTC Confirmatior	Procedure.		
	C-253, "DTC Logic".			J
	260B displayed aga			
	Replace steering loc NSPECTION END.	k unit.		SE

L

M

Ν

Ο

Ρ

B260C STEERING LOCK UNIT

Description

The steering lock unit performs the check by itself according to the steering status.

DTC Logic

INFOID:000000003185448

INFOID:000000003185449

INFOID:000000003185447

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260C	STEERING LOCK UNIT	BCM detects malfunctioning of steering lock unit before steering locking.	Steering lock unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Turn ignition switch OFF.
- 3. Press door switch.
- 4. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-254, "Diagnosis Procedure".
- NO >> INSPECTION END.

Diagnosis Procedure

1.INSPECTION START

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure. See <u>SEC-254, "DTC Logic"</u>.

Is the DTC B260C displayed again?

- YES >> Replace steering lock unit.
- NO >> INSPECTION END.

B260D STEERING LOCK UNIT

< COMPONENT DIAGNOSIS >

B260D STEERING LOCK UNIT

Description

The steering lock unit performs the check by itself according to the steering lock status (before lock, after lock and unlock).

DTC Logic

INFOID:000000003185451

INFOID:000000003185450

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B260D	STEERING LOCK UNIT	BCM detects malfunctioning of steering lock unit after steering locking.	Steering lock unit	
DTC CONFI	RMATION PROC	EDURE		
1.PERFORM	M DTC CONFIRMA	TION PROCEDURE		
 Turn igni Press do Check "S 	•	t" with CONSULT-III.		_
		agnosis Procedure".		
Diagnosis	Procedure		INFOID:0000000318545	12
1.INSPECT	ION START			
		t" with CONSULT-III.		-
	DTC Confirmation 2-255, "DTC Logic".	Procedure.		S
	260D displayed aga	ain?		
	Replace steering loc NSPECTION END.	sk unit.		

С

Ν

Ο

Ρ

А

B260F ENGINE STATUS

Description

BCM receives the engine status signal from ECM via CAN communication.

DTC Logic

INFOID:000000003185454

INFOID:00000003185453

DTC DETECTION LOGIC

NOTE:

- If DTC B260F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-207, "DTC Logic"</u>.
- If DTC B260F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-208, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260F	INTERRUPTION OF ENGINE STATUS SIGNAL	BCM is not yet received the engine status signal from ECM when ignition switch is in ON position	• ECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions.
- CVT selector lever is in the P position.
- Do not depress the brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-256, "Diagnosis Procedure".
- NO >> INSPECTION END.

Diagnosis Procedure

1.INSPECTION START

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure. See <u>SEC-256. "DTC Logic"</u>.

Is the DTC B260F displayed again?

- YES >> GO TO 2.
- NO >> INSPECTION END.

2.REPLACE ECM

1. Replace ECM.

2. Go to <u>EC-1016</u>, "BASIC INSPECTION : Special Repair Requirement" (VQ35DE), <u>EC-24</u>, "BASIC INSPECTION : Special Repair Requirement" (QR25DE).

>> INSPECTION END.

INFOID:000000003185455

B26E1 NO RECEPTION OF ENGINE STATUS SIGNAL

< COMPONENT DIAGNOSIS >

B26E1 NO RECEPTION OF ENGINE STATUS SIGNAL

Description

BCM receives the engine status signal from ECM via CAN communication.

DTC Logic

INFOID:000000003185457

INFOID:000000003185456

DTC DETECTION LOGIC **NOTE**:

- If DTC B26E1 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-207, "DTC Logic"</u>.
- If DTC B26E1 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-208, "DTC Logic"</u>.

				E
DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B260F	NO RECEPTION OF ENGINE STATUS SIGNAL	BCM does not receive the engine status signal from ECM when ignition switch is in the ON position	• ECM	F
OTC CONFI	RMATION PROC	EDURE		G
1.PERFORM	M DTC CONFIRMA	TION PROCEDURE		0
 CVT sele Do not de 	ector lever is in the l epress the brake pe			Η
<u>s DTC detec</u> YES >> 0	ted?	agnosis Procedure".		I
Diagnosis	Procedure		INFOID:000000003185458	J
1.INSPECTI	ON START			
2. Check "S 3. Touch "E 4. Perform		t" with CONSULT-III.		SEC
<u>s the DTC B</u> YES >> 0	26E1 displayed aga GO TO 2. NSPECTION END.	<u>iin?</u>		M
2.REPLACE	ECM			N
	<u>C-1016, "BASIC I</u>	NSPECTION : Special Repair Requirem air Requirement" (QR25DE).	<u>ent"</u> (VQ35DE), <u>EC-24, "BASIC</u>	0
>>	NSPECTION END.			
				Р

[SEDAN]

А

В

С

D

B2612 STEERING STATUS

Description

INFOID:000000003185459

[SEDAN]

There are 2 switches in the steering unit. IPDM E/R compares those 2 switches conditions to judge the present steering status and transmit the result to BCM via CAN communication.

DTC Logic

INFOID:000000003185460

INFOID:000000003185461

DTC DETECTION LOGIC

NOTE:

- If DTC B2612 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-207, "DTC Logic"</u>.
- If DTC B2612 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-208, "DTC Logic"</u>.

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B2612	STEERING STA- TUS	 BCM detects the mismatch between the following status for 1 second Steering lock or unlock Feedback of steering lock status from IPDM E/R (CAN) 	 Harness or connectors [steering lock unit circuit (BCM side) is open or shorted] Harness or connectors [steering lock unit circuit (IPDM E/R side) is open or shorted.] Steering lock unit IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

- 1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P or N position.
- Do not depress brake pedal.
- Steering is locked.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-258, "Diagnosis Procedure".

NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE 2

- 1. Turn ignition switch ON.
- 2. Turn ignition switch OFF.
- 3. Press door switch.
- 4. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to <u>SEC-258, "Diagnosis Procedure"</u>.
- NO >> INSPECTION END.

Diagnosis Procedure

1.INSPECTION START

Check the case in which DTC is detected.

- Case1: It is detected after ignition switch is changed from ON to OFF and door switch is pressed.
- Case2: It is detected after ignition switch is changed from ON to OFF

In which case is DTC detected?

Case1 >> GO TO 2. Case2 >> GO TO 7.

2.CHECK BCM OUTPUT SIGNAL

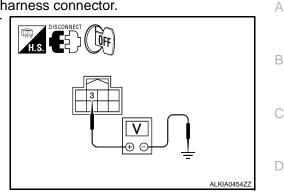
< COMPONENT DIAGNOSIS >

[SEDAN]

Ε

F

- 1. Turn ignition switch OFF.
- 2. Disconnect steering lock unit harness connector and IPDM E/R harness connector.
- 3. Check voltage between steering lock unit harness connector and ground.



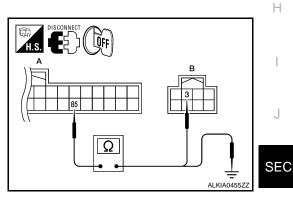
Steering	lock unit	Ground	Voltage [V]
Connector	Terminal	Ground	voltage [v]
M32	3	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4. NO >> GO TO 3.

3. CHECK STEERING LOCK UNIT CIRCUIT-I

- 1. Disconnect BCM harness connector.
- Check continuity between BCM harness connector M19 (A) terminal 85 and steering lock unit harness connector M32 (B) terminal 3.



BC	CM	Steering) lock unit	Continuity	
 Connector	Terminal	Connector	Terminal	Continuity	
 A: M19	85	B: M32	3	Yes	M

3. Check continuity between BCM harness connector M19 (A) terminal 85 and ground.

N	Continuity	Ground	BCM	
	Continuity	Ground	Terminal	Connector
	No	Ground	85	A: M19

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

4.CHECK IPDM E/R OUTPUT SIGNAL

1. Connect IPDM E/R harness connector.

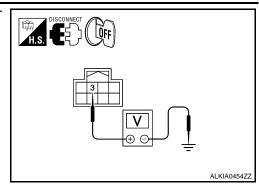
2. Disconnect BCM harness connector.

SEC-259

L

< COMPONENT DIAGNOSIS >

3. Check voltage between steering lock unit harness connector and ground.



Steering	lock unit	Ground	Voltago [\/]	
Connector	Terminal	Ground	Voltage [V]	
M32	3	Ground	Battery voltage	

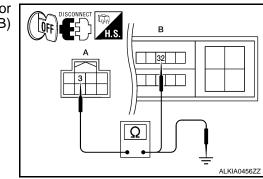
Is the inspection result normal?

YES >> Replace steering lock unit.

NO >> GO TO 5.

5. CHECK STEERING LOCK UNIT CIRCUIT-II

1. Check continuity between steering lock unit harness connector M32 (A) terminal 3 and IPDM E/R harness connector E18 (B) terminal 32.



Steering lock unit		IPDN	Continuity	
 Connector	Terminal	Connector	Terminal	Continuity
 A: M32	3	B: E18	32	Yes

2. Check continuity between steering lock unit harness connector M32 (A) terminal 3 and ground.

Steering	lock unit	Ground	Continuity
Connector	Terminal	Gibunu	Continuity
A: M32	3	Ground	No

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

6.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

7. CHECK BCM OUTPUT SIGNAL

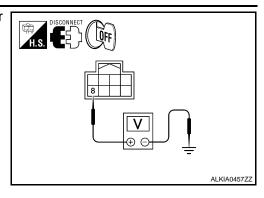
1. Turn ignition switch OFF.

Disconnect steering lock unit harness connector and IPDM E/R harness connector. 2.

SEC-260

< COMPONENT DIAGNOSIS >

3. Check voltage between steering lock unit harness connector and ground.



	Steeri	ng lock unit	Ground	Voltage [V]	
_	Connector	Terminal	Gibunu	vollage [v]	
_	M32	8	Ground	Battery voltage	
10.4	he increation requit new	malO			

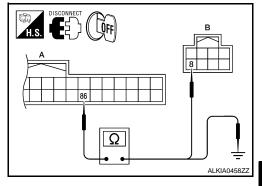
Is the inspection result normal?

YES >> GO TO 9. NO >> GO TO 8.

8. CHECK STEERING LOCK UNIT CIRCUIT-I

1. Disconnect BCM harness connector.

 Check continuity between BCM harness connector M19 (A) terminal 86 and steering lock unit harness connector M32 (B) terminal 8.



B	СМ	Steering lock unit		Steering lock unit Continuity		Continuity
Connector	Terminal	Connector	Terminal	Continuity		
A: M19	86	B: M32	8	Yes		

3. Check continuity between BCM harness connector M19 (A) terminal 86 and ground.

BCM		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: M19	86	Ground	No	

Is the inspection result normal?

YES >> GO TO 11.

NO >> Repair harness or connector.

9.CHECK IPDM E/R OUTPUT SIGNAL

1. Connect IPDM E/R harness connector.

2. Disconnect BCM harness connector.

[SEDAN]

А

В

С

D

Ε

F

Н

SEC

L

Μ

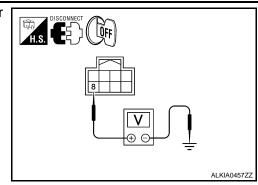
Ν

Ο

Ρ

< COMPONENT DIAGNOSIS >

3. Check voltage between steering lock unit harness connector and ground.



[SEDAN]

Steering	lock unit	Ground	Voltage [V]	
Connector	Terminal	Cround		
M32	8	Ground	Battery voltage	

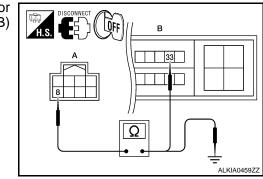
Is the inspection result normal?

YES >> Replace steering lock unit.

NO >> GO TO 10.

10. CHECK STEERING LOCK UNIT CIRCUIT-II

 Check continuity between steering lock unit harness connector M32 (A) terminal 8 and IPDM E/R harness connector E18 (B) terminal 33.



Steering lock unit		IPDM E/R		Continuity	
Connector	Terminal	erminal Connector Terminal		Continuity	
A: M32	8	B: E18	33	Yes	

2. Check continuity between steering lock unit harness connector and ground.

Steering	lock unit	Ground	Continuity	
Connector	Terminal	Ground		
A: M32	8	Ground	No	

Is the inspection result normal?

YES >> GO TO 11.

NO >> Repair harness or connector.

11.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

B2617 STARTER RELAY CIRCUIT

< COMPONENT DIAGNOSIS >

B2617 STARTER RELAY CIRCUIT

Description

Located in IPDM E/R, it runs the starter motor. The starter relay is turned ON by the BCM when the ignition switch is in START position. IPDM E/R transmits the starter relay ON signal to BCM via CAN communication.

DTC Logic

INFOID:000000003185463

INFOID:00000003185462

DTC DETECTION LOGIC

NOTE:

- If DTC B2617 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-207, "DTC Logic"</u>.
- If DTC B2617 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-208, "DTC Logic"</u>.
- If DTC B2617 is displayed with DTC B2611, first perform the trouble diagnosis for DTC B2611. Refer to <u>PCS-59, "DTC Logic"</u>.
- If DTC B2617 is displayed with DTC B210E, first perform the trouble diagnosis for DTC B210E. Refer to <u>SEC-263, "DTC Logic"</u>.

	DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	G
-	B2617	STARTER RELAY CIRCUIT	 An immediate operation of starter relay is requested by BCM, but there is no response for more than 1 second BCM is not commanding starter relay activation, but BCM detects starter relay output is active 	 Harness or connectors (Starter relay circuit is open or short- ed.) IPDM E/R 	Н

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P position.
- Do not depress the brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

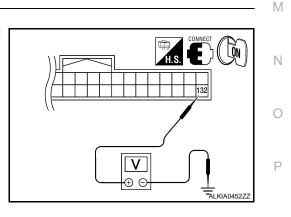
- YES >> Go to SEC-263, "Diagnosis Procedure".
- NO >> INSPECTION END

Diagnosis Procedure

1.CHECK STARTER RELAY

1. Turn ignition switch ON.

 Check voltage between BCM harness connector and ground under the following condition.



А

В

Ε

F

SEC

INFOID:00000003185464

B2617 STARTER RELAY CIRCUIT

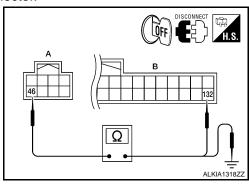
< COMPONENT DIAGNOSIS >

BCM		Ground Transmission type		Condition	Voltage (V)
Connector	Terminal	Ground	Transmission type	Condition	voltage (v)
		CVT: Select lever in Park		Ignition switch cranking or request to start	Battery voltage
M21	132	Ground	T dik	Other than above	0
1012 1	132	Giouna	M/T: Clutch pedal depressed	Ignition switch cranking or request to start	Battery voltage
			depressed	Other than above	0

Is the measurement value within the specification.

2. CHECK STARTER RELAY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM harness connector and IPDM E/R harness connector.
- Check continuity between IPDM E/R harness connector and BCM harness connector.



IPDN	M E/R	B	CM	Continuity
 Connector	Terminal	Connector	Terminal	Continuity
 A: E17	46	B: M21	132	Yes

4. Check continuity between IPDM E/R harness connector and ground.

IPDN	/I E/R	Ground	Continuity	
Connector	Terminal	Ground		
A: E17	46	Ground	No	

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-88, "Removal and Installation"</u>.

NO >> Repair harness or connector.

3.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

B2619 BCM

Description

BCM requests IPDM E/R to supply power to steering lock unit. After receiving the power, the steering lock unit transmits an ON signal to BCM.

DTC Logic

DTC DETECTION LOGIC

DTC No	Trouble diagnosis	DTC detecting condition	Possible cause	
B2619	BCM	BCM detects a mismatch between the power sup- plied to the steering lock unit and the feedback for one second or more.	• BCM	
DTC CON	FIRMATION PROC	EDURE		
1.PERFO	RM DTC CONFIRMA	TION PROCEDURE		
 CVT se Do not 	the push-button ignition elector lever is in the depress brake pedal "Self diagnostic resul		l wait for at least 1 second.	
<u>Is DTC dete</u> YES >> NO >>	<u>ected?</u> → Go to <u>SEC-265. "Di</u> → INSPECTION END.	agnosis Procedure".		
Diagnosi	s Procedure		INFOID:00000003185467	
1.INSPEC	TION START			
	nition switch ON.			
	"Self diagnostic resul "ERASE".			
4. Perfor	m DTC Confirmation			S
	B2619 displayed aga			
YES >>		r to <u>BCS-88, "Removal and Installation"</u> .		

INFOID:000000003185465

INFOID:000000003185466

А

С

Ο

Ρ

B261A PUSH-BUTTON IGNITION SWITCH

< COMPONENT DIAGNOSIS >

B261A PUSH-BUTTON IGNITION SWITCH

Description

INFOID:000000003185468

[SEDAN]

IPDM E/R transmits the push-button ignition switch status via CAN communication to BCM. BCM receives push-button ignition switch status by hardwire input. BCM compares the 2 signals for mismatch.

DTC Logic

INFOID:000000003185469

DTC DETECTION LOGIC

NOTE:

- If DTC B261A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-207, "DTC Logic"</u>.
- If DTC B261A is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-208, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B261A	PUSH-BUTTON IGNITION SWITCH	 BCM detects the mismatch between the following for 1 second or more Push-button ignition switch status Push-button ignition switch status from IPDM E/R (CAN) 	 Harness or connectors (Push-button ignition switch circuit is open or shorted) Between BCM and push-button igni- tion switch Between IPDM E/R and push-button ignition switch

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P position
- Do not depress brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

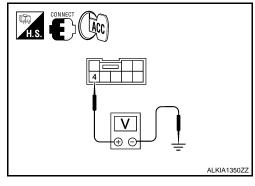
- YES >> Go to SEC-266, "Diagnosis Procedure".
- NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003185470

1. CHECK PUSH-BUTTON IGNITION SWITCH OUTPUT SIGNAL 1

- 1. Turn ignition switch OFF.
- 2. Disconnect push-button ignition switch harness connector and IPDM E/R harness connector.
- 3. Check voltage between push-button ignition switch harness connector and ground.



Push-button	Push-button ignition switch		Voltage (V)
Connector	Terminal	Ground	vollage (v)
M38	4	Ground	Battery voltage

B261A PUSH-BUTTON IGNITION SWITCH

< COMPONENT DIAGNOSIS >

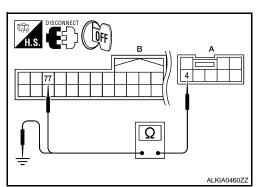
Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

2. CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT

- 1. Disconnect BCM harness connector.
- Check continuity between push-button ignition switch harness connector M38 (A) terminal 4 and BCM harness connector M19 (B) terminal 77.



Push-button	ignition switch	B	СМ	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M38	4	B: M19	77	Yes

3. Check continuity between push-button ignition switch harness connector M38 (A) terminal 4 and ground.

Push-button ignition switch		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: M38	4	Ground	No	

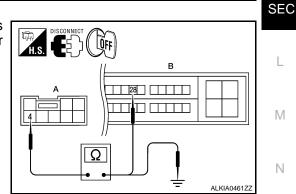
Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

3.CHECK PUSH-BUTTON IGNITION SWITCH

- 1. Disconnect IPDM E/R harness connector.
- Check continuity between push-button ignition switch harness connector M38 (A) terminal 4 and IPDM E/R harness connector E18 (B) terminal 28.



Push-button	ignition switch	IPDI	M E/R	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M38	4	B: E18	28	Yes

3. Check continuity between push-button ignition switch harness connector and ground.

Push-button ignition switch		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: M38	4	Ground	No	

E

ť

J

Ρ

SEC-267

А

В

D

F

Н

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

B261E VEHICLE TYPE

< COMPONE	ENT DIAGNOSIS >		[SEDAN]	
B261E V	EHICLE TYP	E		А
Description	า		INFOID:000000003185471	A
There are two • HEV • Convention DTC Logic			INFOID:000000003185472	B
NOTE: • If DTC B26 <u>SEC-207, "</u> • If DTC B26	DTC Logic".	h DTC U1000, first perform the trouble di	-	D
DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	F
B261E	VEHICLE TYPE	Difference of BCM configration	• BCM	
	RMATION PROC	EDURE FION PROCEDURE		G
	-	" with CONSULT-III.		Η
	So to <u>SEC-269, "Dia</u> NSPECTION END	ignosis Procedure".		I
Diagnosis	Procedure		INFOID:000000003185473	
1.INSPECTI	ON START			J
 Check "S Touch "E Perform 		" with CONSULT-III. Procedure.		SEC
Is the 1st trip	DTC B261E display	-		Ĺ
	Perform BCM config NSPECTION END	uration. Refer to CONSULT-III Operation M	lanual.	M

Ν

Ο

Ρ

B2108 STEERING LOCK RELAY

Description

The steering lock relay ON signal is transmitted to IPDM E/R by BCM via CAN communication. IPDM E/R turns the steering lock relay ON and transmits the release of the steering to BCM.

DTC Logic

INFOID:000000003185475

INFOID:000000003185476

INFOID:000000003185474

DTC DETECTION LOGIC

NOTE:

- If DTC B2108 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-207, "DTC Logic"</u>.
- If DTC B2108 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-208, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2108	STRG LCK RELAY ON	IPDM E/R detects that the relay is stuck at ON po- sition for about 1 second even if the IPDM E/R re- ceives steering lock relay ON/OFF signal from BCM.	• IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P position
- Do not depress the brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-270, "Diagnosis Procedure".
- NO >> INSPECTION END

Diagnosis Procedure

1.CHECK FUSE

NO

- 1. Turn ignition switch OFF.
- 2. Check 10A fuse (No. 40, located in IPDM E/R).

Is the inspection normal?

- YES >> Replace IPDM E/R. Refer to PCS-43. "Removal and Installation".
 - >> Check the following.
 - Harness for open or short between IPDM E/R and battery
 - Fuse

B2109 STEERING LOCK RELAY

< COMPONENT DIAGNOSIS >

B2109 STEERING LOCK RELAY

Description

The steering lock relay ON signal is transmitted to IPDM E/R by BCM via CAN communication. IPDM E/R turns the steering lock relay ON and transmits the release of the steering to BCM.

DTC Logic

INFOID:000000003185478

INFOID:000000003185479

INFOID:00000003185477

DTC DETECTION LOGIC

NOTE:

- If DTC B2109 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to D SEC-207, "DTC Logic".
- If DTC B2109 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-208, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B2109	STRG LCK RELAY OFF	IPDM E/R detects that the relay is stuck at OFF po- sition for about 1 second even if the IPDM E/R re- ceives steering lock relay ON/OFF signal from BCM.	 Harness or connector (power supply circuit) IPDM E/R Battery 	F

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- Press the push-button ignition switch under the following conditions and wait for at least 1 second. 1.
- CVT selector lever is in the P or N position Do not depress the brake pedal Check "Self diagnostic result" with CONSULT-III.
- 2.

Is DTC detected?

>> Go to SEC-271, "Diagnosis Procedure". YES

NO >> INSPECTION END

Diagnosis Procedure

1.CHECK POWER SUPPLY CIRCUIT

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

YES >> GO TO 2.

NO >> Repair the malfunctioning parts

2.CHECK FUSE

- 1. Turn ignition switch OFF.
- Check 10A fuse (No. 40, located in IPDM E/R). 2.

Is the inspection normal?

- >> Replace IPDM E/R. Refer to PCS-43, "Removal and Installation". YES NO
 - >> Check the following.
 - Harness for open or short between IPDM E/R and battery
 - Fuse

А

В

Е

Н

SEC

L

Μ

Ν

Ρ

< COMPONENT DIAGNOSIS >

B210A STEERING LOCK CONDITION SWITCH

Description

There are 2 switches in the steering unit. IPDM E/R compares those 2 switches conditions to judge the present steering status and transmit the result to BCM via CAN communication.

DTC Logic

INFOID:000000003185481

INFOID:000000003185480

DTC DETECTION LOGIC

NOTE:

- If DTC B210A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-207, "DTC Logic"</u>.
- If DTC B210A is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-208, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210A	STRG LCK STATE SW	 BCM detects the mismatch between the following for 1 second Steering lock or unlock Feedback of steering lock status from IPDM E/R (CAN) 	 Harness or connectors [steering lock unit circuit (BCM side) is open or shorted] Harness or connectors [steering lock unit circuit (IPDM E/ R side) is open or shorted.] Steering lock unit IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P or N position
- Do not depress the brake pedal
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to <u>SEC-272, "Diagnosis Procedure"</u>.
- NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003185482

1.INSPECTION START

Check the case in which DTC is detected.

- Case1: It is detected after ignition switch is changed from ON to OFF and door switch is pressed
- · Case2: It is detected after ignition switch is changed from ON to OFF

In which case is DTC detected?

Case1 >> GO TO 2. Case2 >> GO TO 7.

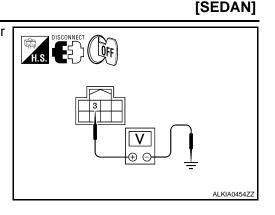
2.check bcm output signal

1. Turn ignition switch OFF.

2. Disconnect steering lock unit harness connector and IPDM E/R harness connector.

< COMPONENT DIAGNOSIS >

3. Check voltage between steering lock unit harness connector and ground.



А

В

С

D

Ε

F

Н

SEC

L

Μ

Ν

0

Ρ

	Steering lock unit		Ground	Voltago [\/]
-	Connector	Terminal	Giouna	Voltage [V]
-	M32	3	Ground	Battery voltage
1 - 1	de a la conceptione de contente de la conce	- 10		

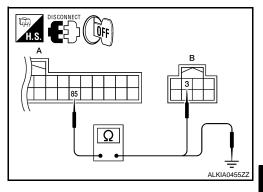
Is the inspection result normal?

YES >> GO TO 4. NO >> GO TO 3.

3. CHECK STEERING LOCK UNIT CIRCUIT-I

1. Disconnect BCM harness connector.

 Check continuity between BCM harness connector M19 (A) terminal 85 and steering lock unit harness connector M32 (B) terminal 3.



BCM		Steering lock unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M19	85	B: M32	3	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 85 and ground.

BCM		Ground	Continuity
Connector	Terminal	Cround	Continuity
A: M19	85	Ground	No

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

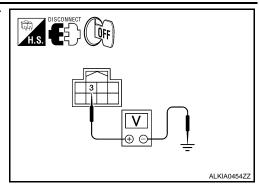
4.CHECK IPDM E/R OUTPUT SIGNAL

1. Connect IPDM E/R harness connector.

2. Disconnect BCM harness connector.

< COMPONENT DIAGNOSIS >

 Check voltage between steering lock unit harness connector and ground.



Steering lock unit		Ground	Voltage [V]
Connector	Terminal	Cround	voltage [v]
M32	3	Ground	Battery voltage

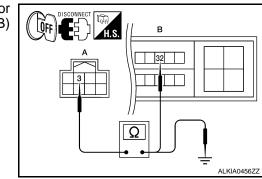
Is the inspection result normal?

YES >> Replace steering lock unit.

NO >> GO TO 5.

5. CHECK STEERING LOCK UNIT CIRCUIT-II

 Check continuity between steering lock unit harness connector M32 (A) terminal 3 and IPDM E/R harness connector E18 (B) termial 32.



Steering	j lock unit	IPDI	M E/R	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M32	3	B: E18	32	Yes

2. Check continuity between steering lock unit harness connector M32 (A) terminal 3 and ground.

Steering	Steering lock unit		Continuity
Connector	Terminal	Ground	Continuity
A: M32	3	Ground	No

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

6. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

/.CHECK BCM OUTPUT SIGNAL

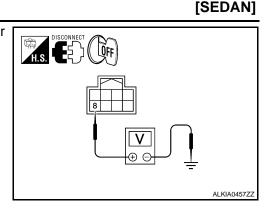
1. Turn ignition switch OFF.

2. Disconnect steering lock unit harness connector and IPDM E/R harness connector E5.

SEC-274

< COMPONENT DIAGNOSIS >

3. Check voltage between steering lock unit harness connector and ground.



А

В

С

D

Ε

F

Н

L

Μ

Ν

Ρ

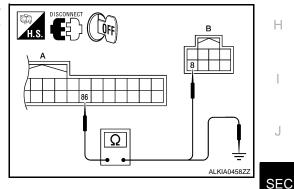
_	Steering lock unit		Ground	Voltago [\/]
-	Connector	Terminal	Ground	Voltage [V]
-	M32	8	Ground	Battery voltage
	a i a la	10		

Is the inspection result normal?

YES >> GO TO 9. NO >> GO TO 8.

8. CHECK STEERING LOCK UNIT CIRCUIT-I

- 1. Disconnect BCM harness connector M122.
- 2. Check continuity between BCM harness connector M19 (A) terminal 86 and steering lock unit harness connector M32 (B) terminal 8.



В	СМ	Steering	lock unit	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M19	86	B: M32	8	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 86 and ground.

ВСМ		Ground	Continuity
Connector	Terminal	Cround	Continuity
A: M19	86	Ground	No

Is the inspection result normal?

YES >> GO TO 11.

NO >> Repair harness or connector.

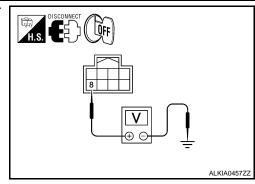
9. CHECK IPDM E/R OUTPUT SIGNAL

1. Connect IPDM E/R harness connector.

Disconnect BCM harness connector. 2.

< COMPONENT DIAGNOSIS >

3. Check voltage between steering lock unit harness connector and ground.



[SEDAN]

Steering lock unit		Ground	Voltage [V]
Connector	Terminal	Cround	voltage [v]
M32	8	Ground	Battery voltage

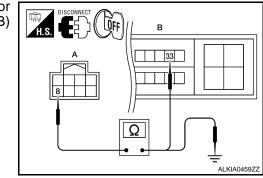
Is the inspection result normal?

YES >> Replace steering lock unit.

NO >> GO TO 10.

10. CHECK STEERING LOCK UNIT CIRCUIT-II

 Check continuity between steering lock unit harness connector M32 (A) terminal 8 and IPDM E/R harness connector E18 (B) terminal 33.



Steering	g lock unit	IPDI	M E/R	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M32	8	B: E18	33	Yes

2. Check continuity between steering lock unit harness connector and ground.

Steering	Steering lock unit		Continuity
Connector	Terminal	Ground	Continuity
A: M32	8	Ground	No

Is the inspection result normal?

YES >> GO TO 11.

NO >> Repair harness or connector.

11.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

B210B STARTER CONTROL RELAY

< COMPONENT DIAGNOSIS >

B210B STARTER CONTROL RELAY

Description

Starter control relay, integrated in IPDM E/R, permits the starter relay operation when in N or P position and the steering is locked or unlocked. It is installed in parallel with the starter relay.

DTC Logic

INFOID:000000003185484

INFOID:000000003185483

DTC DETECTION LOGIC

NOTE:

- If DTC B210B is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-207, "DTC Logic"</u>.
- If DTC B210B is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-208, "DTC Logic"</u>.

B210B START CONT RLY ON IPDM E/R detects that the relay is stuck at ON po- sition even if the followings condition are met for about 1 second. • IPDM E/R DTC CONFIRMATION PROCEDURE • Clutch interlock or shift park neutral position (PNP) switch input signal • IPDM E/R DTC CONFIRMATION PROCEDURE 1. PERFORM DTC CONFIRMATION PROCEDURE • CVT selector lever is in the P or N position. • Depress the brake pedal 2. Check "Self diagnostic result" with CONSULT-III. Is DTC detected? YES >> Go to SEC-277. "Diagnosis Procedure". NO >> INSPECTION END Diagnosis Procedure INFORCEMENT						
 PERFORM DTC CONFIRMATION PROCEDURE 1. Turn the power supply position to start under the following conditions and wait for at least 1 second. CVT selector lever is in the P or N position. Depress the brake pedal Check "Self diagnostic result" with CONSULT-III. Is DTC detected? YES >> Go to SEC-277. "Diagnosis Procedure". NO >> INSPECTION END Diagnosis Procedure 						
 Turn the power supply position to start under the following conditions and wait for at least 1 second. CVT selector lever is in the P or N position. Depress the brake pedal Check "Self diagnostic result" with CONSULT-III. Is DTC detected? YES >> Go to SEC-277. "Diagnosis Procedure". NO >> INSPECTION END Diagnosis Procedure 						
 CVT selector lever is in the P or N position. Depress the brake pedal Check "Self diagnostic result" with CONSULT-III. <u>Is DTC detected?</u> YES >> Go to <u>SEC-277, "Diagnosis Procedure"</u>. NO >> INSPECTION END Diagnosis Procedure 						
Is DTC detected? YES >> Go to SEC-277. "Diagnosis Procedure". NO >> INSPECTION END Diagnosis Procedure INFOID.000000003185485						
YES >> Go to SEC-277, "Diagnosis Procedure". NO >> INSPECTION END Diagnosis Procedure INFOID:000000003185485						
Diagnosis Procedure						
-						
1.INSPECTION START						
 Turn ignition switch ON. Check "Self diagnostic result" with CONSULT-III. Touch "ERASE". Perform DTC Confirmation Procedure. 						
See <u>PCS-41, "DTC Index"</u> .						
Is the DTC B210B displayed again?						
YES >> Replace IPDM E/R. Refer <u>PCS-43, "Removal and Installation"</u> . NO >> INSPECTION END						

Ρ

[SEDAN]

А

С

Ε

B210C STARTER CONTROL RELAY

Description

Starter control relay, integrated in IPDM E/R, permits the starter relay operation when in N or P position and the steering is locked or unlocked. It is installed in parallel with the starter relay.

DTC Logic

INFOID:000000003185487

INFOID:000000003185488

INFOID:000000003185486

DTC DETECTION LOGIC

NOTE:

- If DTC B210C is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-207, "DTC Logic"</u>.
- If DTC B210C is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-208, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210C	START CONT RLY OFF	 IPDM E/R detects that the relay is stuck at ON position even if the followings condition are met for about 1 second. Starter control relay ON/OFF signal from BCM Clutch interlock or shift park neutral position (PNP) switch input signal 	• IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn the power supply position to start under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P or N position.
- Depress the brake pedal
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-278, "Diagnosis Procedure".
- NO >> INSPECTION END

Diagnosis Procedure

1.INSPECTION START

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure. See <u>PCS-41, "DTC Index"</u>.

Is the DTC B210C displayed again?

- YES >> Replace IPDM E/R. Refer to PCS-43. "Removal and Installation".
- NO >> INSPECTION END

SEC-278

B210D STARTER RELAY

< COMPONENT DIAGNOSIS >

B210D STARTER RELAY

Description

Located in IPDM E/R, it runs the starter motor. The starter relay is turned ON by the BCM when the ignition switch is in START position. IPDM E/R transmits the starter relay ON signal to BCM via CAN communication.

DTC Logic

INFOID:000000003185490

INFOID:000000003185489

DTC DETECTION LOGIC

NOTE:

- If DTC B210D is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-207, "DTC Logic"</u>.
- If DTC B210D is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-208, "DTC Logic"</u>.
- If DTC B210D is displayed with DTC B2617, first perform the trouble diagnosis for DTC B2617. Refer to SEC-263, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	F
B210D	STARTER RELAY ON	IPDM E/R detects that the relay is stuck at ON position even if the followings condition are met for about 1 second.Starter control relay ON/OFF signal from BCM	• IPDM E/R	G
		 Clutch interlock or shift park neutral position (PNP) switch input 		Н

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Ignition switch ON under the following conditions and wait for at least 1 second.
- Ă/T selector lever is P or N position
- Do not depress the brake pedal
- 2. Check "Self diagnostic result" with CONSULT-III.

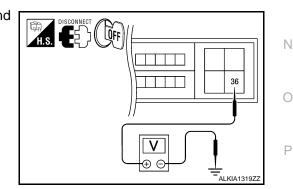
Is DTC detected?

- YES >> Go to SEC-279, "Diagnosis Procedure".
- NO >> INSPECTION END.

Diagnosis Procedure

1.CHECK STARTER RELAY POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect IPDM E/R harness connector.
- Check voltage between IPDM E/R harness connector and ground.



А

В

Ε

SEC

Μ

INFOID:000000003185491

B210D STARTER RELAY

< COMPONENT DIAGNOSIS >

[SEDAN]

IPDM E/R		Ground	Voltage (V)	
Connector	Terminal	Ground	voltage (v)	
E18	36	Ground	Battery voltage	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-43, "Removal and Installation".

NO >> Check harness for open or short between IPDM E/R and battery.

B210E STARTER RELAY

< COMPONENT DIAGNOSIS >

B210E STARTER RELAY

Description

Located in IPDM E/R, it runs the starter motor. The starter relay is turned ON by the BCM when the ignition switch is in START position. IPDM E/R transmits the starter relay ON signal to BCM via CAN communication.

DTC Logic

INFOID:000000003185493

∨ ⊕ ⊕

ALKIA0452ZZ

INFOID:000000003185492

DTC DETECTION LOGIC

NOTE:

- If DTC B210E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-207, "DTC Logic"</u>.
- If DTC B210E is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-208, "DTC Logic"</u>.

DTC No.	name		Possible cause
B210E	STARTER RELAY OFF	 IPDM E/R detects that the relay is stuck at ON position even if the followings condition are met for about 1 second. Starter control relay ON/OFF signal from BCM Clutch interlock or shift park neutral position (PNP) switch input 	• IPDM E/R
	FIRMATION PRO		
1. PERFO	RM DTC CONFIRM	ATION PROCEDURE	
A/T seDo not	lector lever is in the depress the brake	bedal	ast 1 second.
2. Check Is DTC det	0	ult" with CONSULT-III.	
YES >>	> Go to <u>SEC-281, "</u> C	Diagnosis Procedure".	
-	> INSPECTION END).	
	is Procedure		INFOID:00000003185494
1.INSPEC	TION START		
	••	ion the vehicle is equipped with.	
	e of transmission > GO TO 2.		
M/T >>	> GO TO 3.		
2.CHECK	STARTER RELAY	OUTPUT SIGNAL/CVT MODELS	
	nition switch OFF.	connector	
		CM harness connector and ground.	

[SEDAN]

А

В

С

Ε

B210E STARTER RELAY

< COMPONENT DIAGNOSIS >

BCM co	BCM connector			Condition		
Connector	Terminal	Ground	Ignition switch	Brake pedal	CVT selector le- ver	Voltage (V)
					P or N	Battery voltage
M21	132	Ground	ON	Depressed	Other than above	0

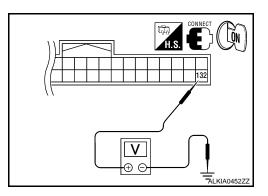
Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

3.CHECK STARTER RELAY OUTPUT SIGNAL / M/T MODELS

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM harness connector.
- 3. Check voltage between BCM harness connector and ground.



BCM c	BCM connector		C	ondition	Voltage (V)
Connector	Terminal	Ground	Ignition switch	Clutch pedal	voltage (v)
M21	132	Ground	OFF	Not depressed	0
IVIZ I	132	Ground		Depressed	Battery voltage

Is the inspection result normal?

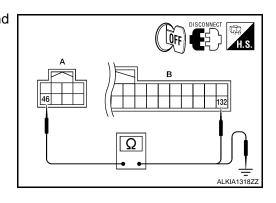
YES >> GO TO 5.

NO >> GO TO 4.

4. CHECK STARTER RELAY OUTPUT SIGNAL CIRCUIT

1. Disconnect IPDM E/R harness connector.

2. Check continuity between IPDM E/R harness connector and BCM harness connector.



IPDM E/R		BCM		Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: E17	46	B: M21	132	Yes

3. Check continuity between BCM harness connector and ground.

SEC-282

B210E STARTER RELAY

< COMPONENT DIAGNOSIS >

[SEDAN]

IPDM E	IPDM E/R	Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: E17	46	Ground	No	
NO >> Repair harnes CHECK STARTER REL Turn ignition switch OF Disconnect IPDM E/R	I E/R. Refer to <u>PCS</u> s connector. _AY POWER SUPF =F. harness connector			
	DM E/R	Ground	Voltage (V)	
Connector	Terminal	1		
E17 the inspection result nor	46	Ground	Battery voltage	
		S-43. "Removal and Installation between IPDM E/R and batter		

Ν

Ο

Ρ

B210F PNP/CLUTCH INTERLOCK SWITCH

Description

IPDM E/R confirms the shift position with the following signals.

- Park/neutral position (PNP) switch (A/T models)
- Clutch interlock switch (M/T models)
- Shift position signal from BCM (CAN)

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B210F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-207. "DTC Logic"
- If DTC B210F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-207, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210F	INTER LOCK/PNP SW ON	 IPDM E/R detects a mismatch between the signals below for 1 second or more. Clutch interlock input signal (M/T models) Shift PNP switch input signal (A/T models) Shift position signal from BCM (CAN) 	 Harness or connectors [Park/neutral position (PNP) switch circuit is open or shorted (A/T mod- els)] or (Clutch interlock switch cir- cuit is open or shorted.) Clutch interlock switch (M/T mod- els) Park/neutral position (PNP) switch (A/T models)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions and wait for at least 1 second.

- A/T selector lever is in the P or N position
- Do not depress the brake pedal
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Go to <u>SEC-284, "Diagnosis Procedure"</u>. NO >> INSPECTION END

Diagnosis Procedure

1.INSPECTION START

Check which type of transmission the vehicle is equipped with.

Which type of transmission

CVT >> GO TO 2. M/T >> GO TO 5.

2. СНЕСК DTC WITH BCM

Refer to BCS-85, "DTC Index".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

 ${f 3.}$ CHECK PNP SWITCH INPUT SIGNAL

1.	Turn	ignition	switch	OFF.
----	------	----------	--------	------

- 2. Disconnect IPDM E/R harness connector.
- 3. Turn ignition switch ON.

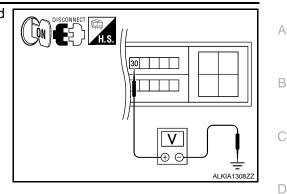
INFOID:000000003185495

INFOID:000000003185496

INFOID:000000003185497

< COMPONENT DIAGNOSIS >

4. Check voltage between IPDM E/R harness connector and ground under following condition.



[SEDAN]

Ε

F

Н

L

Μ

Ν

Ρ

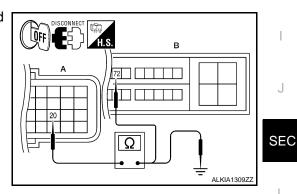
IPDM E/R		Ground	Condition		Voltage (V)	
Connector	Terminal	Ground	Condition		voltage (v)	
E19	E18 30	Ground	CVT selector lever	P or N	0	
ETO				Other than above	Battery voltage	

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to PCS-43, "Removal and Installation".
- NO >> GO TO 4 (VQ35DE).
- NO >> GO TO 10 (QR25DE).

4.CHECK PNP SWITCH CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect TCM harness connector.
- 3. Check continuity between IPDM E/R harness connector and TCM harness connector.



ТСМ		IPDN	Continuity	
Connector	tor Terminal Connector		Terminal	Continuity
A: F16	20	B: E18	72	Yes

4. Check continuity between TCM harness connector and ground.

ТСМ		Ground	Continuity	
Connector	Terminal	Glouid	Continuity	
A: F16	20	Ground	No	

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair harness or connector.

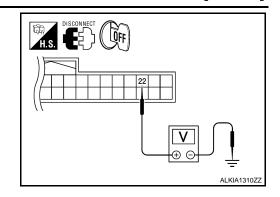
5.CHECK CLUTCH INTERLOCK SWITCH INPUT SIGNAL (BCM)

- Turn ignition switch OFF. 1.
- Disconnect BCM harness connector. 2.

SEC-285

< COMPONENT DIAGNOSIS >

3. Check voltage between BCM harness connector and ground.



[SEDAN]

BCM		Ground		Condition	Voltago (V)	
Connector	Terminal	Ground	Condition		Voltage (V)	
M18 22	22 Ground	Clutch podol	Not depressed	0		
	Ground	Clutch pedal	Depressed	Battery voltage		

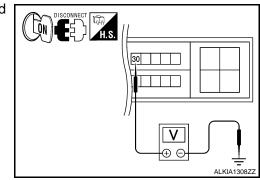
Is the inspection result normal?

YES >> GO TO 6. NO >> GO TO 11.

NO >> GO TO 11.

6. CHECK CLUTCH INTERLOCK SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect IPDM E/R harness connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between IPDM E/R harness connector and ground.



IPDM E/R		- Ground (Condition	Voltage (V)
Connector	Terminal	Ground	Condition		voltage (v)
E18	20	Ground		Not depressed	0
ETO	30 Ground Clutch pedal		Depressed	Battery voltage	

Is the inspection result normal?

YES >> Replace the IPDM E/R. Refer to PCS-43, "Removal and Installation".

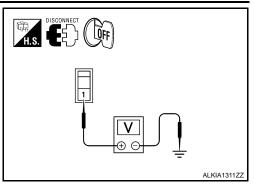
NO >> GO TO 7.

7. Check clutch interlock switch power supply

1. Disconnect clutch interlock switch harness connector.

< COMPONENT DIAGNOSIS >

Check voltage between clutch interlock switch harness connector and ground.



	Clutch interlock switch		Ground	Voltage (V)
-	Connector	Terminal	Ground	voltage (v)
_	E36	1	Ground	Battery voltage

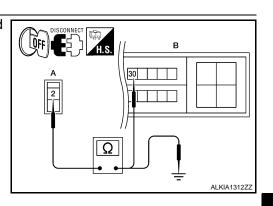
Is the inspection result normal?

YES >> GO TO 8.

NO >> Check harness for open or short between clutch interlock switch and fuse.

8.check clutch interlock switch circuit

1. Check continuity between IPDM E/R harness connector and clutch interlock switch harness connector.



Clutch interlock switch		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: E36	2	B: E18	30	Yes

2. Check continuity between clutch interlock switch harness connector and ground.

 Clutch inte	rlock switch	Cround	Continuity	- M
 Connector	Terminal	– Ground	Continuity	
A: E36	2	Ground	No	N

Is the inspection result normal?

YES >> GO TO 9.

NO >> Repair harness or connector.

9.CHECK CLUTCH INTERLOCK SWITCH

Refer to SEC-289, "Component Inspection".

Is the inspection result normal?

YES >> Replace the IPDM E/R. Refer to <u>PCS-43, "Removal and Installation"</u>.

NO >> Replace clutch interlock switch.

10.CHECK PNP SWITCH CIRCUIT FOR CONTINUITY

1. Turn ignition switch OFF.

[SEDAN]

А

В

D

Ε

F

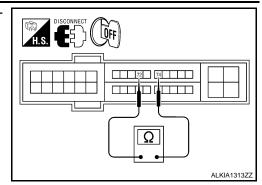
Н

L

Ρ

< COMPONENT DIAGNOSIS >

2. Check continuity between IPDM E/R harness connector terminals 72 and 74.



[SEDAN]

IPDM E/R			Condition		Continuity
Connector	Terminals		Condition		Continuity
F10	72	74	PNP switch position	P or N	Yes
FIU	12	74		Other	No

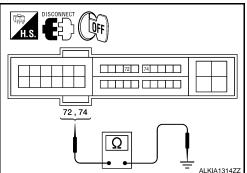
Is the inspection result normal?

YES >> GO TO 11. NO >> GO TO 12.

11. CHECK PNP SWITCH CIRCUIT FOR SHORT

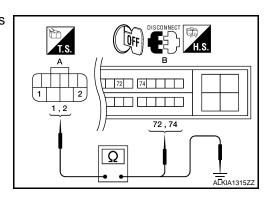
Check continuity between IPDM E/R harness connector terminals 72, 74 and ground.

IPDM E/R		Ground	Continuity	
Connector	Terminal	Giouna	Continuity	
F10	72	Ground	No	
	74	Giodila	NO	



Is the inspection result normal?

- YES >> Replace the IPDM E/R. Refer to <u>PCS-43, "Removal and</u> <u>Installation"</u>.
- NO >> Repair or replace harness.
- 12. CHECK PNP SWITCH INPUT SIGNAL CIRCUIT
- 1. Disconnect PNP switch harness connector.
- 2. Check continuity between PNP switch and IPDM E/R harness connectors.



Park/neutral position switch		IPDM E/R		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
A: F25	1	B: F10	74	Yes	
A. F23	2	B. FIU	72	165	

3. Check continuity between PNP switch harness connector and ground.

SEC-288

< COMPONENT DIAGNOSIS >

[SEDAN]

SEC

L

Μ

Ν

Ο

Ρ

Park/neutral	position switch	Ground	Continuity	А
Connector	Terminal	Ground	Continuity	
A: F25	1	Ground	No	D
	2	Ground	110	В
Is the inspection result norm	<u>al?</u>			
YES >> Replace PNP sv	vitch.			С
NO >> Repair harness				
13. CHECK INTERMITTEN				
Refer to GI-42, "Intermittent	Incident".			D
>> INSPECTION E				E
Component Inspection			INFOID:000000003185	498
1. CHECK CLUTCH INTER	LOCK SWITCH			F
1. Turn ignition switch OFF	•			
2. Disconnect clutch interlo	ock switch harness conne			_
 Check continuity between lowing conditions. 	en clutch interlock switch			G
			2	Н
			Ω	1
			ALKIA1316	zz J

Clutch interlock switch		Condition		Continuity	
Terr	minal				
1	2	Clutch pedal	Not depressed	No	
1	2	Clutch pedal	Depressed	Yes	

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace clutch interlock switch.

< COMPONENT DIAGNOSIS >

B2110 PNP/CLUTCH INTERLOCK SWITCH

Description

IPDM E/R confirms the shift position with the following signals.

- Park/neutral position (PNP) switch (A/T models)
- Clutch inter lock switch (M/T models)
- Shift position signal from BCM (CAN)

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2110 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-207, "DTC Logic"</u>.
- If DTC B2110 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-208, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2110	INTER LOCK/PNP SW	IPDM E/R detects mismatch between the signals below for 1 second or more.Clutch interlock input signal (M/T models)Shift NP switch input signal (A/T models)	 Harness or connectors [Park/neutral position (PNP) switch circuit is open or shorted (A/T mod- els)] or (Clutch interlock switch circuit is open or shorted.) Clutch inter lock switch (MT models) Park/neutral position (PNP) switch (AT models)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn the ignition switch ON under the following conditions and wait for at least 1 second.

- A/T selector lever is in the P or N position
- Do not depress the brake pedal
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Go to <u>SEC-290, "Diagnosis Procedure"</u>.

NO >> INSPECTION END

Diagnosis Procedure

1.INSPECTION START

Check which type of transmission the vehicle is equipped with.

Which type of transmission

CVT >> GO TO 2. M/T >> GO TO 5.

2. CHECK DTC WITH BCM

Refer to BCS-85, "DTC Index".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

3.CHECK PNP SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.

2. Disconnect IPDM E/R harness connector.

3. Turn ignition switch ON.

INFOID:000000003185501

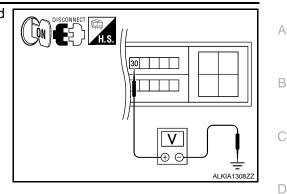
[SEDAN]

INFOID:000000003185499

INFOID:000000003185500

< COMPONENT DIAGNOSIS >

4. Check voltage between IPDM E/R harness connector and ground under following condition.



[SEDAN]

Ε

F

Н

L

Μ

Ν

Ρ

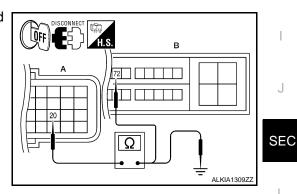
IPDM E/R		Ground		ondition	Voltago (V/)	
Connector	Terminal	Ground	Condition		Voltage (V)	
E18	E40 00 Orward OV/East			P or N	0	
ETO	30	Ground	CVT selector lever	Other than above	Battery voltage	

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to PCS-43. "Removal and Installation".
- NO >> GO TO 4 (VQ35DE).
- NO >> GO TO 10 (QR25DE).

4.CHECK PNP SWITCH CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect TCM harness connector.
- 3. Check continuity between IPDM E/R harness connector and TCM harness connector.



-	TCM IPDM E/R			Continuity		
_	Connector	Terminal	Connector	Terminal	Continuity	
-	A: F16	20	B: E18	72	Yes	

4. Check continuity between TCM harness connector and ground.

ТСМ		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: F16	20	Ground	No	

Is the inspection result normal?

YES >> GO TO 8.

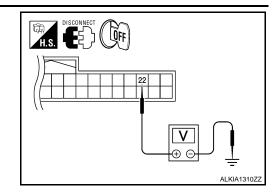
NO >> Repair harness or connector.

5.CHECK CLUTCH INTERLOCK SWITCH INPUT SIGNAL (BCM)

- Turn ignition switch OFF. 1.
- Disconnect BCM harness connector. 2.

< COMPONENT DIAGNOSIS >

3. Check voltage between BCM harness connector and ground.



[SEDAN]

BCM		Ground	Condition		Voltago (V/)	
Connector	Terminal	Ground	Condition		Voltage (V)	
M18	22	Ground		Not depressed	0	
IVI I O	22	Ground	Ground Clutch pedal	Depressed	Battery voltage	

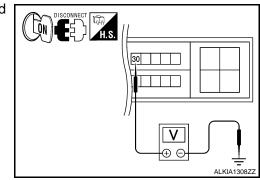
Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 11.

6. CHECK CLUTCH INTERLOCK SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect IPDM E/R harness connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between IPDM E/R harness connector and ground.



IPDM E/R		Ground C		Condition	Voltage (V)	
Connector	Terminal	Ground	Condition		vollage (v)	
E18	20	Ground		Not depressed	0	
ETO	30 Ground	Clutch pedal	Depressed	Battery voltage		

Is the inspection result normal?

YES >> Replace the IPDM E/R. Refer to PCS-43, "Removal and Installation".

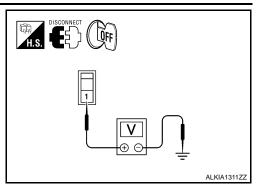
NO >> GO TO 7.

7.check clutch interlock switch power supply

1. Disconnect clutch interlock switch harness connector.

< COMPONENT DIAGNOSIS >

Check voltage between clutch interlock switch harness connector and ground.



Clutch interlock switch		Ground	Voltage (V)	
	Connector	Terminal	Giouna	voltage (v)
_	E36	1	Ground	Battery voltage

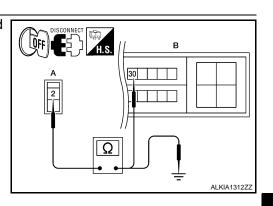
Is the inspection result normal?

YES >> GO TO 8.

NO >> Check harness for open or short between clutch interlock switch and fuse.

8.check clutch interlock switch circuit

1. Check continuity between IPDM E/R harness connector and clutch interlock switch harness connector.



Clutch interlock switch		IPDI	Continuity		
Connector	Terminal	Connector	Terminal	Continuity	
A: E36	2	B: E18	30	Yes	

2. Check continuity between clutch interlock switch harness connector and ground.

 Clutch inte	rlock switch	Ground	Continuity	- M
 Connector	Terminal	Ground	Continuity	
A: E36	2	Ground	No	N

Is the inspection result normal?

YES >> GO TO 9.

NO >> Repair harness or connector.

9.CHECK CLUTCH INTERLOCK SWITCH

Refer to SEC-295, "Component Inspection".

Is the inspection result normal?

YES >> Replace the IPDM E/R. Refer to <u>PCS-43</u>, "Removal and Installation".

NO >> Replace clutch interlock switch.

10.CHECK PNP SWITCH CIRCUIT FOR CONTINUITY

1. Turn ignition switch OFF.

SEC-293

А

В

D

Ε

F

Н

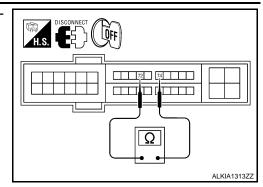
SEC

L

Ρ

< COMPONENT DIAGNOSIS >

2. Check continuity between IPDM E/R harness connector terminals 72 and 74.



[SEDAN]

IPDM E/R			Condition		Continuity
Connector	Terr	ninals	Condition		Continuity
E10	70	74	PNP switch position	P or N	Yes
ΓIU	F10 72 74 PNP switch po	FINE SWICH POSITION	Other	No	

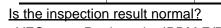
Is the inspection result normal?

YES >> GO TO 11. NO >> GO TO 12.

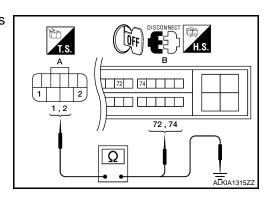
11. CHECK PNP SWITCH CIRCUIT FOR SHORT

Check continuity between IPDM E/R harness connector terminals 72, 74 and ground.

IPDM E/R		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
F10	72	Ground	No	
110	74	Ground	NO	

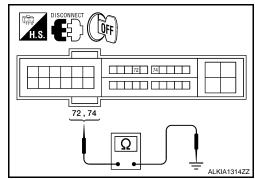


- YES >> Replace the IPDM E/R. Refer to <u>PCS-43, "Removal and</u> <u>Installation"</u>.
- NO >> Repair or replace harness.
- 12. CHECK PNP SWITCH INPUT SIGNAL CIRCUIT
- 1. Disconnect PNP switch harness connector.
- 2. Check continuity between PNP switch and IPDM E/R harness connectors.



Park/neutral	position switch	IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: F25	1	B: F10	74	Yes
A. F25	2	B. FIU	72	Tes les

3. Check continuity between PNP switch harness connector and ground.



SEC-294

< COMPONENT DIAGNOSIS >

[SEDAN]

SEC

L

Μ

Ν

Ο

Ρ

Park/neutral	position switch	Ground	Continuity	А
Connector	Terminal	Ground	Continuity	
A: F25	1	Ground	No	D
	2	Ground		В
Is the inspection result norm	<u>al?</u>			
YES >> Replace PNP sv				С
NO >> Repair harness				
13. CHECK INTERMITTEN				
Refer to GI-42, "Intermittent	Incident".			D
>> INSPECTION E				E
Component Inspectior)		INFOID:000000031855	502
1.CHECK CLUTCH INTER	LOCK SWITCH			F
1. Turn ignition switch OFF				
	ock switch harness connec			
 Check continuity betwee lowing conditions. 	en clutch interlock switch			G
				Н
			Ω	
			ALKIA1316Z	zz J

	interlock vitch	Condition		Condition Continuity		Continuity
Teri	minal					
1	2	Clutch pedal	Not depressed	No		
1			Depressed	Yes		

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace clutch interlock switch.

< COMPONENT DIAGNOSIS >

POWER SUPPLY AND GROUND CIRCUIT BCM

BCM : Diagnosis Procedure

Refer to BCS-36, "Diagnosis Procedure". IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) : Diagnosis Procedure INFOID:000000003185504

Refer to PCS-19, "Diagnosis Procedure".

INFOID:000000003185503

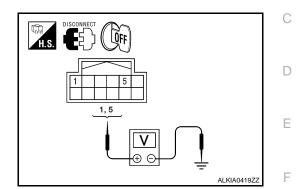
< COMPONENT DIAGNOSIS >

KEY SLOT

Diagnosis Procedure

1. CHECK KEY SLOT POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect key slot connector.
- 3. Check voltage between slot connector and ground.



Key slot		Ground	Voltage (V)	G
Connector	Terminal	Giodila	(Approx.)	
M40	1	Ground	Battory voltago	Ц
10140	5	Giouna	Battery voltage	П

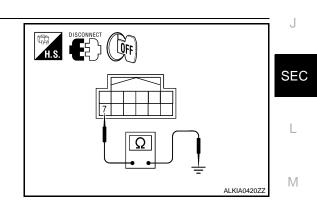
Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace key slot power supply circuit.

2. CHECK KEY SLOT GROUND CIRCUIT

Check continuity between key slot connector and ground.



Keys	Key slot		Continuity	Ν
Connector	Connector Terminal		Continuity	
M40	7	Ground	Yes	0

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace key slot ground circuit.

3.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

INFOID:000000003185505

А

В

Ρ

KEY SLOT ILLUMINATION

< COMPONENT DIAGNOSIS >

KEY SLOT ILLUMINATION

Description

Blinks when Intelligent Key insertion is required.

Component Function Check

1.CHECK FUNCTION

With CONSULT-III

Check key slot illumination ("KEY SLOT ILLUMI") Active Test mode.

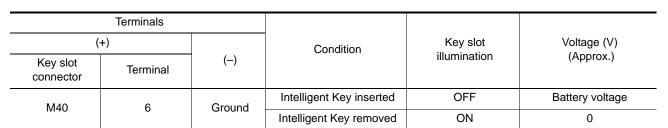
Is the inspection result normal?

YES >> Key slot function is OK. NO >> Refer to <u>SEC-298, "Diagnosis Procedure"</u>.

Diagnosis Procedure

1.CHECK KEY SLOT ILLUMINATION OUTPUT SIGNAL

Check voltage between key slot connector and ground.



Щ. Н.S.

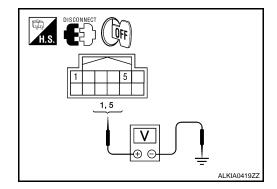
Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 2.

2. CHECK KEY SLOT POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect key slot connector.
- 3. Check voltage between slot connector and ground.



SEC-298

INFOID:000000003185506

INFOID:000000003185507

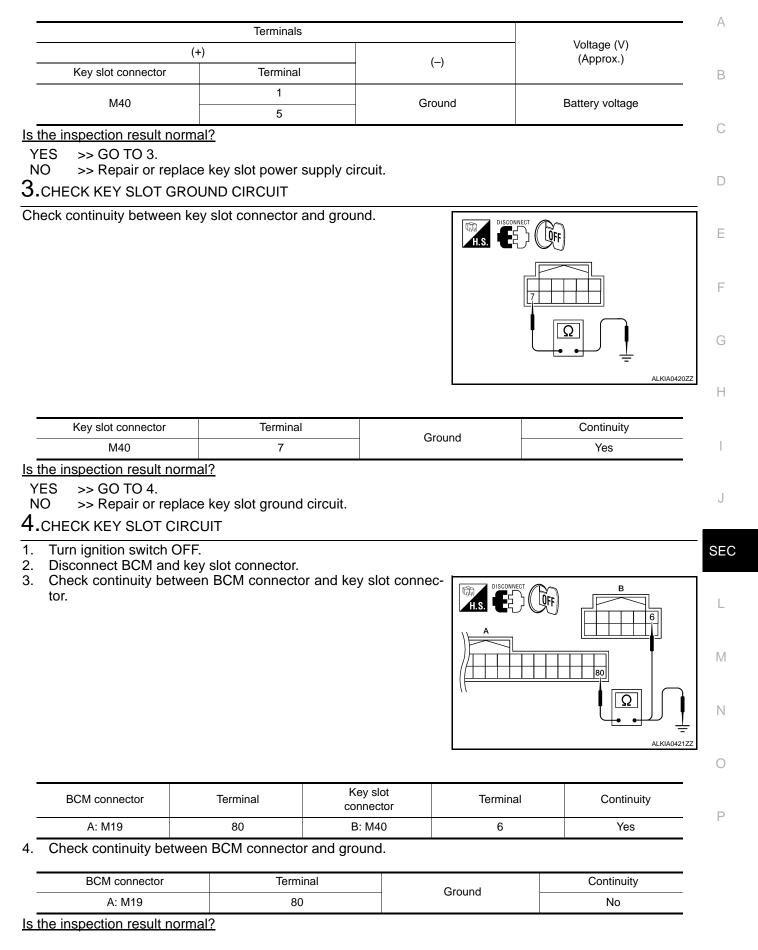
INFOID:000000003185508

ALKIA0418ZZ

KEY SLOT ILLUMINATION

< COMPONENT DIAGNOSIS >

[SEDAN]



KEY SLOT ILLUMINATION

< COMPONENT DIAGNOSIS >

YES >> GO TO 5.

NO >> Repair or replace harness between BCM and key slot.

5.CHECK KEY SLOT

Refer to SEC-298, "Description".

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace key slot. Refer to <u>SEC-357, "Removal and Installation"</u>.

 $6. {\sf CHECK} {\sf INTERMITTENT} {\sf INCIDENT}$

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

< COMPONENT DIAGNOSIS >

KEY CYLINDER SWITCH

Description

For vehicles equipped with LH and RH anti-pinch system, the main power window and door lock/unlock switch detects condition of the door key cylinder switch and transmits to BCM as the LOCK or UNLOCK signal.

For vehicles equipped with LH anti-pinch system only, the front door lock assembly LH (key cylinder switch) transmits the LOCK or UNLOCK signal directly to the BCM.

Component Function Check

INFOID:000000003185510

D

А

В

1.CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

Check KEY CYL UN-SW, KEY CYL UN-SW in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" E with CONSULT-III. Refer to <u>DLK-206. "Work Flow"</u>.

Monitor item	Co	ondition	F
KEY CYL LK-SW	Lock	: ON	
KEY CYLLK-SW	Neutral / Unlock	: OFF	
KEY CYL UN-SW	Unlock	: ON	G
KET CTL UN-SW	Neutral / Lock	: OFF	

Is the inspection result normal?

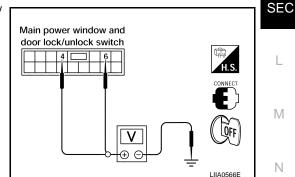
- YES >> Key cylinder switch is OK.
- NO >> With LH and RH anti-pinch, refer to <u>DLK-269</u>, "<u>Diagnosis Procedure (With LH and RH Anti-Pinch)</u>".
- NO >> With LH anti-pinch only, refer to <u>DLK-271, "Diagnosis Procedure (With LH Anti-Pinch Only)"</u>.

Diagnosis Procedure (With LH and RH Anti-Pinch)

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

1. Turn ignition switch ON.

 Check voltage between main power window and door lock/ unlock switch connector and ground.



	Terminals				
(+)				Voltage (V)	
Main power window and door lock/unlock switch connector	Terminal	()	Key position	(Approx.)	
D7	4		Lock	0	
		Ground	Neutral / Unlock	5	
	6	Ground	Unlock	0	
	0		Neutral / Lock	5	

INFOID:000000003185509

INFOID:000000003185511

J

Ρ

Н

< COMPONENT DIAGNOSIS >

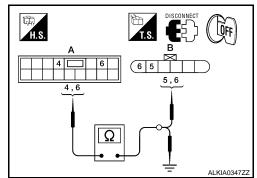
Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to <u>PWC-255</u>, "Removal and <u>Installation</u>". After that, Refer to <u>PWC-179</u>, "ADDITIONAL SERVICE WHEN REPLACING CON-TROL UNIT : Special Repair Requirement".

```
NO >> GO TO 2
```

2. CHECK DOOR KEY CYLINDER SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch connector and front door lock assembly LH (key cylinder switch) connector.
- Check continuity between main power window and door lock/ unlock switch connector and front door lock assembly LH (key cylinder switch) connector.



Main power window and door lock/ unlock switch connector	Terminal	Front door lock assembly LH (key cylinder switch) connector	Terminal	Continuity
A: D7	4	B: D10	6	Yes
	6	5. 510	5	165

4. Check continuity between main power window and door lock/unlock switch connector and ground.

Power window main switch connec- tor	Terminal		Continuity
A: D7	4	Ground	No
A. 07	6		110

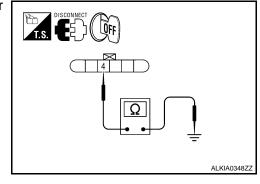
Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

${f 3.}$ CHECK DOOR KEY CYLINDER SWITCH GROUND CIRCUIT

Check continuity between front door lock assembly LH connector and ground.



Front door lock assembly LH connector	Terminal	Ground	Continuity
D10	4	Croand	Yes

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

< COMPONENT DIAGNOSIS >

4.CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch. Refer to SEC-304, "Component Inspection".

Is the inspection result normal?

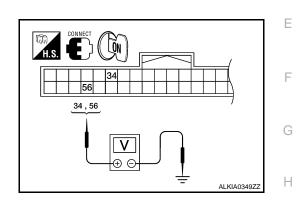
YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace front door lock assembly LH (key cylinder switch). Refer to <u>DLK-403, "FRONT DOOR</u> <u>LOCK : Removal and Installation"</u>. After that, Refer to <u>DLK-209, "ADDITIONAL SERVICE WHEN</u> <u>REPLACING CONTROL UNIT : Special Repair Requirement"</u>.

Diagnosis Procedure (With LH Anti-Pinch Only)

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

- 1. Turn ignition switch ON.
- 2. Check voltage between BCM connector and ground.



	Terminals					
(+)	(+)		Key position	Voltage (V) (Approx.)		
BCM connector	Terminal	()		(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
	56	50		Lock	0	
M18	00	Ground	Neutral / Unlock	5		
IVITO	24	Ground	Unlock	0	S	
	34		Neutral / Lock	5		

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to <u>PWC-255</u>, "<u>Removal and</u> <u>Installation</u>". After that, Refer to <u>PWC-179</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CON-</u> <u>TROL UNIT</u>: <u>Special Repair Requirement</u>".

NO >> GO TO 2

2. CHECK DOOR KEY CYLINDER SWITCH GROUND CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect front door lock assembly LH (key cylinder switch) connector.

3. Check continuity between front door lock assembly LH (key cylinder switch) connector and ground.

Front door lock assembly LH connector	Terminal	Ground	Continuity	С
 D10	4	Ground	Yes	

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3.CHECK DOOR KEY CYLINDER SIGNAL CIRCUIT

1. Disconnect BCM connector M18.

INFOID:000000003185512

В

D

SEC

L

Μ

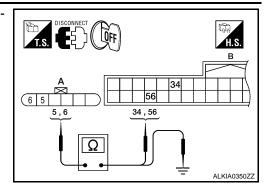
Ν

Ρ

< COMPONENT DIAGNOSIS >

[SEDAN]

2. Check continuity between front door lock assembly LH (key cylinder switch) connector and BCM connector M18.



Front door lock assembly LH connector	Terminal	BCM connector	Terminal	Continuity	
A: D10	5	B: M18	34	Yes	
A. 010	6	D. WIG	56	Tes	

3. Check continuity between front door lock assembly LH (key cylinder switch) connector and ground.

Front door lock assembly LH connector	Terminal		Continuity		
A: D10	5	Ground	No		
A. 010	6		NO		

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

4.CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch.

Refer to SEC-304, "Component Inspection".

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".
- NO >> Replace front door lock assembly LH (key cylinder switch). Refer to <u>DLK-403</u>, "FRONT DOOR <u>LOCK : Removal and Installation</u>". After that, Refer to <u>DLK-209</u>, "ADDITIONAL SERVICE WHEN <u>REPLACING CONTROL UNIT : Special Repair Requirement</u>".

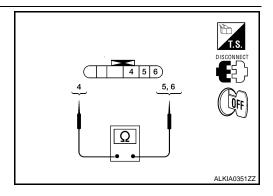
Component Inspection

INFOID:000000003185513

COMPONENT INSPECTION

1. CHECK DOOR KEY CYLINDER SWITCH

Check front door lock assembly LH (key cylinder switch).



< COMPONENT DIAGNOSIS >

[SEDAN]

Ν

Ο

Ρ

Termi	inal		
Front door lock assembly conne		Key position	Continuity
5		Unlock	Yes
5	4	Neutral / Lock	No
6	4	Lock	Yes
0		Neutral / Unlock	No
	witch is OK. door lock assembly	LH (key cylinder switch). Refer to <u>C</u> After that, refer to <u>SEC-305, "Special</u>	
Special Repair Requ	iirement		INFOID:00000000318551
.PERFORM INITIALIZA	TION PROCEDURE		
<u>nent"</u> . <u>s the inspection result no</u> YES >> Inspection en	<u>TIONAL SERVICE W</u> rmal? d.	O GI-42. "Intermittent Incident".	: Special Repair Require

< COMPONENT DIAGNOSIS >

HORN

Description

Horn (high/low) is located inside of front bumper and operates when theft warning system is in alarm phase.

Component Function Check

1.CHECK FUNCTION

1. Select HORN in "ACTIVE TEST" mode with CONSULT-III.

2. Check the horn (high/low) operation.

Test item		Description				
HORN	ON	Horn relay	ON (for 20 ms)			

Is the operation normal?

YES >> INSPECTION END. NO >> Refer to <u>SEC-306, "Diagnosis Procedure"</u>.

Diagnosis Procedure

1.CHECK HORN FUNCTION

Check horn function with horn switch

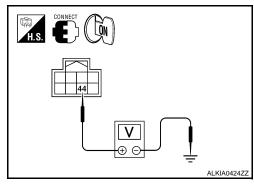
Do the horns sound?

YES >> GO TO 2.

NO >> Refer to <u>HRN-7, "Wiring Diagram - Sedan"</u>.

2. CHECK HORN RELAY POWER SUPPLY

- 1. Turn ignition switch ON.
- 2. Perform "ACTIVE TEST" ("HORN") with CONSULT-III.
- 3. Using an analog voltmeter or an oscilloscope, check voltage between IPDM E/R connector E17 terminal 44 and ground.



IPDM E/R		Ground	d Test item		Voltage (V)		
Connector	Terminal	Ground		rest item	(Approx.)		
E17	44	Ground	HORN	ON	Battery voltage $\rightarrow 0 \rightarrow$ Battery voltage		
		Ground	HORN	Other than above	Battery voltage		

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

3.CHECK HORN RELAY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect IPDM E/R and horn relay connector.

INFOID:000000003185515

INFOID:000000003185516

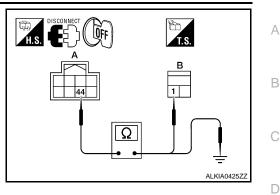
INFOID:000000003185517

HORN

< COMPONENT DIAGNOSIS >

[SEDAN]

3. Check continuity between IPDM E/R harness connector and horn relay harness connector.



IPD	M E/R	Horn	Continuity		
Connector	Terminal	Connector	Terminal	Continuity	
A: E17	44	B: H-1	1	Yes	

4. Check continuity between IPDM E/R harness connector and ground.

IPC	DM E/R	Ground	Continuity	
Connector	Terminal	Ground		
A: E17	44	Ground	No	

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace IPDM E/R.Refer to PCS-43. "Removal and Installation".

NO >> Repair or replace the malfunctioning part.

SEC

L

Μ

Ν

Ο

Ρ

J

Е

F

Н

< COMPONENT DIAGNOSIS >

HEADLAMP

Description

Headlamp lighting when theft warning system is alarm phase.

Component Function Check

1.CHECK HEADLAMP OPERATION

Check if headlamp operate by lighting switch.

Does headlamp come on when turning switch "ON"?

YES >> Headlamp circuit is OK.

NO >> Check headlamp system. Refer to <u>SEC-308, "Diagnosis Procedure"</u>.

Diagnosis Procedure

1.CHECK HEADLAMP OPERATION

Refer to EXL-4, "Work Flow".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace.

2. CHECK INTER MITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

Is the inspection result normal?

>> INSPECTION END.

INFOID:000000003185518

INFOID:000000003185519

INFOID:000000003185520

WARNING LAMP

	•				
< COMPONENT DI	AGNOSIS >			[SEDAN]	
WARNING LAI	MP				Δ
Description				INFOID:000000003185521	A
	ilt in combination meter. em malfunction is report	ed to the driver by the warning	g lamp illumination.		В
Component Fur	ction Check			INFOID:000000003185522	
1.CHECK FUNCTION	DN				С
 Perform "INDICA Check warning la 		" mode with CONSULT-III.			D
	Test item		Description		
INDICATOR	ON	Warning lamp	ON		Е
	OFF		OFF		
Is the inspection resu					F
YES >> INSPEC NO >> Go to <u>SE</u>	TION END. <u>C-309, "Diagnosis Proc</u>	edure".			
Diagnosis Proce	dure			INFOID:000000003185523	G
	IATION METER."				
Check combination n	neter function. Refer to	/WI-4, "Work Flow".			Н
Is the inspection resu					
YES >> GO TO 2		ing parts			
NO >> Repair o	r replace the malfunctior	ing parts.			

 $2. {\sf CHECK} \ {\sf INTERMITTENT} \ {\sf INCIDENT}$

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

SEC

L

Μ

Ν

Ο

Ρ

J

VEHICLE SECURITY INDICATOR

< COMPONENT DIAGNOSIS >

VEHICLE SECURITY INDICATOR

Description

- Vehicle security indicator is built in combination meter.
- NVIS (Infinity Vehicle Immobilizer System-NATS) and vehicle security system conditions are indicated by blink or illumination of vehicle security indicator.

Component Function Check

1.CHECK FUNCTION

- 1. Perform "THEFT IND" in the "ACTIVE TEST" mode with CONSULT-III.
- 2. Check vehicle security indicator operation.

Test it	em	Description				
THEFT IND	ON	Vehicle security indicator	ON			
	OFF		OFF			

Is the inspection result normal?

YES >> INSPECTION END.

NO >> Go to <u>SEC-310</u>, "Diagnosis Procedure".

Diagnosis Procedure

1.CHECK COMBINATION METER

Check combination meter. Refer to MWI-4, "Work Flow".

Is the inspection result is normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

INFOID:000000003185524

INFOID:000000003185525

INFOID:000000003185526

< ECU DIAGNOSIS >	[SEDAN]	
ECU DIAGNOSIS		А
BCM (BODY CONTROL MODULE)		Π
Reference Value	INFOID:000000003185527	В
Refer to <u>BCS-41, "Reference Value"</u> .		
Terminal Layout	INFOID:000000003185528	С
Refer to <u>BCS-45, "Terminal Layout"</u> .		
Physical Values	INFOID:000000003185529	D
Refer to <u>BCS-45, "Physical Values"</u> .		
		Ε

J

F

G

Н

SEC

L

M

Ν

0

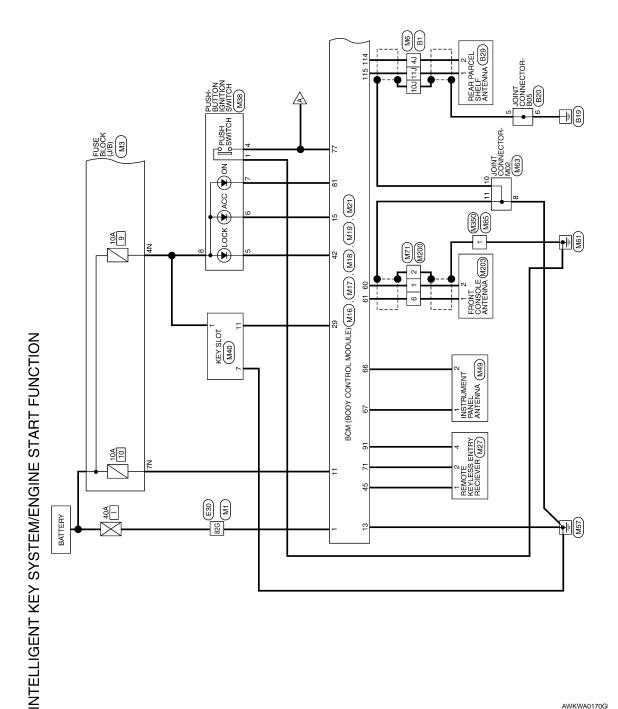
Ρ

< ECU DIAGNOSIS >

[SEDAN]

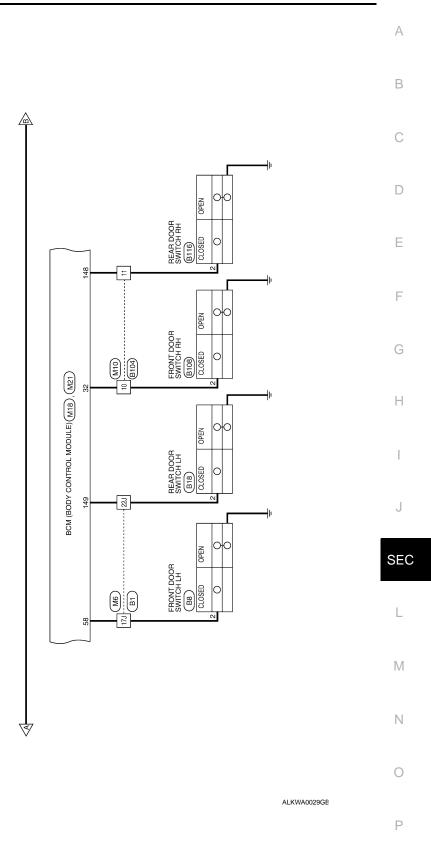
INFOID:000000003185530

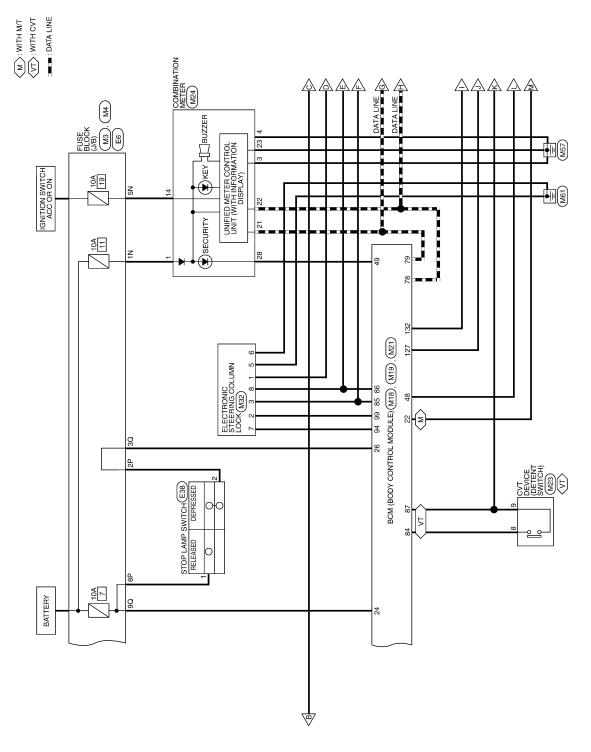
Wiring Diagram - INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION -



AWKWA0170G

< ECU DIAGNOSIS >

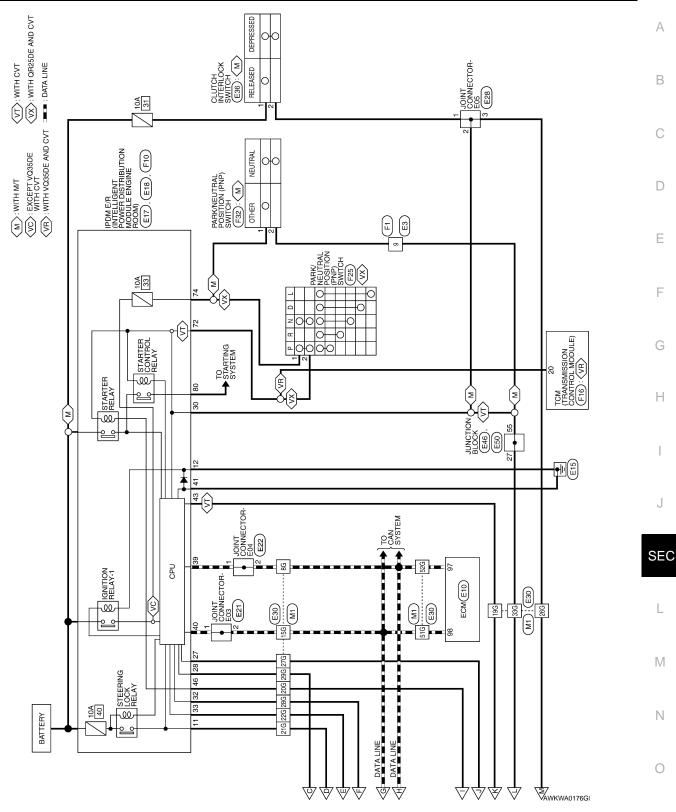




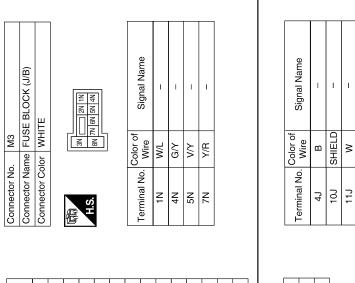
AWKWA0171G

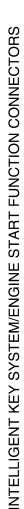
< ECU DIAGNOSIS >

[SEDAN]



Ρ





Signal Name	I	I	I	I	I	I	I	I	1	1	I	I	I	I
Color of Wire	Ь	_	G/B	щ	P/L	G/R	Я∕	BR/W	Г/О	BR	R/G	Ļ	Ь	W/B
Terminal No.	8G	15G	19G	20G	21G	22G	26G	27G	28G	29G	33G	51G	52G	82G

9G 8G 7G 6G 5G 4G 3G 176 166 156 146 138 126 116 106 2G 1G

H.S.

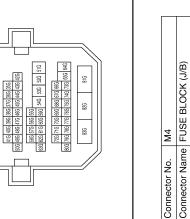
E

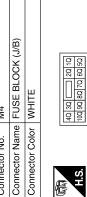
Connector Name WIRE TO WIRE

ž

Connector No.

Connector Color WHITE



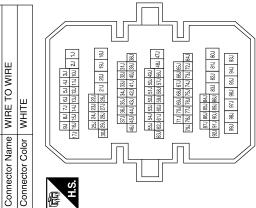


M6

Connector No.

Signal Name	I	-	
Color of Wire	0/L	R/W	
Terminal No.	30	9Q	

AWKIA0422GB



I

SB/B/B/

17J 22J

I



< ECU DIAGNOSIS >

VTROL		6 25 24 23 22 21 20 6 45 44 43 42 41 40		Vame	H_SW	LOW_SW	HIGH_SW	N_SW	JR_SW	K_LED	=2_A/L	N/P	LED	DR_SW
BCM (BODY CONTROL MODULE) GREEN		32 31 30 29 28 27 26 52 51 50 49 48 47 46		r of Signal Name	CLUTCH_SW		STOP				0			DR_DOOR_SW
Connector Name Connector Color	同 H.S.	39 38 37 38 58 34 33 22 31 30 22 92 27 26 22 22 22 20 99 58 57 56 54 53 22 51 50 49 48 47 46 45 44 43 42 41 40		Terminal No. Color of Wire	22 R/Y				_				49 L/O	58 SB
ODY CONTROL .E)	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	Signal Name	BAT_BCM_FUSE	GND1 ACC LED										
Connector Name BCM (BODY CONTROL MODULE) Connector Color WHITE	4 5 6 7 1 11 12 13 14 1	No. Wire	Y/R	B X	-									
Connector Name Connector Color	E H.S.	Terminal No.	1	15	2									
NTROL		Name	DWER_F/L											
BCM (BODY CONTROL MODULE) BLACK		Color of Signal Name	W/B BAT_POWER_											
Connector Name BCM (B MODUL Connector Color BLACK	品. H.S.	Terminal No. Co	-											
Connec														

< ECU DIAGNOSIS >

[SEDAN]

	BCM (BODY CONTROL	JULE)	۲.					3 122 121 120 119 118 117 116 115 114 113 112	151 150 149 148 147 146 145 144 143 142 141 140 139 138 137 136 135 134 133 132		Signal Name	TRIINK ANT 1 R	TRUNK ANT 1 A	IGN USM CONT1	ST_CONT_USM	RR_DOOR_SW	RI DOOR SW
M21	ne BCN	DM	or GRAY					126 125 124 123	46 145 144 14		Color of	a Mie	N	BR/W	н	МM	В/Я
Connector No.	Connector Name		Connector Color		E	H.S.		131 130 129 128 127 1	151 150 149 148 147 1		Terminal No.	114	115	127	132	148	149
		RF1_TUNER_SIGNAL	ENG_START_SW	CAN-L	CAN-H	IGN_ON_LED	AT_DEVICE_OUT	S/L_CONDITION_1	S/L_CONDITION_2	SHIFT_P	RF1_POWER_SUPPLY	S/L POWER SUPPLY 12V					
Color of		L/O RF1_TUNER_SIGNAL	BR ENG_START_SW	P CAN-L	L CAN-H	LG IGN_ON_LED	Y/R AT_DEVICE_OUT	L/O S/L_CONDITION_1	G/R S/L_CONDITION_2	G/B SHIFT_P	L/R RF1_POWER_SUPPLY	G/Y S/L POWER SUPPLY 12V	I /Y S/L K-LINE				

			1	ſ	61 60	81 80]				
					62	82					
					ß	83			ш	<	ш,
	١ <u>م</u>				64	84					5
	Ë				65	85		Ĕ	Z	Z	Z
	ő				99 2	7 86		ž			
	2			Ē	68 67	88 87		nal	õ	S	õ
	BCM (BODY CONTROL MODULE)				9 69	89 8		Signal Name	ROOM_ANT_2_B	ROOM_ANT_2_A	ROOM_ANT_1_B
	ШЩ Ц	X		1K	2	3 06			_	-	-
M19	BCM (BOE MODULE)	BLACK			4	91		<u> </u>			
Σ	Μž	Ш		5	72	92		Color of Wire	B/B	Œ	~
	e	-			73	93		color o Wire	В	W/R	<u>م</u>
ö	an	8			74	94					
ž	Z Z	0			76 75	96 95		β			
cto	scto	g			7 7	97 9		าล	60	61	66
ЯU	JUE 1	L a	H.S.		18	98			9	٥ ا	ø
Connector No.	Connector Name	Connector Color	倍王		62	66		Terminal No.			
	-	<u> </u>		L	_		1		L	-	

		_		_	
Signal Name	ROOM_ANT_2_B	ROOM_ANT_2_A	ROOM_ANT_1_B	ROOM_ANT_1_A	
Color of Wire	B/R	W/R	н	g	
Terminal No. Wire	60	61	66	67	

Signal Name	BAT	GND	GND	ACC	CAN-H	CAN-L	GND	SECURITY
Color of Wire	M/L	В	В	٧/٧	Γ	Р	В	L/0
Terminal No.	-	3	4	14	21	22	23	28

			16 17 18 19 20	36 37 38 39 40
~			16	8
M24 COMBINATION METER			9 10 11 12 13 14 15	35
			14	34
		[₽	ŝ
⊆			12	33
AT			÷	31
Z			10	30
L B	E			29
M24 CON	Ξ		8	28
	Connector Color WHITE		7	26 27 28 29 30 31 32 33 34
e	F		9	26
au o	100			
	lõ.		ŝ	52
<u>8</u>	19		4	24
Connector No. Connector Name	ا ق	(j)	e	21 22 23 24 25
		品.S.H	~	23
U U	ŭ	16 T	-	21

Connector No. M23 Connector Name CVT DEVICE Connector Color WHITE

2 4 5 6 8 10	Signal Name	DETENT_KEY_SW	DETENT_KEY_SW
	Color of Wire	Y/R	G/B
.S.H	Terminal No.	8	6

AWKIA0407G	В

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

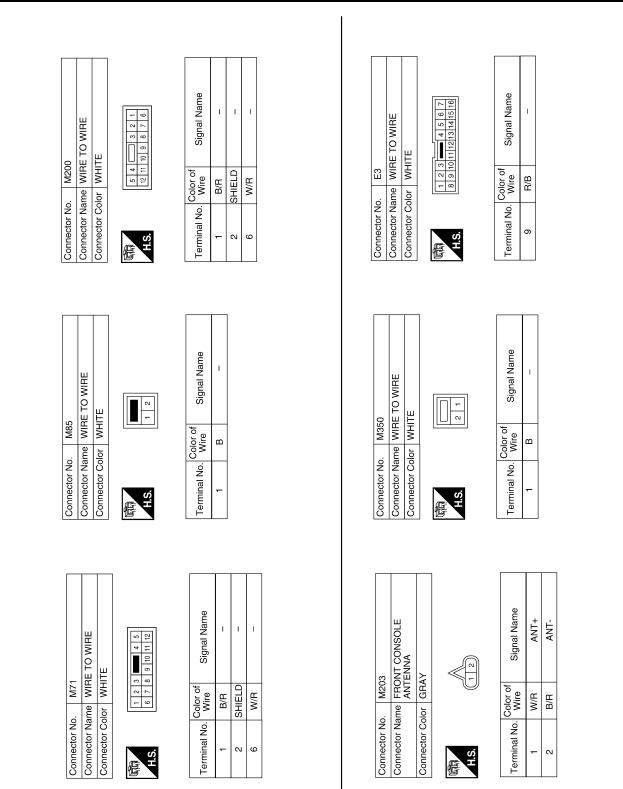
										N								
M38 PUSH-BUTTON IGNITION SWITCH BROWN	4 5 6 7 8 8 7 8	Signal Name	GND	START_SW	ACC	NO	а В			JOINT CONNECTOR-M02	ш			Signal Name	I	I	1	
	4 - 1	Color of Wire	в	HE (rş	101	G∕		lo. M63		olor BLUE			Color of Wire	В	GR	GR	
Connector No. Connector Name Connector Color	围.S.	Terminal No.	-	4 r	ი <u>ლ</u>	2	8		Connector No.	Connector Name	Connector Color		HS	Terminal No.	8	10	11	
												_					-	
M32 ELECTRONIC STEERING COLUMN LOCK WHITE		Signal Name	S/L_12V_MECHANICAL	S/L_COM	S/L_CONDITION_1	GND	GND S/1 10/ CBL (VO)	S/L_CONDITION_2		INSTRUMENT PANEL				Signal Name	ANT+	ANT-		
M32 ELECTRON COLUMN LO WHITE	8 7 6 5 1		S/L_12		S/L_		Ū	S/L_	07W	ISTRUME	GRAY		-				-	
No. M: Name EL Color W		lo. Color of Wire	P/L	Z	2	m	œ ≷	G/R				-		lo. Color of Wire	G	æ	1	
Connector No. Connector Name Connector Color	国 H.S.	Terminal No.	-	2	ε	£	9	8	Connector No	Connector Name	Connector Color	Æ	HIS.	Terminal No.	-	2		
					_				_									
M27 REMOTE KEYLESS ENTRY RECIEVER BLACK	3	Signal Name	GND	SIGNAL	121					_OT			4 5 6 10 11 12	Signal Name	B+	GND	CARD_SW_1	
		Color of Wire	Ъ	9	r L				MAD	Connector Name KEY SLOT	r WHITE		1 2 3 7 8 9	Color of Wire	G/Y	в	>	
Connector No. Connector Name Connector Color	H.S.	Terminal No.	-	~ ~	+				Connector No	sctor Nam	Connector Color			Terminal No.	+	7	=	

< EC

SEC-319

< ECU DIAGNOSIS >

[SEDAN]



ALKIA0138GB



< ECU DIAGNOSIS >

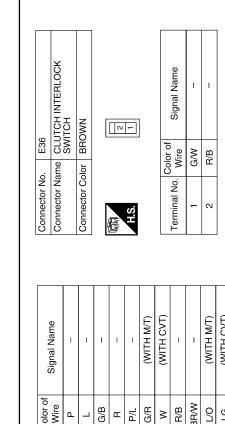
А Connector Name IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) Connector Name JOINT CONNECTOR-E03 START_CONT DETENT_SW Signal Name Signal Name CAN-H S-GND CAN-L T I. В 2 41 40 39 5 45 44 43 Connector Color WHITE Connector Color WHITE E17 С Color of Wire 4 4 Color of Wire E21 G/B ш ш ۰ _ _ _ Connector No. Connector No. Terminal No. Terminal No. D 41 43 39 40 46 N -H.S. H.S. E 佢 Ε SL_CONDITION_2 PUSH_START_SW SL_CONDITION_1 CLUTCH_I/L_SW IGN_SIGNAL F Signal Name Signal Name CAN-L CAN-H P GND 81 85 89 93 97 101 105 109 82 86 90 94 98 102 106 110 83 87 91 95 99 102 107 101 111 83 87 91 95 99 102 107 111 84 88 92 96 100 104 112 112 ESCL Connector Color BLACK ľ ECM E10 Color of Wire Color of Wire BR/W 9 _ R/B G/R ٩ ВΒ ЪΓ ш Connector Name Connector No. Н Terminal No. Terminal No. 97 98 ÷ 12 28 30 33 32 27 H.S. 佢 38 36 J 37 35 15 16 17 18 19 20 21 22 23 24 SEC 2526272829 3031323334 IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) L 7P 6P 5P 4P 3P 2P 1P 16P 15P 14P 13P 12P 1P 3P <td Signal Name FUSE BLOCK (J/B) L I Μ Connector Color WHITE WHITE E18 4 8 Color of Wire E6 R/G 13 Y/R 6 7 Connector Name Connector Name Connector Color ₽ Ν Connector No. Connector No. 10 11 5 Terminal No. 4 ZР 8Р H.S. H.S. ი с E E Ο

ALKIA0139GB

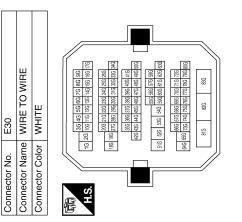
Ρ

[SEDAN]

[SEDAN]



Signal Name	I	1	I	I	I	(WITH M/T)	(WITH CVT)	I	I	(WITH M/T)	(WITH CVT)	Ι	I	Ι	I	
Color of Wire	٩	_	G/B	æ	P/L	G/R	M	R/B	BR/W	Г/О	ГG	BR	R/G	Γ	٩	W/B
Terminal No.	8G	15G	19G	20G	21G	22G	22G	26G	27G	28G	28G	29G	33G	51G	52G	82G



AWKIA0408GB

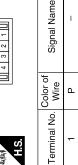
Connector No.	E22
Connector Name	Connector Name JOINT CONNECTOR-E04
Connector Color WHITE	WHITE
中国	

Connector Name JOINT CONNECTOR-E05

E28

Connector No.

Connector Color WHITE



L	Τe		
	Signal Name	I	

I

٩

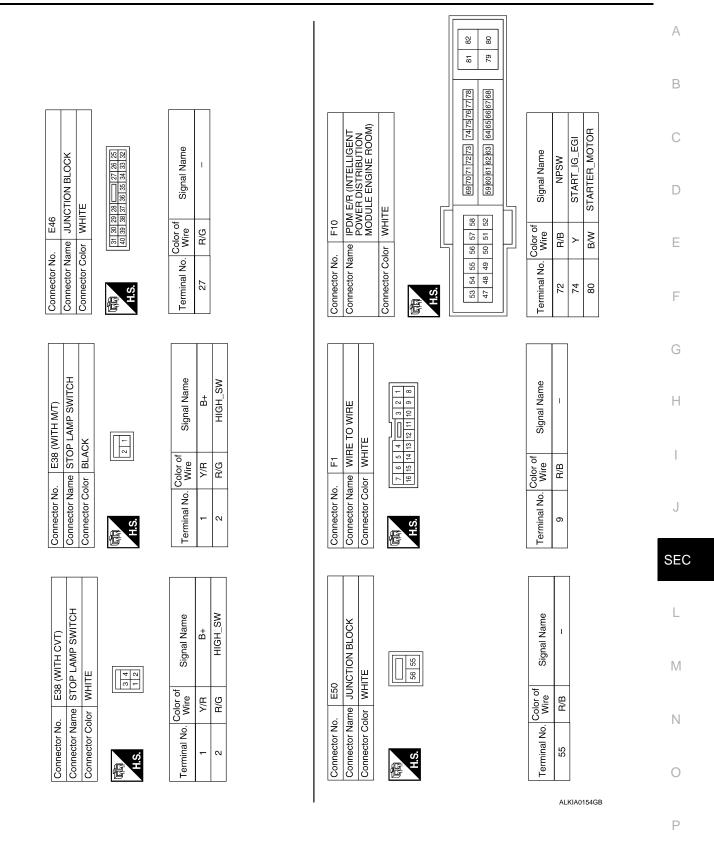
N

321	Signal Nar
	Color of
国 H.S.	Terminal No.

Signal Name	I	I	-
Color of Wire	R/B	R/B	R/B
Terminal No.	٢	2	3

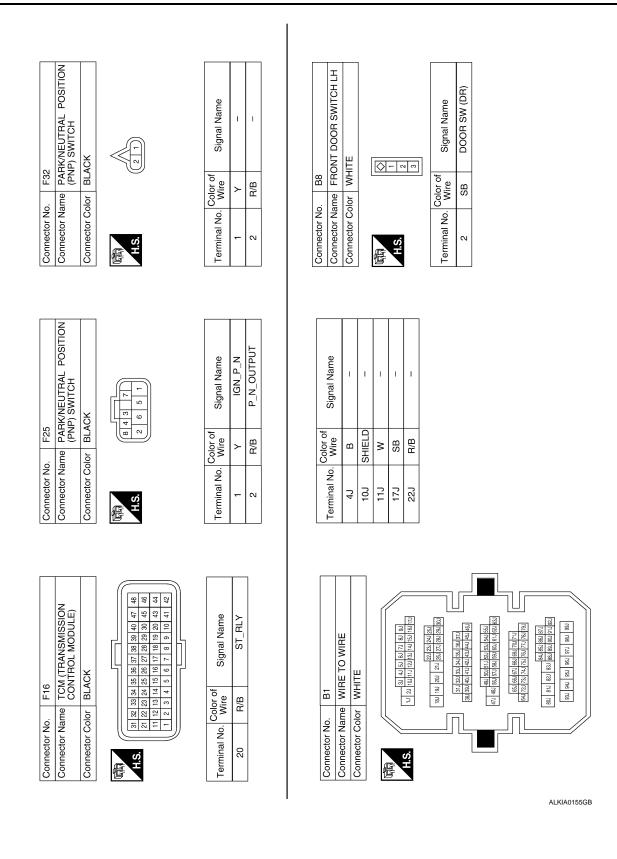
< ECU DIAGNOSIS >

[SEDAN]



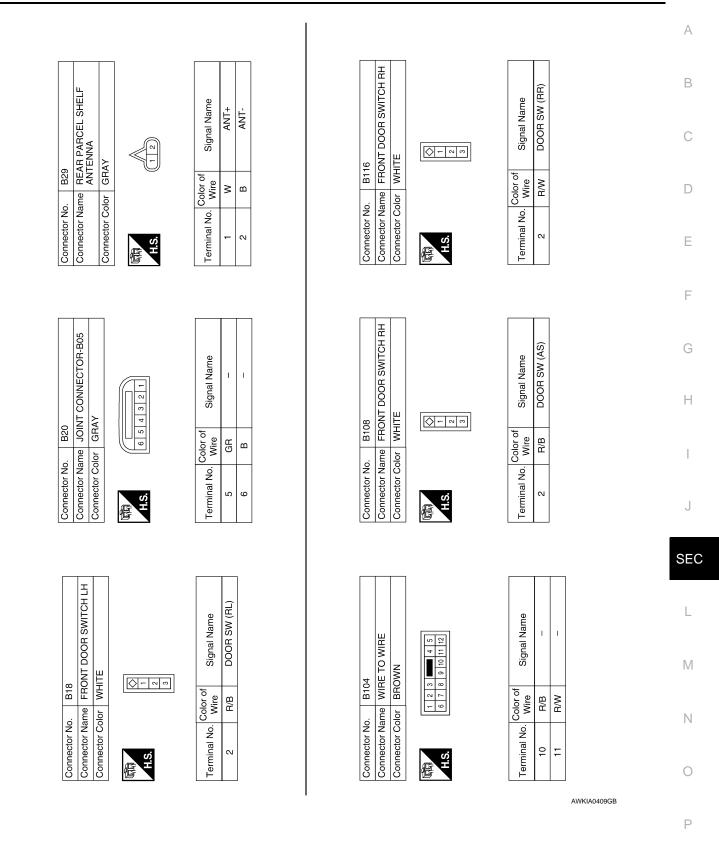
)SIS >





< ECU DIAGNOSIS >

[SEDAN]

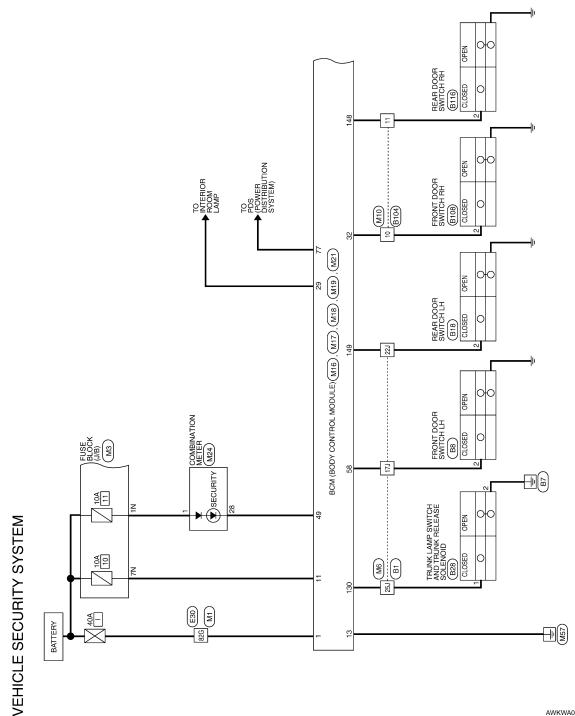


< ECU DIAGNOSIS >

Wiring Diagram - VEHICLE SECURITY SYSTEM -

INFOID:000000003185531

[SEDAN]

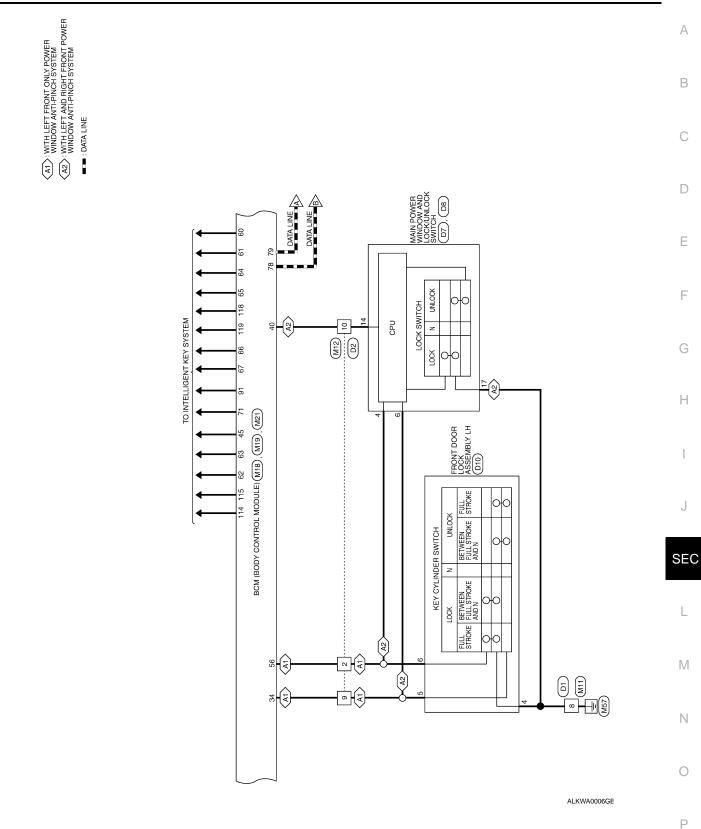


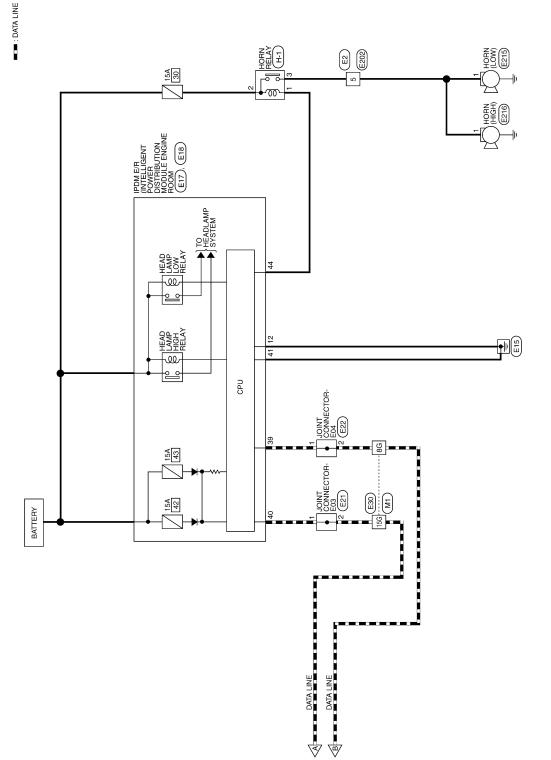
AWKWA0172G



< ECU DIAGNOSIS >

[SEDAN]

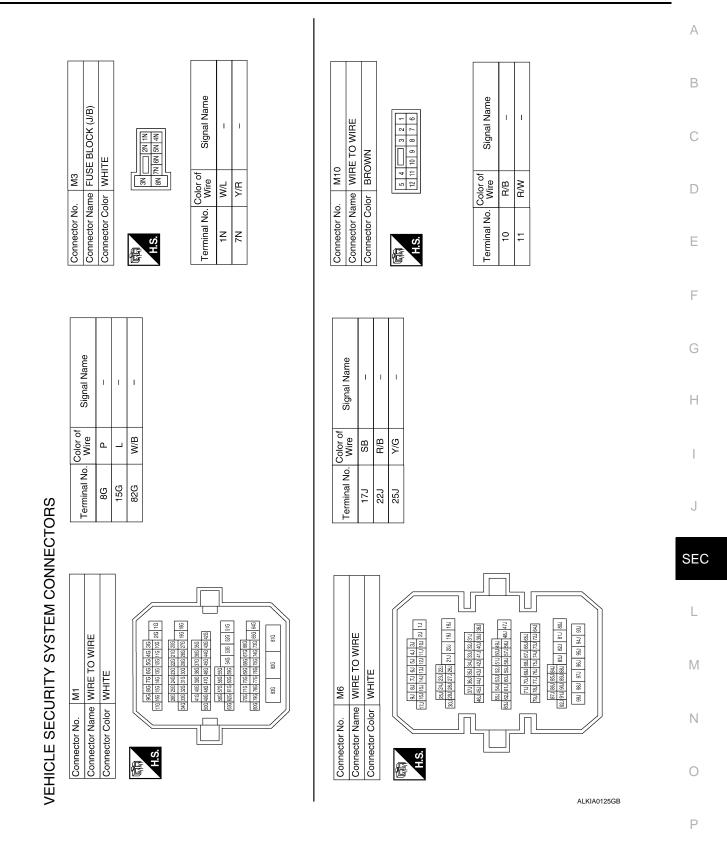




AWKWA0173G

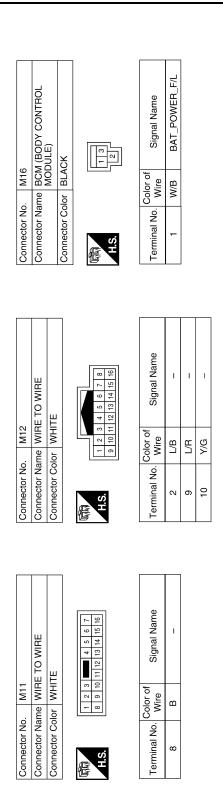
< ECU DIAGNOSIS >

[SEDAN]

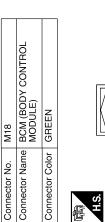


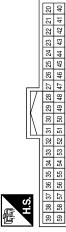
< ECU DIAGNOSIS >

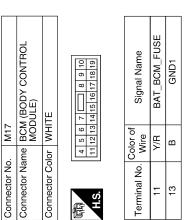
[SEDAN]



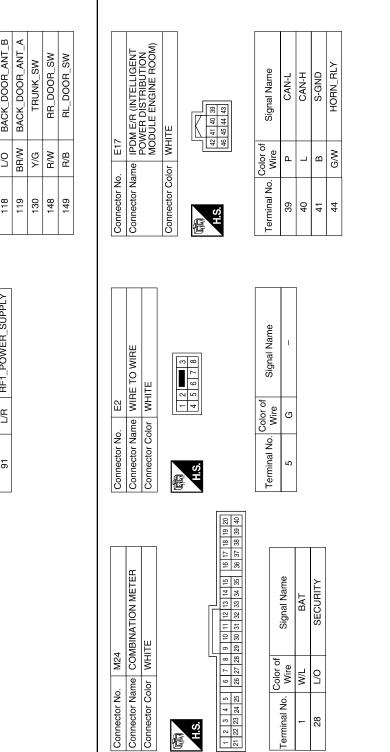
Signal Name	FOB_IN_SW_1	AS_DOOR_SW	DOOR KEY/C UNLOCK_SW	CENTRAL_LOCK_SW	CENTRAL UNLOCK_	PW_K-LINE	GND_RF2_A/L	IMMO_LED	DOOR_KEY/C_LOCK_	DR_DOOR_SW
Color of Wire	≻	R/B	L/R	GR	GR/R	Y/G	Ч	ГQ	L/B	SB
Terminal No.	29	32	34	36	39	40	45	49	56	58





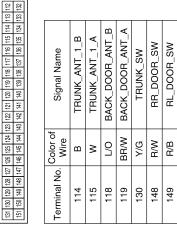


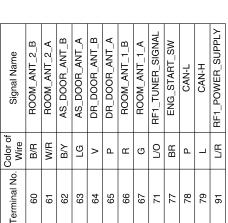
AWKIA0410GB



H.S.

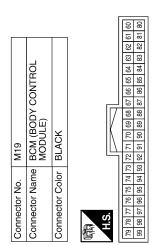
俉





H.S.

佢



< ECU DIAGNOSIS >

Connector Name BCM (BODY CONTROL MODULE)

M21

Connector No.

GRAY

Connector Color

BCM (BODY CONTROL MODULE)

[SEDAN]

А

В

С

D

Ε

F

Н

J

SEC

L

Μ

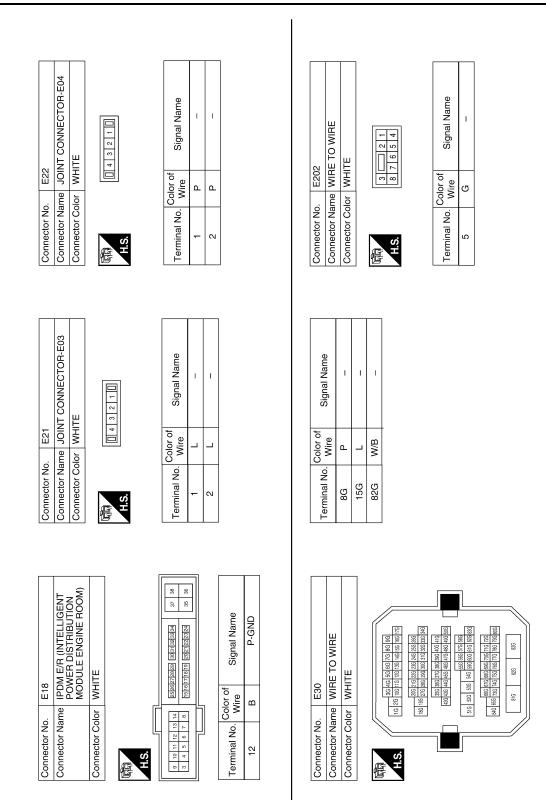
Ν

0

Ρ

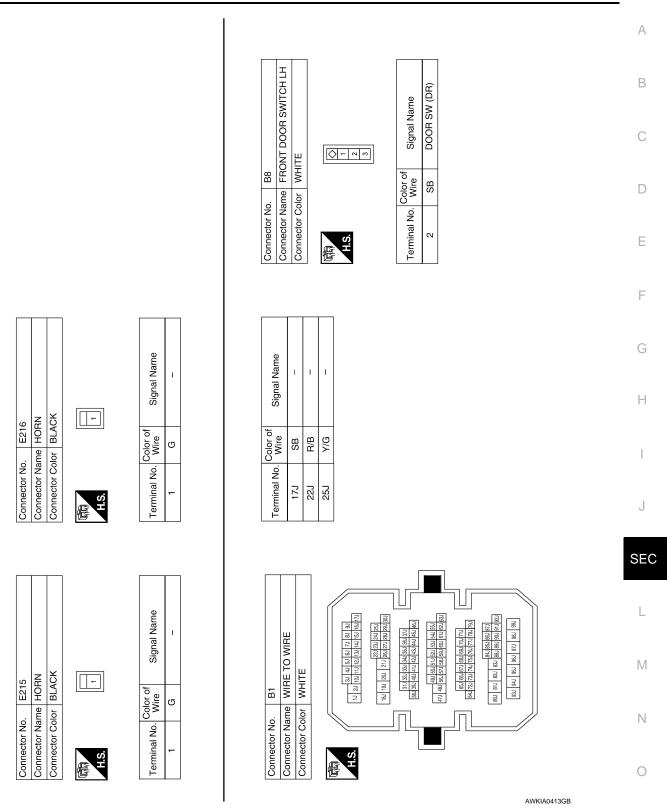
AWKIA0411GB

[SEDAN]



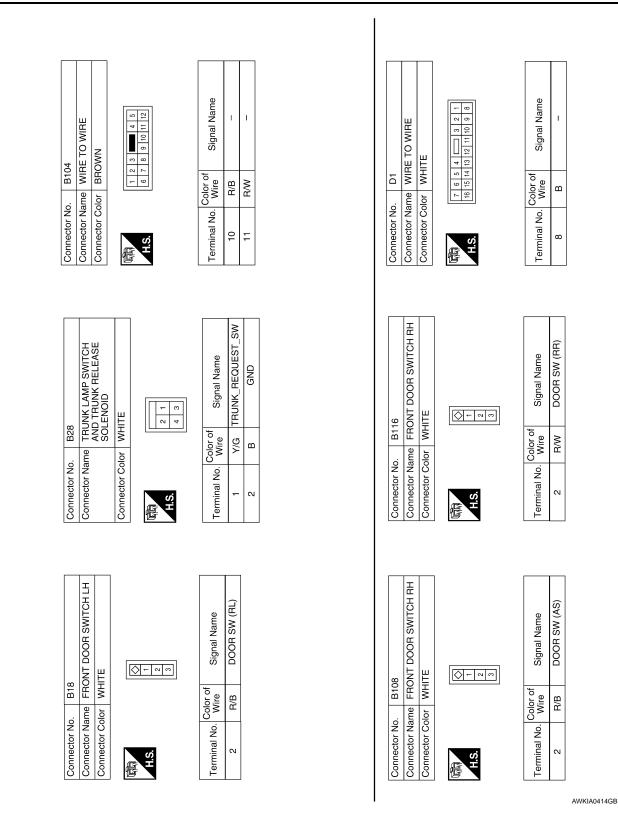
AWKIA0412GB

< ECU DIAGNOSIS >



Ρ

< ECU DIAGNOSIS >



D7 D7 me MAIN POWER WINDOW MAIN POWER WINDOW AND LOCK/UNLOCK SWITCH or WHITE or WHITE or WHITE Onector Color WHITE I 2 3 4 12 3 4 13 16 I 2 3 4 13 16 I 1 2 10 14 16 VIG COM		
Connector No. D2 Connector Name WIE TO WIRE Connector Name WIE TO WIRE Connector Name WIE TO WIRE Connector Name MA Connector Name WIE Connector Name MA Swamp Connector Name Main Swamp Information Wite Information Wite Information Wite Information Wite Information Color of Information Wite Information Wite Information Information Information <thinformation< th=""> Information</thinformation<>	D10 FRONT DOOR LOCK ASSEMBLY LH GRAY	Signal Name GND DOOR KEY/C UNLOCK_SW

< ECU DIAGNOSIS >

[SEDAN]

А

В

С

D

Е

F

G

Н

J

SEC

L

Μ

Ν

0

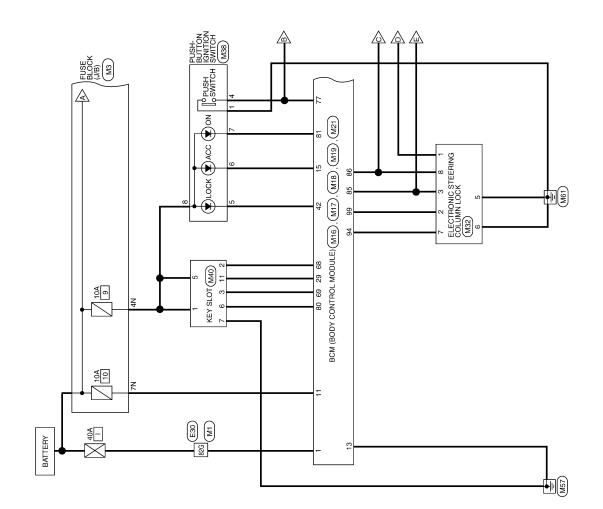
Ρ

SEC-335

< ECU DIAGNOSIS >

Wiring Diagram - NVIS -

[SEDAN]

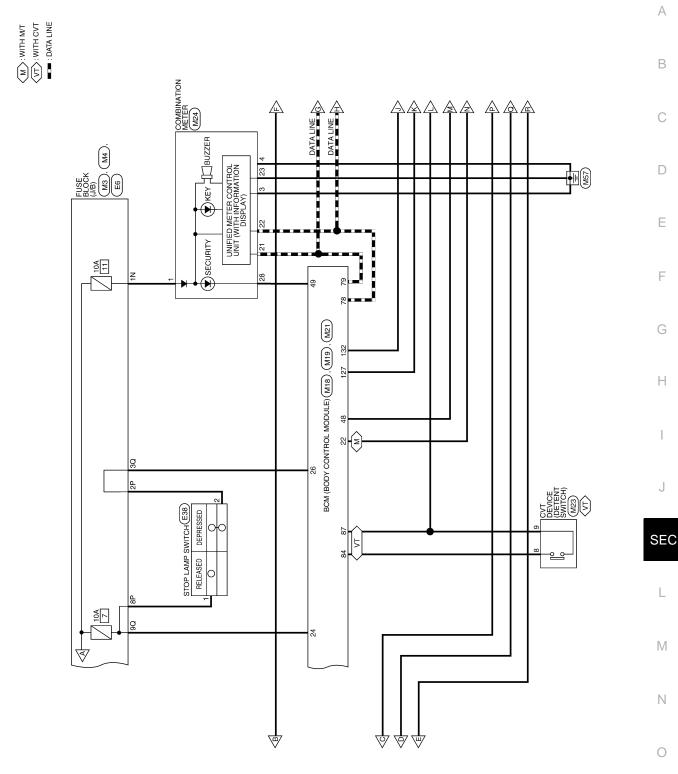


NVIS

AWKWA0174G

< ECU DIAGNOSIS >

[SEDAN]

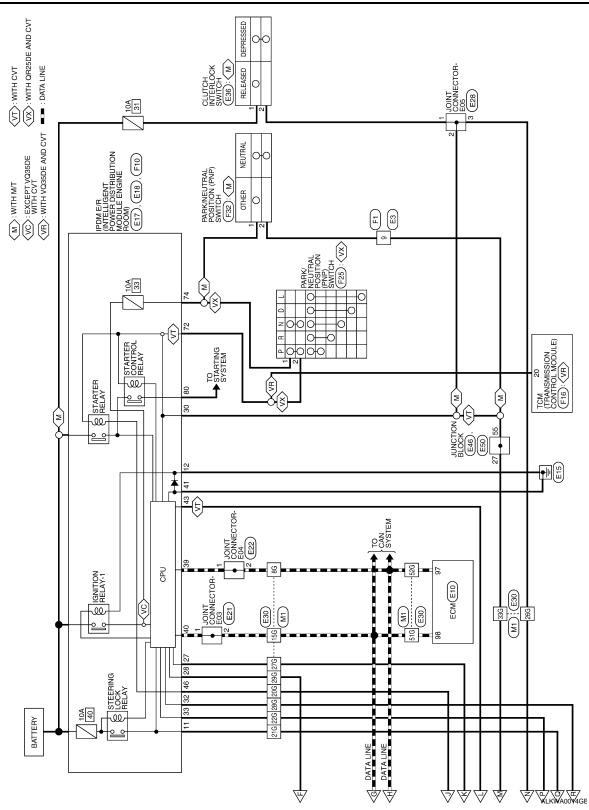


Ρ

AWKWA0175GI

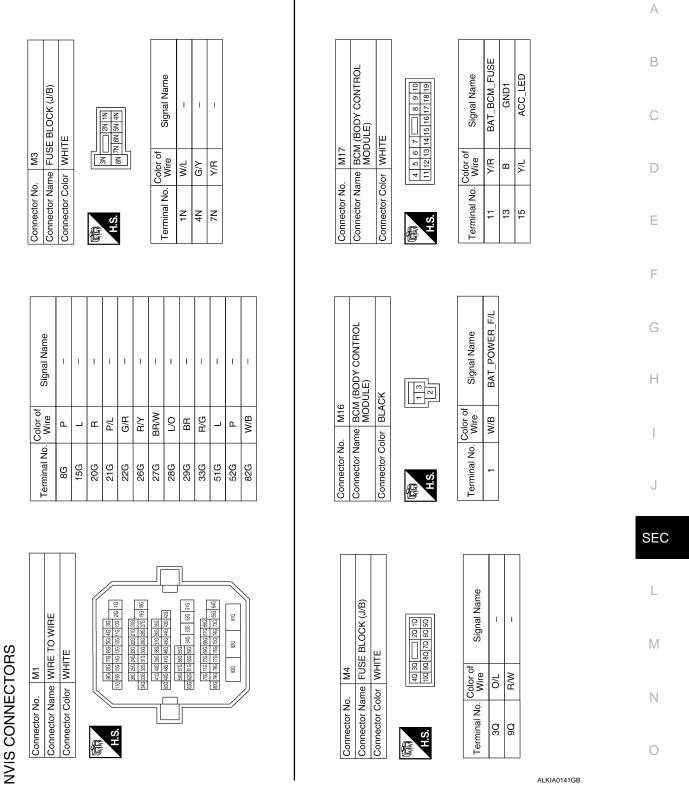
< ECU DIAGNOSIS >

[SEDAN]



< ECU DIAGNOSIS >

[SEDAN]



Ρ

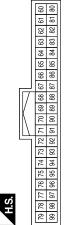
3	42 41			2	≥				
25 24 23	52 51 50 49 48 47 46 45 44 43	Signal Name	CLUTCH_SW	STOP_LAMP_LOW_SW	STOP_LAMP_HIGH_SW	FOB_IN_SW_1	S/L_LOCK_LED	SHIFT_N/P	IMMO_LED
		Color of Wire	Rγ	ВW	0/F	≻	щ	R/G	Г/О
	59 58 57 56 55 54 53	Terminal No.	22	24	26	29	42	48	49

		00 00
Color of Wire	Signal Name	
Rү	CLUTCH_SW	Tern
R/W	STOP_LAMP_LOW_SW	
O/L	STOP_LAMP_HIGH_SW	
≻	FOB_IN_SW_1	
н	S/L_LOCK_LED	
R/G	SHIFT_N/P	

Connector No.	M19
Connector Name	Connector Name BCM (BODY CONTROL MODULE)
Connector Color BLACK	BLACK
E	

Connector Name BCM (BODY CONTROL MODULE)

Connector No. M18



Signal Name	FOB_READER_CLOCK	FOB_READER_DATA
Color of Wire	G/O	0
erminal No.	68	69

Connector No.	M21	Connector No.	M23
Connector Name	Connector Name BCM (BODY CONTROL	Connector Name CVT D	CVT [
	MUDULE)	Connector Color WHITI	WHITI
Connector Color GRAY	GRAY		
		E	1 3
H.S.		H.S.	-

	130 129 128 127 126 125 124 123 122 121 120 119 118 117 116 115 114 113 112	3 132		
	=	134 133		
	ŧ	5		-
	115	135		E,
	116	136		6
	117	148 147 146 145 144 143 142 141 140 139 138 137 136 135	Signal Name	IGN_USM_CONT1
	118	138	Sa Sa	Σ
_	119	139	a	۱ <u>۳</u>
17	120	140	igr	z
V	121	141	l l o	Q
Ν	122	142		
$ \rangle$	123	143	<u>+</u>	
	124	144	Color of Wire	BR/W
	125	145	Color o Wire	Ľ.
	126	146	Ŭ,	ш
	127	147	ġ	
	128	148		
	129	149	ine	127
	130	151 150 149	Terminal No.	1 [·]
	131	151	Te	
	_	-		

CVT DEVICE	WHITE	1 3 - 7 9 2 4 5 6 8 10
Connector Name CVT DEVICE	Connector Color WHITE	同 H.S.

Signal Name	DETENT_KEY_SW	DETENT_KEY_SW	
Color of Wire	Ч/R	G/B	
Terminal No.	8	6	

Signal Name	ENG_START_SW	CAN-L	CAN-H	FOB SLOT ILLUMINATION	IGN_ON_LED	AT_DEVICE_OUT	S/L_CONDITION_1	S/L_CONDITION_2	SHIFT_P	S/L POWER SUPPLY_12V	S/L_K-LINE
Color of Wire	ВВ	٩	_	R/L	Ľ	Y/R	L/0	G/R	G/B	G/Y	ΓΛ
Terminal No.	77	78	62	80	81	84	85	86	87	94	66

Signal Nam	ENG_STAF	CAN-I	CAN-F	FOB SL	IGN_ON	AT_DEVICE	S/L_CONDI ⁻	S/L_CONDI	SHIFT	MOd 1/S	S/L_K-LI
Color of Wire	BR	Ч	-	R/L	ГG	Y/R	L/0	G/R	G/B	G/Y	ΓΛ
Terminal No.	22	78	29	80	81	84	85	86	87	94	66

AWKIA0421GB

ST_CONT_USM

œ

132



< ECU DIAGNOSIS >

ELECTRONIC STEERING COLUMN LOCK

Connector Name Connector Color

Signal Name

Color of Wire

Ferminal No.

Connector Name COMBINATION METER

M24

Connector No.

Connector Color WHITE

GND

മ

ო

BAT

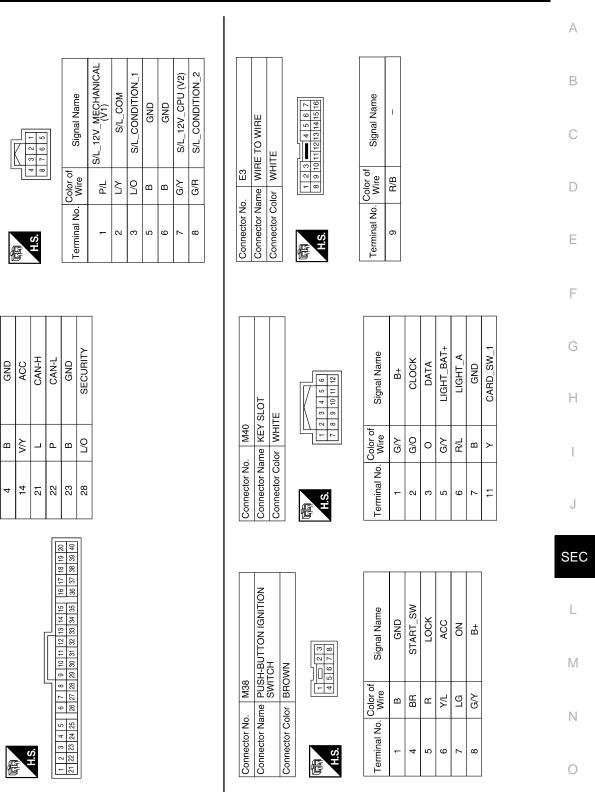
W/L

M32

Connector No.

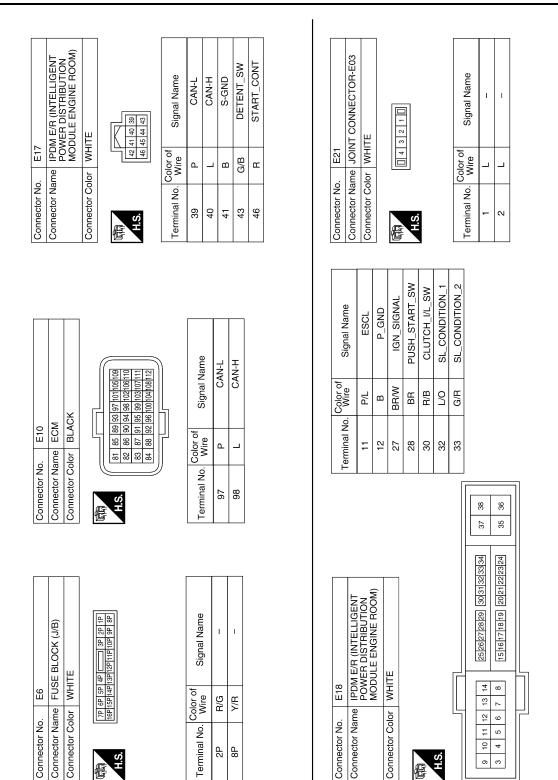
WHITE

[SEDAN]



AWKIA0416GB

Ρ



< ECU DIAGNOSIS >

[SEDAN]

ALKIA0144GB

SEC-342

BCM (BODY CONTROL MODULI	E)

А

В

С

D

Ε

F

G

Н

J

SEC

L

Μ

Ν

Ο

E28	Connector Name JOINT CONNECTOR-E05	BLACK	
Connector No.	Connector Name	Connector Color BLACK	雨 H.S.

Connector Name JOINT CONNECTOR-E04

E22

Connector No.

Connector Color WHITE

4 3 2 1 1	Signal Name
	Color of Wire
E.H.S.H	Terminal No.

Signal Name	I	I
No. Color of Wire	Ч	Ч
No.		

N

-

Signal Name

Color of Wire

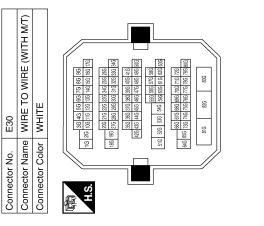
Terminal No. -N ო

L T.

R/B R/B R/B

ī

Signal Name	I	I	I	I	I	I	I	I	I	I	-	I	I
Color of Wire	٩	Г	œ	P/L	G/R	R/B	BR/W	L/0	BR	R/G	Γ	Ч	W/B
Terminal No.	98	15G	20G	21G	22G	26G	27G	28G	29G	33G	51G	52G	82G



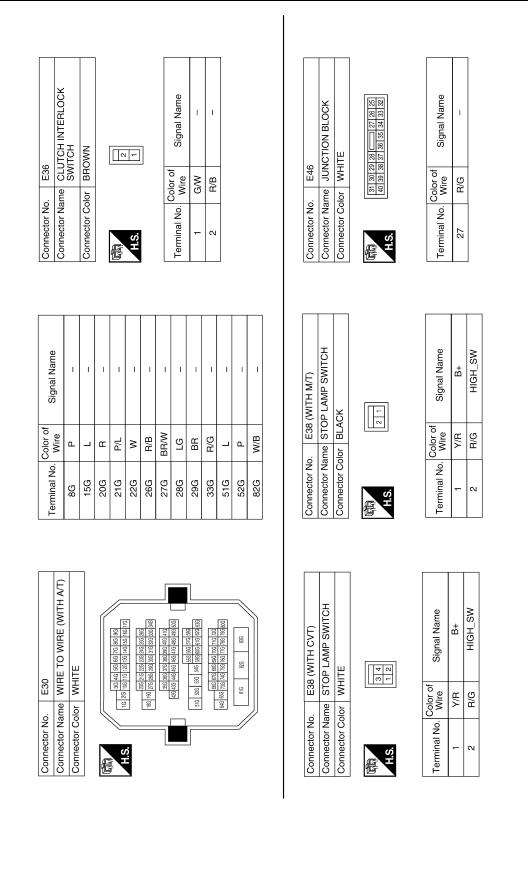
AWKIA0417GB

Ρ

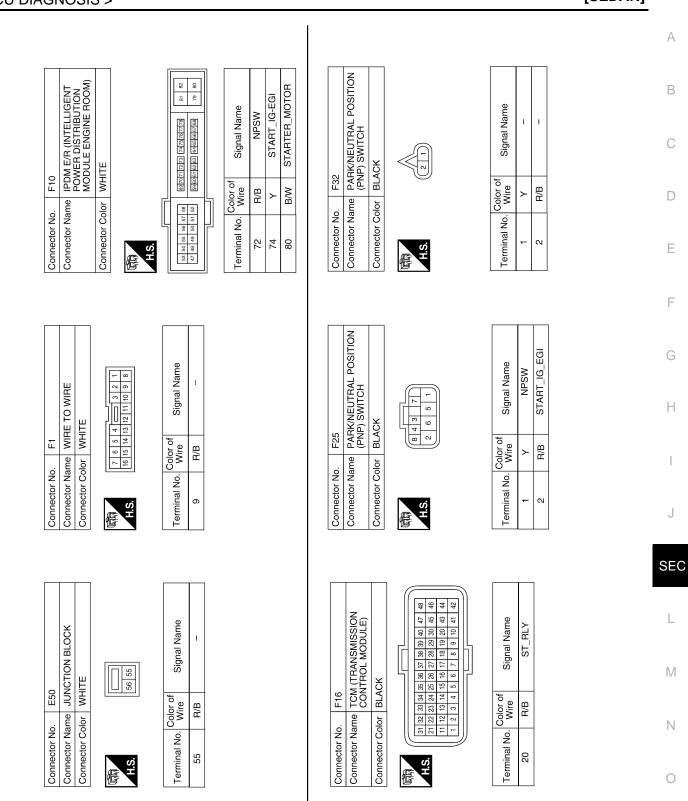
< ECU DIAGNOSIS >

BCM (BODY CONTROL MODULE)

[SEDAN]



AWKIA0418GB



Fail Safe

INFOID:000000003185533

Ρ

AWKIA0420GB

Display contents of CONSULT	Fail-safe	Cancellation
B2013: ID DISCORD BCM-S/L	Inhibit engine cranking	Erase DTC
B2014: CHAIN OF S/L-BCM	Inhibit engine cranking	Erase DTC
B2190: NATS ANTTENA AMP	Inhibit engine cranking	Erase DTC

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[SEDAN]

SEC-345

< ECU DIAGNOSIS >

[SEDAN]

Display contents of CONSULT	Fail-safe	Cancellation
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI-SCANNING	Inhibit engine cranking	Erase DTC
B2197: BCM-ENG-ST ID NG	Inhibit engine cranking	Erase DTC
B2557: VEHICLE SPEED	Inhibit electronic steering column lock	When normal vehicle speed signals have been received from ABS actuator and electric unit (control unit) for 500 ms
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistentStarter control relay signalStarter relay status signal
B2562: LO VOLTAGE	 Inhibit engine cranking Inhibit electronic steering column lock 	100 ms after the power supply voltage increases to more than 8.8 V
B2563: HI VOLTAGE	 Inhibit engine cranking Inhibit electronic steering column lock 	500 ms after the power supply voltage decreases to less than 18 V
B2601: SHIFT POSITION	Inhibit electronic steering column lock	 500 ms after the following signal reception status becomes consistent Selector lever P position switch signal P range signal (CAN)
B2602: SHIFT POSITION	Inhibit electronic steering column lock	 5 seconds after the following BCM recognition conditions are fulfilled Ignition switch is in the ON position Selector lever P position switch signal: Except P position (battery voltage) Vehicle speed: 4 /h or more
B2603: SHIFT POSI STATUS	Inhibit electronic steering column lock	 500 ms after the following BCM recognition conditions are fulfilled Ignition switch is in the ON position Selector lever P position switch signal: Except P position (battery voltage) Selector lever P/N position signal: Except P and N positions (0 V)
B2604: PNP SW	Inhibit electronic steering column lock	 500 ms after any of the following BCM recognition conditions is fulfilled Status 1 Ignition switch is in the ON position Selector lever P/N position signal: P and N position (battery voltage) P range signal or N range signal (CAN): ON Status 2 Ignition switch is in the ON position Selector lever P/N position signal: Except P and N positions (0 V) P range signal and N range signal (CAN): OFF
B2605: PNP SW	Inhibit electronic steering column lock	 500 ms after any of the following BCM recognition conditions is fulfilled Ignition switch is in the ON position Power position: IGN Selector lever P/N position signal: Except P and N positions (0 V) Interlock/PNP switch signal (CAN): OFF Status 2 Ignition switch is in the ON position Selector lever P/N position signal: P or N position (battery voltage) PNP switch signal (CAN): ON
B2606: S/L RELAY	Inhibit engine cranking	 500 ms after the following CAN signal communication status has become consistent Electronic steering column lock relay signal (Request signal) Electronic steering column lock relay signal (Condition signal)

SEC-346

< ECU DIAGNOSIS >

[SEDAN]

INFOID:000000003185534

Display contents of CONSULT	Fail-safe	Cancellation
B2607: S/L RELAY	Inhibit engine cranking	 500 ms after the following CAN signal communication status has become consistent Electronic steering column lock relay signal (Request signal) Electronic steering column lock relay signal (Condition signal)
B2608: STARTER RELAY	Inhibit engine cranking	 500 ms after the following signal communication status becomes consistent Starter motor relay control signal Starter relay status signal (CAN)
B2609: S/L STATUS	 Inhibit engine cranking Inhibit electronic steering column lock 	 When the following electronic steering column lock conditions agree BCM electronic steering column lock control status Electronic steering column lock condition No. 1 signal status Electronic steering column lock condition No. 2 signal status
B260A: IGNITION RELAY	Inhibit engine cranking	 500 ms after the following conditions are fulfilled IGN relay (IPDM E/R) control signal: OFF (Battery voltage) Ignition ON signal (CAN to IPDM E/R): OFF (Request signal) Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions is fulfilledPower position changes to ACCReceives engine status signal (CAN)
B2612: S/L STATUS	 Inhibit engine cranking Inhibit electronic steering column lock 	 When any of the following conditions is fulfilled Electronic steering column lock unit status signal (CAN) is received normally The BCM electronic steering column lock control status matches the electronic steering column lock status recognized by the electronic steering column lock unit status signal (CAN from IPDM E/R)
B2617: STARTER RELAY CIRC	Inhibit engine cranking	1 second after the starter motor relay control inside BCM becomes normal
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM be- comes normal
B2619: BCM	Inhibit engine cranking	1 second after the electronic steering column lock unit power sup- ply output control inside BCM becomes normal
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization
B26E1: ENG STATE NO RECIV	Inhibit engine cranking	When any of the following conditions is fulfilledPower position changes to ACCReceives engine status signal (CAN)

DTC Inspection Priority Chart

If some DTCs are displayed at the same time, perform inspections one by one based on the following priority M chart.

Priority	DTC	
1	 B2562: LOW VOLTAGE B2563: HI VOLTAGE B261E: VEHICLE TYPE 	
2	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)	
3	 B2190: NATS ANTTENA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM 	

< ECU DIAGNOSIS >

[SEDAN]

Priority		DTC	
4	 B2013: ID DISCORD BCM-S/L B2014: CHAIN OF S/L-BCM B2553: IGNITION RELAY B2555: STOP LAMP B2556: PUSH-BTN IGN SW B2557: VEHICLE SPEED B2560: STARTER CONT RELAY B2601: SHIFT POSITION B2602: SHIFT POSI STATUS B2603: SHIFT POSI STATUS B2604: PNP SW B2605: PNP SW B2606: S/L RELAY B2607: S/L RELAY B2608: STARTER RELAY B2609: S/L STATUS B26009: S/L STATUS B26009: S/L STATUS B26009: S/L STATUS B26009: STEERING LOCK UNIT B26009: STEERING LOCK UNIT B26009: STEERING LOCK UNIT B26019: STEERING LOCK UNIT B26019: STEERING LOCK UNIT B26019: STEERING LOCK UNIT B2611: ACC RELAY B2611: ACC RELAY CIRC B2614: ACC RELAY CIRC B2615: BLOWER RELAY CIRC B2616: IGN RELAY CIRC B2616: IGN RELAY CIRC B2617: STARTER RELAY CIRC B2618: BCM B2619: BCM B2614: PUSH-BTN IGN SW B2614: PUSH-BTN IGN SW B2614: ENG STATE NO RECIV C1729: VHCL SPEED SIG ERR U0415: VEHICLE SPEED SIG 		
5	 C1704: LOW PRESSURE FL C1705: LOW PRESSURE FR C1706: LOW PRESSURE RR C1707: LOW PRESSURE RL C1708: [NO DATA] FL C1709: [NO DATA] FR C1710: [NO DATA] RR C1711: [NO DATA] RR C1712: [CHECKSUM ERR] FL C1713: [CHECKSUM ERR] FR C1714: [CHECKSUM ERR] RR C1715: [CHECKSUM ERR] RR C1716: [PRESSDATA ERR] FL C1717: [PRESSDATA ERR] FR C1718: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RR C1720: [CODE ERR] FL C1721: [CODE ERR] FR C1722: [CODE ERR] FR C1723: [CODE ERR] RR C1724: [BATT VOLT LOW] FL C1725: [BATT VOLT LOW] RR C1727: [BATT VOLT LOW] RL C1727: [BATT VOLT LOW] RL C1724: [CONTROL UNIT 		
6	B2621: INSIDE ANTENNA B2622: INSIDE ANTENNA B2623: INSIDE ANTENNA		

< ECU DIAGNOSIS >

DTC Index

[SEDAN]

А

INFOID:000000003185535

NOTE:

Details of time display

- CRNT: Displays when there is a malfunction now or after returning to the normal condition until turning ignition switch OFF → ON again.
- 1 39: Displayed if any previous malfunction is present when current condition is normal. It increases like 1
 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The counter
 remains at 39 even if the number of cycles exceeds it. It is counted from 1 again when turning ignition switch
 OFF → ON after returning to the normal condition if the malfunction is detected again.

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	_	_	_	
U1000: CAN COMM CIRCUIT		—		<u>SEC-207</u>
U1010: CONTROL UNIT (CAN)	_	—	—	<u>SEC-208</u>
U0415: VEHICLE SPEED SIG	_	—		BCS-33
B2013: ID DISCORD BCM-S/L	×	—	—	<u>SEC-209</u>
B2014: CHAIN OF S/L-BCM	×	—	—	<u>SEC-210</u>
B2190: NATS ANTTENA AMP	×	—	_	<u>SEC-214</u>
B2191: DIFFERENCE OF KEY	×	—		<u>SEC-218</u>
B2192: ID DISCORD BCM-ECM	×	—		<u>SEC-219</u>
B2193: CHAIN OF BCM-ECM	×	—		<u>SEC-220</u>
B2553: IGNITION RELAY	—	—	—	PCS-56
B2555: STOP LAMP	—	—		<u>SEC-221</u>
B2556: PUSH-BTN IGN SW	—	×		<u>SEC-224</u>
B2557: VEHICLE SPEED	×	×	—	<u>SEC-226</u>
B2560: STARTER CONT RELAY	×	×		<u>SEC-227</u>
B2562: LOW VOLTAGE	—	—		BCS-34
B2563: HI VOLTAGE	×	×		BCS-35
B2601: SHIFT POSITION	×	×		<u>SEC-228</u>
B2602: SHIFT POSITION	×	×		<u>SEC-232</u>
B2603: SHIFT POSI STATUS	×	×		<u>SEC-235</u>
B2604: PNP SW	×	×	—	<u>SEC-239</u>
B2605: PNP SW	×	×		<u>SEC-241</u>
B2606: S/L RELAY	×	×	—	<u>SEC-243</u>
B2607: S/L RELAY	×	×		<u>SEC-244</u>
B2608: STARTER RELAY	×	×	—	<u>SEC-246</u>
B2609: S/L STATUS	×	×	—	<u>SEC-248</u>
B260A: IGNITION RELAY	×	×	—	PCS-58
B260B: STEERING LOCK UNIT	—	×	—	<u>SEC-253</u>
B260C: STEERING LOCK UNIT	—	×	—	<u>SEC-254</u>
B260D: STEERING LOCK UNIT	—	×	—	<u>SEC-255</u>
B260F: ENG STATE SIG LOST	×	×	_	<u>SEC-256</u>
B2611: ACC RELAY	—	—		PCS-59
B2612: S/L STATUS	×	×	_	SEC-258

< ECU DIAGNOSIS >

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2614: ACC RELAY CIRC	_	×		PCS-61
B2615: BLOWER RELAY CIRC	—	×	_	PCS-64
B2616: IGN RELAY CIRC	_	×	_	PCS-67
B2617: STARTER RELAY CIRC	×	×	_	<u>SEC-263</u>
B2618: BCM	×	×	_	PCS-70
B2619: BCM	×	×	—	<u>SEC-265</u>
B261A: PUSH-BTN IGN SW	—	×	_	<u>SEC-266</u>
B261E: VEHICLE TYPE	×	× (Turn ON for 15 seconds)	_	<u>SEC-269</u>
B2621: INSIDE ANTENNA	—	—	—	DLK-242
B2622: INSIDE ANTENNA	—	—	_	<u>DLK-245</u>
B2623: INSIDE ANTENNA	_	—	_	<u>DLK-248</u>
B26E1: ENG STATE NO RES	×	×	—	<u>SEC-257</u>
C1704: LOW PRESSURE FL	-	—	×	<u>WT-8</u>
C1705: LOW PRESSURE FR	—	—	×	<u>WT-8</u>
C1706: LOW PRESSURE RR	-	—	×	<u>WT-8</u>
C1707: LOW PRESSURE RL	-	—	×	<u>WT-8</u>
C1708: [NO DATA] FL	—	—	×	<u>WT-13</u>
C1709: [NO DATA] FR	-	—	×	<u>WT-13</u>
C1710: [NO DATA] RR	_	_	×	<u>WT-13</u>
C1711: [NO DATA] RL	_	_	×	<u>WT-13</u>
C1712: [CHECKSUM ERR] FL	—	—	×	<u>WT-14</u>
C1713: [CHECKSUM ERR] FR	_	_	×	<u>WT-14</u>
C1714: [CHECKSUM ERR] RR	_	_	×	<u>WT-14</u>
C1715: [CHECKSUM ERR] RL	-	—	×	<u>WT-14</u>
C1716: [PRESSDATA ERR] FL	-	—	×	<u>WT-15</u>
C1717: [PRESSDATA ERR] FR	_	_	×	<u>WT-15</u>
C1718: [PRESSDATA ERR] RR	_	_	×	<u>WT-15</u>
C1719: [PRESSDATA ERR] RL	-	—	×	<u>WT-15</u>
C1720: [CODE ERR] FL	-	—	×	<u>WT-14</u>
C1721: [CODE ERR] FR	_	_	×	<u>WT-14</u>
C1722: [CODE ERR] RR	_	_	×	<u>WT-14</u>
C1723: [CODE ERR] RL	—	—	×	<u>WT-14</u>
C1724: [BATT VOLT LOW] FL	-	—	×	<u>WT-14</u>
C1725: [BATT VOLT LOW] FR	-	—	×	<u>WT-14</u>
C1726: [BATT VOLT LOW] RR	-	—	×	<u>WT-14</u>
C1727: [BATT VOLT LOW] RL	-	—	×	<u>WT-14</u>
C1729: VHCL SPEED SIG ERR	-	—	×	<u>WT-16</u>

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) [SEDAN] < ECU DIAGNOSIS > IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE А ROOM) **Reference Value** INFOID:000000003185536 В Refer to PCS-79, "Reference Value". **TERMINAL LAYOUT** С Refer to PCS-79, "Reference Value". PHYSICAL VALUES Refer to PCS-79, "Reference Value". D Fail Safe INFOID:000000003185537 Refer to PCS-91, "Fail Safe". Ε DTC Index INFOID:000000003185538 Refer to PCS-91, "DTC Index". F

Н

J

SEC

L

Μ

Ν

Ο

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION SYMPTOMS < SYMPTOM DIAGNOSIS > [SEDAN]

SYMPTOM DIAGNOSIS

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION SYMPTOMS

Symptom Table

INFOID:000000003185539

Engine can not be started with all Intelligent Keys. **CAUTION:**

- Follow Trouble Diagnosis Flowchart referring to "<u>SEC-183, "Work Flow"</u>". Determine malfunctioning condition before performing this diagnosis.
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis.
- Check systems shown in the "Diagnosis/service procedure" column in this order.

CONDITIONS OF VEHICLE (OPERATING CONDITIONS)

- Engine start function is ON when setting on CONSULT-III.
- Use Intelligent Key with registered Intelligent Key ID.
- One or more of Intelligent Keys with registered Intelligent Key ID is in the passenger compartment.

Diagnosis/service procedure		Reference page
1. Check power supply and ground circuit	BCM	<u>BCS-36</u>
	IPDM E/R	PCS-19
2. Check push button ignition switch		<u>SEC-266</u>
3. Check Intermittent Incident		<u>GI-42</u>

VEHICLE SECURITY SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

VEHICLE SECURITY SYSTEM SYMPTOMS

Symptom Table

INFOID:000000003185540

[SEDAN]

Procedure Symptom		dure	– Diagnostic procedure	Pofor to page
		tom	Diagnostic procedure	Refer to page
Vehicle security system cannot be set to		Door switch	Check door switch	<u>DLK-252</u>
	Vehicle security sys-	Trunk	Check trunk room lamp switch	DLK-283
	tem cannot be set by	Door outside key	Check key cylinder switch	DLK-269
		Intelligent Key	Check Intelligent Key.	DLK-315
		_	Check Intermittent Incident	<u>GI-42</u>
	Security indicator does not turn ON.		Check vehicle security indicator	<u>SEC-310</u>
			Check Intermittent Incident	<u>GI-42</u>
	* Vehicle security		Check door switch	DLK-252
2	system does not sound alarm when ····	Any door is opened.	Check Intermittent Incident	<u>GI-42</u>
	Vehicle security alarm does not acti- vate.	•	Check horn	DLK-320
3			Check Intermittent Incident	<u>GI-42</u>
3		Head lamp alarm	Check head lamp alarm	<u>SEC-308</u>
		Head lamp alarm	Check Intermittent Incident	<u>GI-42</u>
	Vehicle security sys- tem cannot be can- celed by	Door outside key	Check key cylinder switch	SEC-301
			Check Intermittent Incident	<u>GI-42</u>
4		ed by	Check Intelligent Key	DLK-315
		Intelligent Key	Check Intermittent Incident	<u>GI-42</u>

*: Check the system is in the armed phase.

J

SEC

L

Μ

Ν

Ο

Ρ

А

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS SYMPTOMS

< SYMPTOM DIAGNOSIS >

[SEDAN]

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS SYMPTOMS

Symptom Table

INFOID:000000003185541

Security indicator does not turn ON or flash. CAUTION:

- Follow Trouble Diagnosis Flowchart referring to "<u>SEC-183, "Work Flow"</u>". Determine malfunctioning condition before performing this diagnosis.
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis.
- Check systems shown in the "Action" column in this order.

CONDITIONS OF VEHICLE (OPERATING CONDITIONS)

- Intelligent Key is not inserted into key slot.
- Engine switch is not depressed.

Action	Reference page
1. Check vehicle security indicator	<u>SEC-310</u>
2. Check Intermittent Incident	<u>GI-42</u>

ON-VEHICLE MAINTENANCE PRE-INSPECTION FOR DIAGNOSTIC

Basic Inspection

А

[SEDAN]

Basic Inspection	INFOID:000000003185542	В
The engine start function, door lock function, power distribution system and NATS-IVIS/NMS in Key system are closely related to each other regarding control. Narrow down the functional a by performing basic inspection to identify which function is malfunctioning. The vehicle secur	rea in question	С

by performing basic inspection to identify which function is malfunctioning. The vehicle security function can operate only when the door lock and power distribution system are operating normally. Therefore, it is easy to identify any factor unique to the vehicle security system by performing the vehicle security operation check	С
after basic inspection.	D
1. CHECK DOOR LOCK OPERATION	
 Check the door lock for normal operation with the Intelligent Key controller and door request switch. Successful door lock operation with the Intelligent Key and request SW indicates that the remote keyless entry receiver is functioning normally. Identify the malfunctioning point by referring to the DLK section if the door cannot be unlocked. 	E
Can the door be locked with the Intelligent Key and door request switch?	F
YES >> GO TO 2. NO >> Refer to <u>DLK-368, "INTELLIGENT KEY : Symptom Table"</u> .	0
2. CHECK ENGINE STARTING	G
1. Checks that the engine starts when operating the Intelligent Key inserted into the key slot.	
Does the engine start?	Н
YES >> GO TO 3. NO >> Refer to <u>SEC-352, "Symptom Table"</u> .	
3. CHECK STEERING LOCKING	
	I
 Does the steering lock when operating door switch after switching the power supply from ON position (or ACC position) to LOCK position? If door switch is malfunctioning, BCM cannot lock the steering. If BCM does not detect DTC, steering lock unit is normal. 	J
Does steering lock?	
YES >> GO TO 4. NO >> Refer to <u>DLK-252, "Component Function Check"</u> .	SE
4.CHECK POWER SUPPLY INDICATOR SWITCHING	
1. Press push-button ignition switch and position indicator will switch from LOCK, ACC to ON gradually when steering is locked. Checks that the position indicator is illuminated at different positions of the circuit.	L
Is each position indicator illuminating?	M
YES >> GO TO 5. NO >> Refer to <u>SEC-266, "Description"</u> .	
5. CHECK VEHICLE SECURITY SYSTEM	
	Ν
 Check the vehicle security system for normal operation. The vehicle security function can operate only when the door lock and power distribution functions are operating normally. Therefore, it is easy to identify any factor unique to the vehicle security by performing the vehicle security operation check after this basic inspection. 	0

>> Go to SEC-355, "Vehicle Security Operation Check".

Vehicle Security Operation Check

1.INSPECTION START

Turn ignition switch "OFF" and pull out Intelligent Key from key slot. NOTE:

INFOID:000000003185543

Ρ

PRE-INSPECTION FOR DIAGNOSTIC

< ON-VEHICLE MAINTENANCE >

Before starting operation check, open front windows.

>> GO TO 2.

2. CHECK SECURITY INDICATOR LAMP

- 1. Lock doors using Intelligent Key or mechanical key.
- 2. Check that security indicator lamp illuminates for 30 seconds.

Security indicator lamp should illuminate.

OK >> GO TO 3.

NG >> Perform diagnosis and repair. Refer to <u>SEC-310, "Component Function Check"</u>.

3.CHECK ALARM FUNCTION

- 1. After 30 seconds, security indicator lamp will start to blink.
- 2. Open any door or hood before unlocking with Intelligent Key or mechanical key, or open trunk lid without Intelligent Key or mechanical key.

Do alarm function properly.

- OK >> GO TO 4.
- NG >> Check the following.
 - The vehicle security system does not phase in alarm mode. Refer to <u>SEC-353, "Symptom</u> <u>Table"</u>.
 - Alarm (horn, headlamp and hazard lamp) do not operate. Refer to SEC-353, "Symptom Table".

4.CHECK ALARM CANCEL OPERATION

Unlock any door or open trunk lid using Intelligent Key or mechanical key. Alarm (horn, headlamp and hazard lamp) should stop.

- OK >> INSPECTION END.
- NG >> Check door lock function. Refer to <u>DLK-217, "INTELLIGENT KEY : System Description"</u>.

KEY SLOT

< ON-VEHICLE REPAIR >

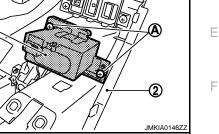
ON-VEHICLE REPAIR KEY SLOT

REMOVAL

- 1. Remove the instrument lower panel LH. Refer to IP-11, "Removal and Installation".
- 2. Disconnect key slot connector.
- 3. Remove the key slot screw (A), and then remove key slot (1) from instrument lower panel LH (2).

INSTALLATION Install in the reverse order of removal.





Æ

SEC

L

Μ

Ν

Ο

Ρ

J

Н

[SEDAN]

INFOID:000000003179588

А

В

С

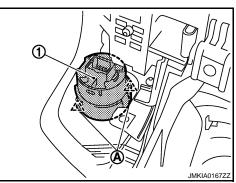
D

PUSH BUTTON IGNITION SWITCH

Removal and Installation

REMOVAL

- 1. Remove the cluster lid A assembly. Refer to IP-11, "Removal and Installation".
- 2. Remove the push-button ignition switch (1) from cluster lid A assembly, and then remove pawl (A). Press push-button ignition switch (1) back to disengage from cluster lid A assembly.



INSTALLATION Install in the reverse order of removal. INFOID:000000003179589

[SEDAN]