SECURITY CONTROL SYSTEM

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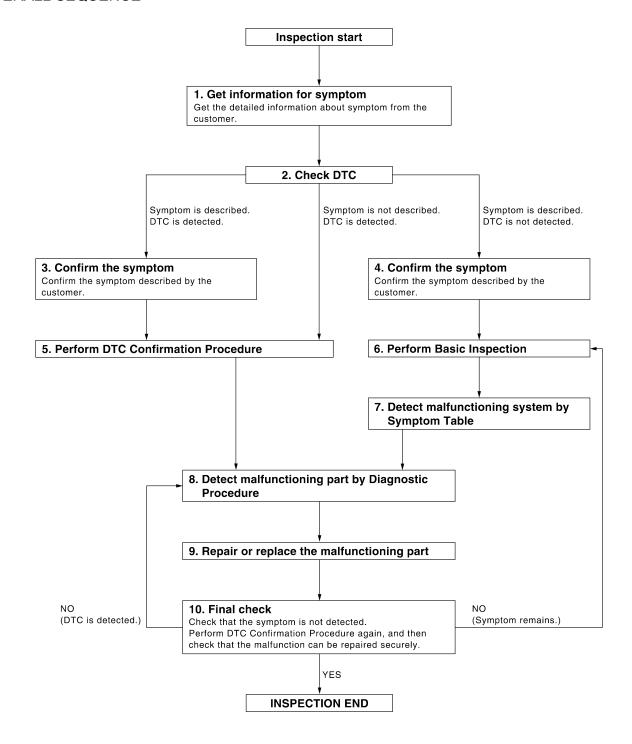
< BASIC INSPECTION > [COUPE]

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

OVERALL SEQUENCE



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DIAGNOSIS AND REPAIR WORKFLOW [COUPE] < BASIC INSPECTION > 1.GET INFORMATION FOR SYMPTOM Α Get the detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurred). В >> GO TO 2. 2.CHECK DTC WITH BCM AND IPDM E/R Check "Self Diagnostic Result" with CONSULT. Perform the following procedure if DTC is displayed. Record DTC and freeze frame data (Print them out with CONSULT.) Erase DTC. D Study the relationship between the cause detected by DTC and the symptom described by the customer. Check related service bulletins for information. Is any symptom described and any DTC detected? Е 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 to the vehicle in "Data Monitor" mode and check real time diagnosis results. Verify relationship between the symptom and the condition when the symptom is detected. >> GO TO 5. f 4.CONFIRM THE SYMPTOM Confirm the symptom described by the customer. Connect CONSULT to the vehicle in "Data Monitor" mode and check real time diagnosis results. Verify relationship between the symptom and the condition when the symptom is detected. >> GO TO 6. ${f 5}$ 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 connected to the vehicle, and check diagnostic results in real time. If two or more DTCs are detected, refer to BCS-65, "DTC Inspection Priority Chart" 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 GI-42, "Intermittent Incident".

6.PERFORM BASIC INSPECTION

Perform PCS-48, "Pre-Inspection for Multi-System Diagnostic".

Inspection End>>GO TO 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-214</u>, "Symptom Table".
- Vehicle security system: <u>SEC-215, "Symptom Table"</u>.

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION > [COUPE]

Nissan vehicle immobilizer system-NATS: <u>SEC-216</u>, "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.

<u>Is malfunctioning part detected?</u>

YES >> GO TO 9.

NO >> Check voltage of related BCM terminals using CONSULT.

9. REPAIR OR REPLACE THE MALFUNCTIONING PART

- 1. Repair or replace the malfunctioning part.
- 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.

PRE-INSPECTION FOR DIAGNOSTIC

[COUPE] < BASIC INSPECTION > PRE-INSPECTION FOR DIAGNOSTIC Α Pre-Inspection for Multi-System Diagnostic INFOID:0000000007422315 The engine start function, door lock function, power distribution system and NATS-IVIS/NVIS are closely related to each other. Narrow down the system in question by performing this inspection to identify which system is malfunctioning. For example, the vehicle security system can operate only when the door lock and power distribution system are operating normally. 1. CHECK DOOR LOCK OPERATION Check the door lock for normal operation with the Intelligent Key and door request switch. Successful door lock operation with the Intelligent Key and request switch indicates that the remote keyless D entry receiver and inside key antenna required for engine start are functioning normally. Can the door be locked with the Intelligent Key and door request switch? YES >> GO TO 2. Е NO >> Refer to <u>DLK-187</u>, "Symptom Table". 2.CHECK ENGINE STARTING Check that the engine starts when the Intelligent Key is inserted into the key slot. Does the engine start? YES >> GO TO 3. NO >> Refer to <u>SEC-214</u>, "Symptom Table". 3.CHECK STEERING LOCK OPERATION Check that the steering locks when operating the door switch after switching the power supply from ON position (or ACC position) to LOCK position. If the door switch is malfunctioning, BCM cannot lock the steering. If BCM does not detect DTC, electronic steering column lock is normal. Does steering lock? YES >> GO TO 4. NO >> Refer to DLK-65, "Component Function Check". f 4.CHECK POWER SUPPLY INDICATOR SWITCHING Press push-button ignition switch and check that the position indicator switches from LOCK, through ACC to SEC ON when steering is locked. Is each position indicator illuminating? YES >> GO TO 5. NO >> Refer to PCS-79, "Component Function Check". 5. CHECK VEHICLE SECURITY SYSTEM Refer to SEC-11, "Vehicle Security Operation Check". Are the inspection results normal? YES >> Inspection End. >> Repair vehicle security system as necessary. N Vehicle Security Operation Check INFOID:0000000007422316 1.INSPECTION START Turn ignition switch "OFF" and pull out Intelligent Key from key slot. NOTE: Р Before starting operation check, open front windows. >> GO TO 2. 2.CHECK SECURITY INDICATOR LAMP

Lock doors using Intelligent Key or mechanical key.

Check that security indicator lamp illuminates for 30 seconds.

PRE-INSPECTION FOR DIAGNOSTIC

< BASIC INSPECTION > [COUPE]

Does security indicator lamp illuminate?

YES >> GO TO 3.

NO >> Perform diagnosis and repair. Refer to <u>SEC-141, "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.

Does alarm function properly?

YES >> GO TO 4.

NO >> Check the following.

- The vehicle security system does not phase in alarm mode. Refer to SEC-215, "Symptom Table".
- Alarm (horn, headlamp and hazard lamp) do not operate. Refer to SEC-215, "Symptom Table".

4. CHECK ALARM CANCEL OPERATION

Unlock any door or open trunk lid using Intelligent Key or mechanical key.

Does alarm (horn, headlamp and hazard lamp) stop.

YES >> Inspection End.

NO >> Check door lock function. Refer to <u>DLK-17</u>, "<u>DOOR REQUEST SWITCH</u>: <u>System Description</u>".

INSPECTION AND ADJUSTMENT

[COUPE] < BASIC INSPECTION > INSPECTION AND ADJUSTMENT Α ECM RE-COMMUNICATING FUNCTION ECM RE-COMMUNICATING FUNCTION: Description INFOID:0000000007422317 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 is not necessary) NOTE: When registering new Key IDs or replacing the ECM that is not brand new, refer to CONSULT Immo-D bilizer mode and follow the on-screen instructions. • If multiple keys are attached to the key holder, separate them before work. Distinguish keys with unregistered key ID from those with registered ID. Е ECM RE-COMMUNICATING FUNCTION: Special Repair Requirement INFOID:0000000007422318 ${f 1}$.PERFORM ECM RE-COMMUNICATING FUNCTION Install ECM. Insert the registered Intelligent Key (*2), turn ignition switch to "ON". 2. *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. Turn ignition switch to "OFF". Start engine. Can engine be started? Н YES >> Procedure is completed. NO >> Initialize control unit. Refer to CONSULT Immobilizer mode and follow the on-screen instructions.

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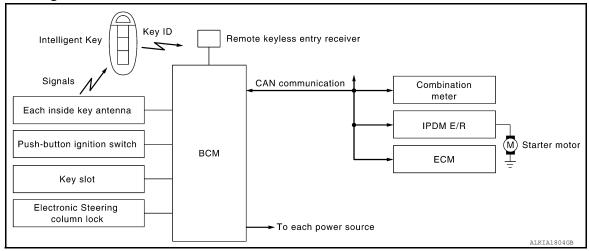
[COUPE]

SYSTEM DESCRIPTION

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

System Diagram

INFOID:0000000007422319



System Description

INFOID:0000000007422320

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM function	Actuator	
Push-button ignition switch	Push switch	Engine start function		
CVT shift selector (CVT models)	P range			
Transmission range switch (CVT models)	N, P range		Steering lock relay Electronic steering column lock Starter relay (IPDM E/R) Starter control relay (IPDM E/R) Starter motor KEY warning lamp	
Clutch interlock switch (M/T models)	Clutch ON/OFF			
Stop lamp switch	Brake ON/OFF			
Each inside key antenna	Request signal			
Remote keyless entry receiver	Key ID			
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, electronic steering column 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.

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Intelligent Key can be registered up to 4 keys (Including the standard Intelligent Key) on request from the owner.

NOTE:

 Refer to <u>SEC-14, "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.
- The Intelligent Key receives the request signal and transmits the Intelligent Key ID signal to the BCM via the remote keyless entry receiver.
- The BCM receives the Intelligent Key ID signal and verifies it with the registered ID.
- BCM transmits the steering column lock unlock signal to electronic steering column lock 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 electronic steering column lock.
- Release of the steering column lock.
- BCM transmits the power supply stop signal to IPDM E/R when it confirms that the electronic steering column lock is in the unlock condition.
- 8. IPDM E/R turns the steering column lock relay OFF and stops power supply to the electronic steering column lock.
- BCM turns ACC relay ON and transmits the ignition power supply ON signal to IPDM E/R.
- 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.
- 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.) 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 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

For details relating to starting the engine using key slot, refer to SEC-20, "System Diagram".

BATTERY SAVER SYSTEM

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

- 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.

ELECTRONIC STEERING COLUMN LOCK OPERATION

Steering is locked by electronic steering column lock 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
- Electronic steering column 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 start	Push-button ignition switch op-	
Power supply position	Brake pedal (CVT) /clutch pedal (M/T)	CVT selector lever position	eration frequency
LOCK → ACC	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
LOCK → START ACC → START ON → START (Engine start)	Depressed	P or N position (*1)	I [If the switch is pressed once, the engine starts from any pow- er supply position (LOCK, ACC, and ON)]
Engine is running → OFF (Engine stop)	_	Any position Vehicle speed < 4 km/h (2 MPH)	1

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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 operation 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)

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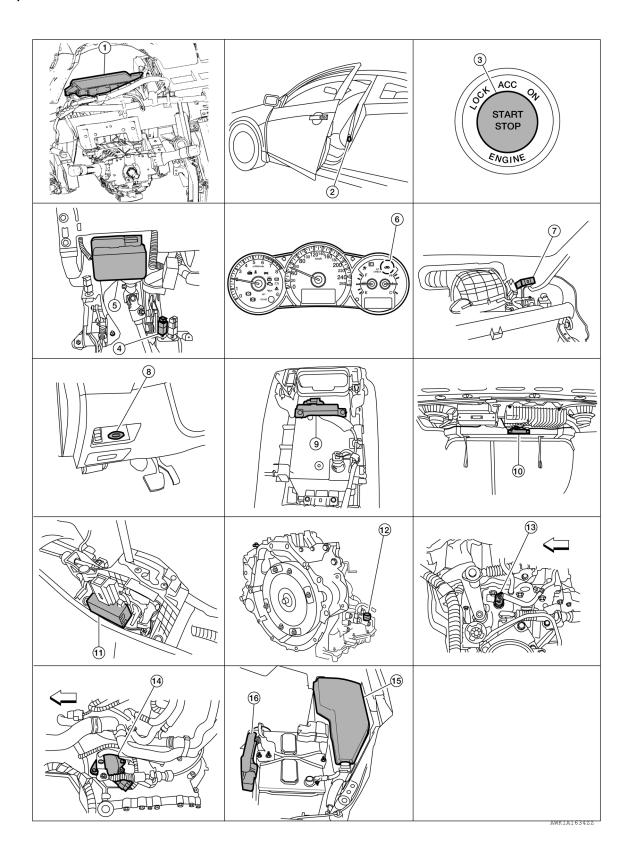
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Component Parts Location

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1.	Body control module M16, M17, M18,
	M19, M21
	(view with instrument panel removed)

- Stop lamp switch E38 (view with lower driver instrument panel removed)
- Remote keyless entry receiver M27 (view with instrument panel removed)
- 10. Rear parcel shelf antenna B29
- 13. Park neutral position switch F32 (with M/T)

- 2. Door switch LH B8 **RH B108**
- Electronic steering column lock M32
- (steering column)
- 8. Key slot M40
- 11. CVT shift selector (park position switch) M23 (with CVT)
- 14. Transmission range switch (TCM con- 15. IPDM E/R E17, E18, F10 nector) F25 (with QR25DE CVT)

- Push button ignition switch M38
- Security indicator lamp
 - Front console antenna M203 (bottom view of console)
- 12. Transmission range switch (TCM connector) F16 (with VQ35DE CVT)

16. ECM E10

Component Description

INFOID:0000000007422322

Component	Reference
BCM	<u>SEC-117</u>
Electronic steering column lock	SEC-106
Push-button ignition switch	SEC-118
Door switch	<u>DLK-65</u>
CVT shift selector (park position switch)	SEC-82
Inside key antenna	DLK-58
Remote keyless entry receiver	<u>DLK-115</u>
Stop lamp switch	<u>SEC-73</u>
Transmission range switch	SEC-92
Clutch interlock switch	<u>SEC-55</u>
Steering lock relay SEC-96	
Starter relay	<u>SEC-99</u>
Starter control relay	SEC-81
Security indicator	<u>SEC-141</u>
Key warning lamp	<u>SEC-140</u>

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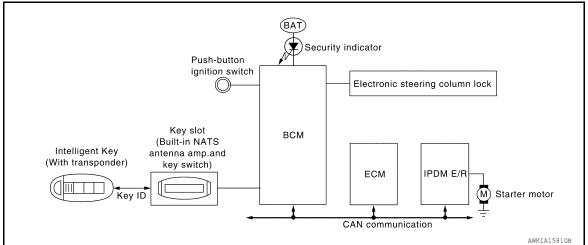
SEC-19 Revision: February 2013 2012 Altima GCC

[COUPE]

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS)

System Diagram

INFOID:0000000007422323



System Description

INFOID:0000000007422324

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM function	Actuator
Push-button ignition switch	Push switch		
CVT shift selector (CVT models)	P range		
Transmission range switch (CVT models)	N, P range		Steering lock relay Electronic steering column lock Starter relay (IPDM E/R)
Clutch interlock switch (M/T models)	Clutch ON/OFF	NVIS (NATS)	Starter control relay (IPDM E/R)
Stop lamp switch	Brake ON/OFF		Starter motor KEY washing lamp
Key slot	Key ID		KEY warning lampSecurity indicator lamp
Each door switch	Door open/close		,
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
 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 CONSULT Immobilizer mode and follow the on-screen instructions.

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS)

< SYSTEM DESCRIPTION >

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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 SEC-13, "ECM RE-COMMUNICATING FUNCTION: Special Repair Requirement".

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.

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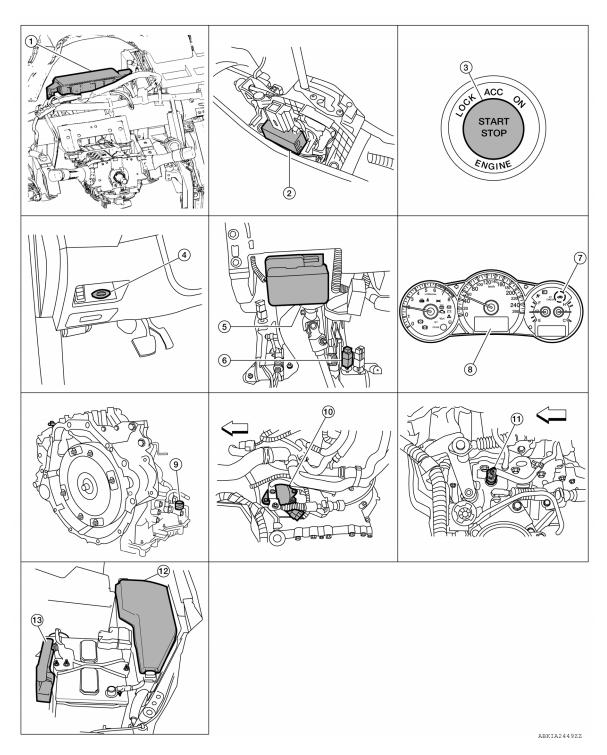
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Component Parts Location

INFOID:0000000007422325



- Body control module M16, M17, M18, M19, M21 2. (view with instrument panel removed)
- 4. Key slot M40
- 7. Security indicator lamp

- CVT shift selector (park position 3. switch) M23 (with CVT)
- 5. Electronic steering column lock M32 (steering column)
- 8. Information display

- Push button ignition switch M38
- Stop lamp switch E38 (view with lower LH instrument panel removed)
- Transmission range switch connector (TCM connector) F16 (with VQ35DE CVT)

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS)

< SYSTEM DESCRIPTION >

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Transmission range switch connector (TCM connector) F25

 (with QR25DE CVT)

11. Park neutral position switch F32 12. IPDM E/R E17, E18, F10 (with M/T)

(with M/T)

13. ECM E10

Component Description

INFOID:0000000007422326

Component	Reference	
BCM	<u>SEC-117</u>	_
Electronic steering column lock	SEC-106	
Push-button ignition switch	SEC-118	
Door switch	DLK-65	
CVT shift selector (park position switch)	<u>SEC-82</u>	
Inside key antenna	DLK-58	
Remote keyless entry receiver	DLK-115	
Stop lamp switch	<u>SEC-73</u>	
Transmission range switch	<u>SEC-92</u>	
Clutch switch	<u>SEC-55</u>	
Steering lock relay	<u>SEC-96</u>	
Starter relay	<u>SEC-99</u>	
Starter control relay	<u>SEC-81</u>	
Security indicator	<u>SEC-141</u>	
Key warning lamp	SEC-140	

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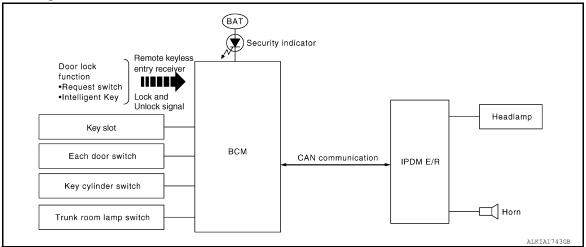
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VEHICLE SECURITY SYSTEM

System Diagram

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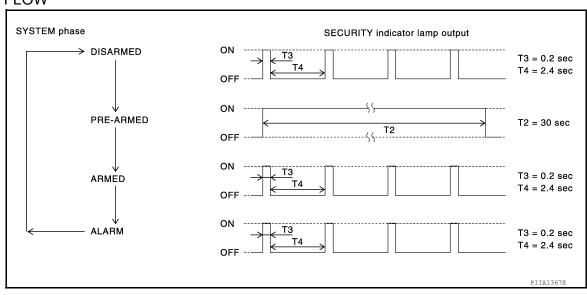
System Description

INFOID:0000000007422328

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM system	Actuator
All door switch	Open or close		
Trunk room lamp switch	Open of close		
Door key cylinder switch			• IPDM E/R
Door lock and unlock switch	Lock or unlock	Vehicle acquisity eyetem	Headlamp
Door request switch		Vehicle security system	• Horn
Intelligent Key	Lock or unlock		Security indicator lamp
	Panic alarm		
Key slot	Intelligent Key Sensing		

OPERATION FLOW



SETTING THE VEHICLE SECURITY SYSTEM

Initial Condition

Ignition switch is in OFF position.

VEHICLE SECURITY SYSTEM

< SYSTEM DESCRIPTION > [COUPE]

Disarmed Phase

- 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.
- 2. 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. 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 30 seconds or when BCM receives any signal from Intelligent Key.

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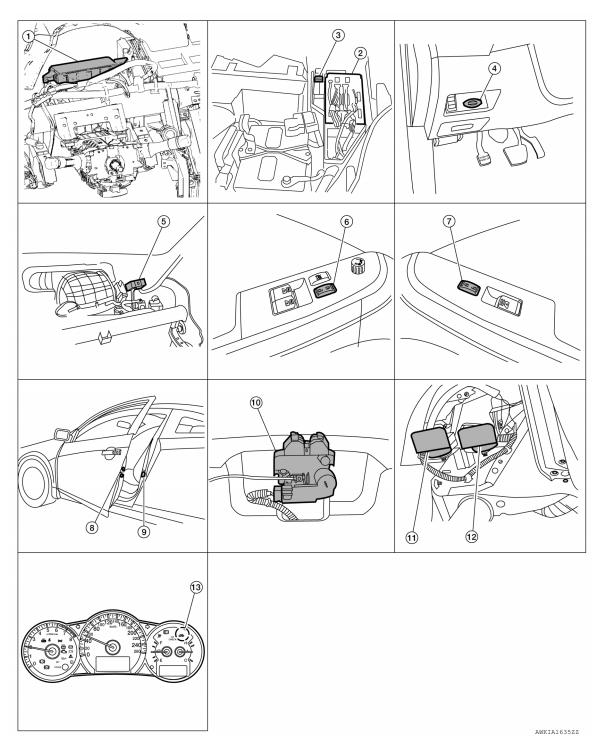
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Component Parts Location

INFOID:0000000007422329



- Body control module M16, M17, M18, M19, M21 2. (view with instrument panel removed)
- 4. Key slot M40
- Power window and door lock/unlock switch RH 8. D105
- IPDM E/R E17, E18
- Remote keyless entry receiver M27 6. (view with instrument panel removed)
 - Door lock assembly LH (key cylinder switch) D10
- 3. Horn relay H-1
 - Main power window and door lock/unlock switch D7, D8
 - Door switch LH B8 RH B108

VEHICLE SECURITY SYSTEM

< SYSTEM DESCRIPTION >

[COUPE]

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10. Trunk lamp switch and trunk release solenoid T4 11. Horn (high) E216 12. Horn (low) E215 (view with front fender protector LH

(view with front fender protector LF removed)

13. Security indicator lamp (part of combination meter) M24

Component Description

Component	Reference
BCM	<u>SEC-24</u>
Horn relay	<u>SEC-137</u>
Security indicator	SEC-141
Door switch	<u>DLK-65</u>
Door lock actuator	DLK-102
Trunk lid lock assembly	DLK-105
Door key cylinder switch	DLK-76
Door lock and unlock switch	DLK-68

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[COUPE]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM: Diagnosis Description

INFOID:0000000007630932

BCM CONSULT FUNCTION

CONSULT 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		
Gystem		WORK SUPPORT	DATA MONITOR	ACTIVE TEST
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP		×	×
Remote keyless entry system	MULTI REMOTE ENT		×	
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 Function (BCM - COMMON ITEM)

INFOID:0000000007630933

ECU IDENTIFICATION Displays the BCM part No.

SELF-DIAG RESULT

Refer to SEC-168, "DTC Index".

< SYSTEM DESCRIPTION > [COUPE]

INTELLIGENT KEY

INTELLIGENT KEY: CONSULT Function (BCM - INTELLIGENT KEY)

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WORK SUPPORT

Monitor item	Description
CONFIRM KEY FOB ID	It can be checked whether Intelligent Key ID code is registered or not in this mode.
AUTO LOCK SET	Auto door lock time can be changed in this mode. • MODE1: 1 minute • MODE2: 5 minutes • MODE3: 30 seconds • MODE4: 2 minutes
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch 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 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. • MODE1: 0.5 sec. • MODE2: Non-operation • MODE3: 1.5 sec.
PW DOWN SET	Unlock button pressing time on Intelligent Key button can be selected from the following with this mode. • MODE1: 3 sec. • MODE2: Non-operation • MODE3: 5 sec.
TRUNK OPEN DELAY	Trunk button pressing time on Intelligent Key button can be selected from the following with this mode. • MODE1: 0.5 sec. • MODE2: 1.5 sec. • MODE3: OFF: No delay
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.
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/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.
SHORT CRANKING OUTPUT	Starter motor can be forcibly activated.
INSIDE ANT DIAGNOSIS	This function allows inside key antenna self-diagnosis.
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.

SELF-DIAG RESULT

Refer to SEC-168, "DTC Index".

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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.
CLUTCH SW	Indicates [ON/OFF] condition of clutch switch.
IGN RLY2 -F/B	Indicates [ON/OFF] condition of ignition relay 2.
ACC RLY-F/B	Indicates [ON/OFF] condition of accessory relay-1.
BRAKE SW 1	Indicates [ON/OFF] condition of brake switch.
BRAKE SW 2	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/STALL/CRANK/RUN] condition of engine states.
S/L LOCK-IPDM	Indicates [ON/OFF] condition of steering lock (LOCK) request.
S/L UNLOCK-IPDM	Indicates [ON/OFF] condition of steering lock (UNLOCK) request.
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.
ID OK FLAG	Indicates [SET/RESET] condition of key ID.
PRMT ENG STRT	Indicates [SET/RESET] condition of engine start possibility.
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.
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.
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.
PRMT RKE STRT	Indicates [ON/OFF] condition of ENGINE START signal from Intelligent Key.

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

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Monitor Item	Condition
RKE OPE COUN2	When remote keyless entry receiver receives the signal transmitted while operating on Intelligent Key, the numerical value start changing.
REVERSE SW	Indicates [ON/OFF] condition of R position.

ACTIVE TEST

Test item	Description
BATTERY SAVER	This test is able to check interior room lamp operation. The interior room lamp is activated after "ON" on CONSULT screen is touched.
PW REMOTO DOWN SET	This test is able to check power window down operation. The power window down is activated after "ON" on CONSULT screen is touched.
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation. The Intelligent Key warning buzzer is activated after "ON" on CONSULT 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 screen is touched. • Key warning chime sounds when "KEY" on CONSULT screen is touched. • OFF position warning chime sounds when "KNOB" on CONSULT screen is touched.
INDICATOR	This test is able to check warning lamp operation. • "KEY" Warning lamp illuminates when "KEY ON" on CONSULT screen is touched. • "KEY" Warning lamp blinks when "KEY IND" on CONSULT screen is touched.
INT LAMP	This test is able to check interior room lamp operation. The interior room lamp is activated after "ON" on CONSULT screen is touched.
LCD	This test is able to check meter display information • Engine start information displays when "BP N" on CONSULT screen is touched. • Engine start information displays when "BP I" on CONSULT screen is touched. • Key ID warning displays when "ID NG" on CONSULT screen is touched. • P position warning displays when "SFT P" on CONSULT screen is touched. • Intelligent Key insert information displays when "INSRT" on CONSULT screen is touched. • Intelligent Key low battery warning displays when "BATT" on CONSULT screen is touched. • Take away through window warning displays when "NO KY" on CONSULT screen is touched. • Take away warning display when "OUTKEY" on CONSULT screen is touched. • OFF position warning display when "LK WN" on CONSULT screen is touched.
FLASHER	This test is able to check hazard warning lamp operation. The hazard warning lamps are activated after "LH/RH/OFF" on CONSULT screen is touched.
HORN	This test is able to check horn operation. The horn is activated after "ON" on CONSULT screen is touched.
P RANGE	This test is able to check CVT shift selector power supply CVT shift selector power is supplied when "ON" on CONSULT 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 screen is touched.
LOCK INDICATOR	This test is able to check LOCK indicator in push-ignition switch operation. LOCK indicator in push-ignition switch illuminates when "ON" on CONSULT screen is touched.
ACC INDICATOR	This test is able to check ACC indicator in push-ignition switch operation. ACC indicator in push-ignition switch illuminates when "ON" on CONSULT screen is touched.
IGNITION ON IND	This test is able to check ON indicator in push-ignition switch operation. ON indicator in push-ignition switch illuminates when "ON" on CONSULT screen is touched.
KEY SLOT ILLUMI	This test is able to check key slot illumination operation. Key slot illumination blinks when "ON" on CONSULT screen is touched.
TRUNK/BACK DOOR	This test is able to check trunk opener actuator open operation. This actuator opens when "OPEN" on CONSULT screen is touched.

THEFT ALM

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THEFT ALM: CONSULT Function (BCM - THEFT ALM)

INFOID:0000000007630935

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 screen.

DATA MONITOR

Monitored Item	Description	
REQ SW -DR	Indicates [ON/OFF] condition of front door request switch (driver side).	
REQ SW -AS	Indicates [ON/OFF] condition of front door request switch (passenger side).	
REQ SW -BD/TR	Indicates [ON/OFF] condition of trunk 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 front door switch LH.	
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.	
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 front door key cylinder switch.	
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from front door key cylinder switch.	
TR/BD OPEN SW	Indicates [ON/OFF] condition of trunk opener switch.	
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.	

ACTIVE TEST

Test item	Operation	Description	
THEFT IND		This test is able to check security indicator lamp operation. The lamp will be turned when "ON" on CONSULT screen is touched.	
VEHICLE SECURITY HORN		This test is able to check vehicle security horn operation. The horns will be activated for 0.5 seconds after "ON" on CONSULT screen is touched.	
HEAD LAMP(HI)		This test is able to check vehicle security lamp operation. The headlamps will be activated for 0.5 seconds after "ON" on CONSULT screen is touched.	
RH		Outputs the voltage to blink the right side turn signal lamps.	
FLASHER	LH	Outputs the voltage to blink the left side turn signal lamps.	
	Off	Stops the voltage to turn the turn signal lamps OFF.	

IMMU

IMMU: CONSULT Function (BCM - IMMU)

INFOID:0000000007630936

DATA MONITOR

DIAGNOSIS SYSTEM (BCM)

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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 operation [ON/OFF].	

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U1000 CAN COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description INFOID:000000007422336

Refer to LAN-6, "System Description".

DTC Logic

DTC DETECTION LOGIC

CONSULT 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 (IPDM E/R)

Diagnosis Procedure

INFOID:0000000007422338

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-7, "CAN Communication Control Circuit".

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

U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

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U1010 CONTROL UNIT (CAN)

DTC Logic

DTC DETECTION LOGIC

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

Diagnosis Procedure

INFOID:0000000007422340

1. REPLACE BCM

When DTC U1010 is detected, replace BCM.

>> Replace BCM. Refer to BCS-92, "Removal and Installation".

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B2013 ID DISCORD, IMMU-STRG

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

B2013 ID DISCORD, IMMU-STRG

Description INFOID:000000007422341

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

DTC Logic

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 electronic steering column lock are NG. The registration is necessary.	Electronic steering column lock

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-36, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422343

1. PERFORM INITIALIZATION

Perform initialization with CONSULT. Re-register all Intelligent Keys.

For initialization and registration of Intelligent Key. Refer to CONSULT Immobilizer mode and follow the onscreen instructions.

Can the system be initialized and can steering lock be released with re-registered Intelligent Key?

YES >> Electronic steering column lock was unregistered.

NO >> Replace electronic steering column lock.

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INFOID:0000000007422346

B2014 CHAIN OF STRG-IMMU

Description INFOID:0000000007422344

BCM performs the ID verification with the electronic steering column lock to release the steering. BCM starts the communication with the electronic steering column lock when Intelligent Key is carried into the passenger compartment and the push-button ignition switch is pressed.

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2014	CHAIN OF STRG- IMMU	Inactive communication between electronic steering column lock and BCM	Harness or connectors (electronic steering column lock circuit is open or shorted) Electronic steering column lock 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.

Is DTC detected?

YES >> Go to SEC-37, "Diagnosis Procedure".

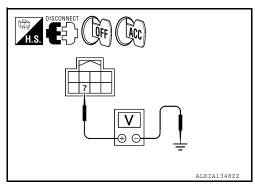
NO >> Inspection End.

Diagnosis Procedure

Regarding Wiring Diagrams information, refer to <a>SEC-181, "Wiring Diagram".

1. CHECK ELECTRONIC STEERING COLUMN LOCK POWER SUPPLY

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



Electronic steering column lock Connector Terminal		Ground	Ignition switch position	Voltago [V/]
		Giodila	ignition switch position	Voltage [V]
M32	7	Ground	$OFF \to ACC$	Battery voltage
10132		Giodila	OFF or ON	0

Is the inspection normal?

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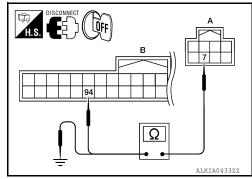
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< DTC/CIRCUIT DIAGNOSIS >

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

2.CHECK ELECTRONIC STEERING COLUMN LOCK POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM harness connector.
- Check continuity between electronic steering column lock harness connector M32 (A) terminal 7 and BCM harness connector M19 (B) terminal 94.



Electronic steering column lock		В	Continuity	
Connector	Terminal	connector	Terminal	Continuity
A: M32	7	B: M19	94	Yes

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

Electronic stee	ring column lock	Ground	Continuity
Connector Terminal		Ground	Continuity
A: M32	7	Ground	No

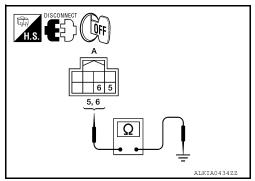
Is the inspection normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

3.check electronic steering column lock ground circuit

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



Electronic stee	ring column lock	Ground	Continuity	
Connector	Connector Terminal		Continuity	
M32	5	Ground	Yes	
IVIOZ	6	Giouna	165	

Is the inspection normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

B2014 CHAIN OF STRG-IMMU

< DTC/CIRCUIT DIAGNOSIS >

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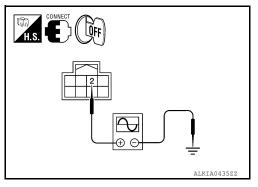
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4. CHECK ELECTRONIC STEERING COLUMN LOCK COMMUNICATION SIGNAL

- 1. Connect electronic steering column lock harness connector.
- 2. Using an oscilloscope, read voltage signal between electronic steering column lock harness connector and ground.



Electronic steering column lock		Ground	Electronic steering col-	Value	
Connector	Terminal	Giouna	umn lock condition	value	
			Lock	Battery voltage	
M32	2	Ground	Lock or unlock	(V) 15 10 5 0 50 ms	
		For 15 seconds after un- lock	Battery voltage		
			15 seconds or later after unlock.	0 V	

Steering is locked : Opening the door when ignition switch is ON to OFF.

Steering is unlocked : Ignition switch is OFF to ACC.

Is the inspection normal?

YES >> Replace electronic steering column lock.

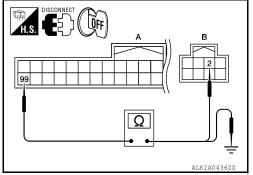
NO >> GO TO 5.

5. CHECK ELECTRONIC STEERING COLUMN LOCK COMMUNICATION CIRCUIT

Turn ignition switch OFF.

Disconnect BCM harness connector.

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



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B2014 CHAIN OF STRG-IMMU

< DTC/CIRCUIT DIAGNOSIS >

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BCM		Electronic stee	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.

В	CM	Ground	Continuity
Connector	Connector Terminal		Continuity
A: M19	99	Ground	No

Is the inspection normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

6. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

B2108 STEERING LOCK RELAY

< DTC/CIRCUIT DIAGNOSIS >

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B2108 STEERING LOCK RELAY

Description INFOID.0000000007422347

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

DTC DETECTION LOGIC

NOTE:

- If DTC B2108 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-34, "DTC Logic".
- If DTC B2108 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-35, "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 position for about 1 second even if the IPDM E/R receives 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.

Is DTC detected?

YES >> Go to SEC-41, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422349

1.CHECK FUSE

- 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-45, "Removal and Installation".

NO >> Check the following.

- Harness for open or short between IPDM E/R and battery
- Fuse

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B2109 STEERING LOCK RELAY

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

B2109 STEERING LOCK RELAY

Description INFOID:000000007422350

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

DTC DETECTION LOGIC

NOTE:

- If DTC B2109 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-34, "DTC Logic".
- If DTC B2109 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-35</u>, "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 position for about 1 second even if the IPDM E/R receives 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

- 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
- Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to SEC-42, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422352

CHECK POWER SUPPLY CIRCUIT

Check IPDM E/R power supply circuit. Refer to PCS-20, "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).

Is the inspection normal?

YES >> Replace IPDM E/R. Refer to PCS-45, "Removal and Installation".

NO >> Check the following.

- Harness for open or short between IPDM E/R and battery
- Fuse

< DTC/CIRCUIT DIAGNOSIS >

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B210A STEERING LOCK CONDITION SWITCH

Description INFOID:000000007422353

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

DTC DETECTION LOGIC

NOTE:

- If DTC B210A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-34, "DTC Logic".
- If DTC B210A is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-35</u>, "DTC Logic".

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 [Electronic steering column lock circuit (BCM side) is open or shorted] Harness or connectors [Electronic steering column lock circuit (IPDM E/R side) is open or shorted.] Electronic steering column lock 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
- Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to SEC-43, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

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Regarding Wiring Diagrams information, refer to SEC-181, "Wiring Diagram".

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 electronic steering column lock harness connector and IPDM E/R harness connector.

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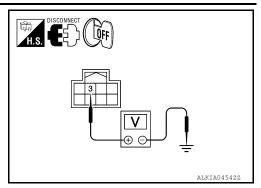
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[COUPE]

3. Check voltage between electronic steering column lock harness connector and ground.



Electronic stee	ring column lock	Ground	Voltage [V]
Connector Terminal		Giodila	voltage [v]
M32	3	Ground	Battery voltage

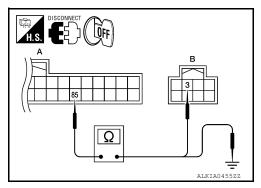
Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

3.check electronic steering column lock circuit-i

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



В	ВСМ		Electronic steering column lock	
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.

ВСМ		Ground	Continuity	
Connector	Terminal		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.

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

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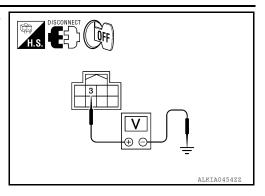
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Check voltage between electronic steering column lock harness connector and ground.



Electronic steering column lock		Ground	Voltage [V]
Connector	Terminal	Ground	voitage [v]
M32	3	Ground	Battery voltage

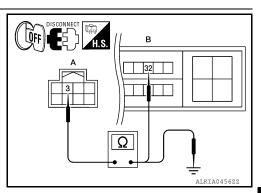
Is the inspection result normal?

YES >> Replace electronic steering column lock.

NO >> GO TO 5.

5. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-II

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



Electronic steel	Electronic steering column lock		IPDM E/R	
Connector	Terminal	Connector	Terminal	Continuity
A: M32	3	B: E18	32	Yes

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

Electronic steering column lock		Ground	Continuity
Connector	Terminal	Orouna	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 electronic steering column lock harness connector and IPDM E/R harness connector.

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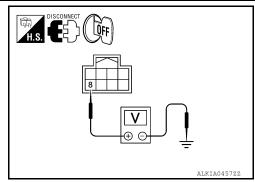
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< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

3. Check voltage between electronic steering column lock harness connector and ground.



Electronic steering column lock		Ground	Voltage [V]
Connector	Terminal	Ground	voltage [v]
M32	8	Ground	Battery voltage

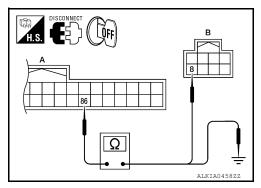
Is the inspection result normal?

YES >> GO TO 9.

NO >> GO TO 8.

8. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-I

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



В	ВСМ		Electronic steering column lock	
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	Oround	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.

< DTC/CIRCUIT DIAGNOSIS >

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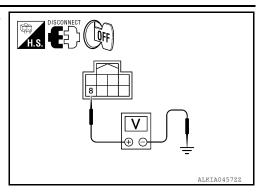
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3. Check voltage between electronic steering column lock harness connector and ground.



Electronic steering column lock		Ground	Voltage [V]
Connector	Terminal	Ground	voltage [v]
M32	8	Ground	Battery voltage

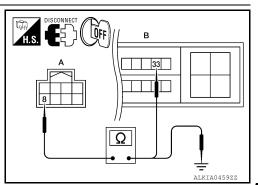
Is the inspection result normal?

YES >> Replace electronic steering column lock.

NO >> GO TO 10.

10. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-II

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



Electronic steel	Electronic steering column lock		IPDM E/R	
Connector	Terminal	Connector	Terminal	Continuity
A: M32	8	B: E18	33	Yes

2. Check continuity between electronic steering column lock harness connector and ground.

Electronic steering column lock		Ground	Continuity
Connector	Terminal	Giodila	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.

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Revision: February 2013 SEC-47 2012 Altima GCC

B210B STARTER CONTROL RELAY

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

B210B STARTER CONTROL RELAY

Description INFOID:000000007422356

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

DTC DETECTION LOGIC

NOTE:

- If DTC B210B is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-34, "DTC Logic".
- If DTC B210B is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-35</u>, "DTC Logic".

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 transmission range 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
- Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to SEC-48, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422358

1. INSPECTION START

- 1. Turn ignition switch ON.
- Check "Self diagnostic result" with CONSULT.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure.

See PCS-29, "DTC Index".

Is the DTC B210B displayed again?

YES >> Replace IPDM E/R. Refer PCS-45, "Removal and Installation".

NO >> Inspection End.

B210C STARTER CONTROL RELAY

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

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B210C STARTER CONTROL RELAY

Description INFOID:0000000007422359

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:0000000007422360

DTC DETECTION LOGIC

NOTE:

- If DTC B210C is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-34, "DTC Logic".
- If DTC B210C is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-35, "DTC Logic".

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 transmission range switch input signal	• IPDM E/R

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION 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.

Is DTC detected?

>> Go to SEC-49, "Diagnosis Procedure". YES

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422361

1.INSPECTION START

- Turn ignition switch ON.
- Check "Self diagnostic result" with CONSULT.
- Touch "ERASE". 3.
- **Perform DTC Confirmation Procedure.**

See PCS-29, "DTC Index".

Is the DTC B210C displayed again?

YES >> Replace IPDM E/R. Refer to PCS-45, "Removal and Installation".

NO >> Inspection End. **SEC**

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INFOID:0000000007422364

B210D STARTER RELAY

Description INFOID:000000007422362

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

DTC DETECTION LOGIC

NOTE:

- If DTC B210D is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-34, "DTC Logic".
- If DTC B210D is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-35, "DTC Logic".
- If DTC B210D is displayed with DTC B2617, first perform the trouble diagnosis for DTC B2617. Refer to <u>SEC-115, "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 transmission range 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.
- CVT selector lever is P or N position
- Do not depress the brake pedal
- Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to SEC-50, "Diagnosis Procedure".

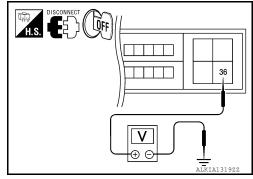
NO >> Inspection End.

Diagnosis Procedure

Regarding Wiring Diagrams information, refer to <a>SEC-204, "Wiring Diagram".

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.



B210D STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

IPDI	M E/R	Ground	Voltage (V)	
Connector	Connector Terminal		voltage (v)	
E18	36	Ground	Battery voltage	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-45, "Removal and Installation".

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

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[COUPE]

INFOID:0000000007422367

B210E STARTER RELAY

Description INFOID.000000007422365

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

DTC DETECTION LOGIC

NOTE:

- If DTC B210E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-34, "DTC Logic".
- If DTC B210E is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-35</u>, "DTC Logic".

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 transmission range 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.
- CVT selector lever is in the P or N position
- Do not depress the brake pedal
- Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to SEC-52, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

Regarding Wiring Diagrams information, refer to SEC-204, "Wiring Diagram".

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.
- Disconnect BCM harness connector.

B210E STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

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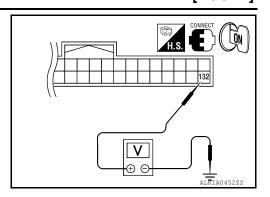
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3. Check voltage between BCM harness connector and ground.



BCM connector			Condition				
Connector	Terminal	Ground	Ignition switch Brake pedal		CVT selector lever	Voltage (V)	
				P or N	Battery voltage		
M21	132	Ground	ON	Depressed	Other than above	0	

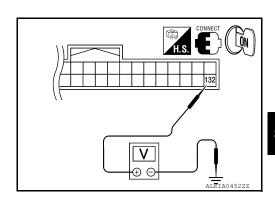
Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

$3.\mathsf{CHECK}$ 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 connector		Ground	Condition		Voltage (V)
Connector	Connector Terminal		Ignition switch	Clutch pedal	voilage (v)
M21	132 Ground	Ground	OFF	Not depressed	0
IVIZ I	132	Ground	OFF	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.

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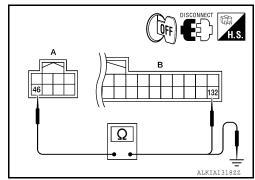
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2. Check continuity between IPDM E/R harness connector and BCM harness connector.



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

3. Check continuity between BCM harness connector and ground.

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

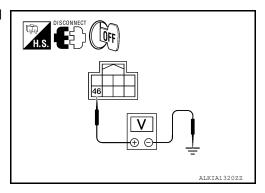
Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-45, "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.
- Check voltage between IPDM E/R harness connector and ground.



IPDI	M E/R	Ground	Voltage (V)
Connector	Connector Terminal		voltage (v)
E17	46	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-45, "Removal and Installation".

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

B210F TRANSMISSION RANGE SWITCH/CLUTCH INTERLOCK SWITCH [COUPE]

< DTC/CIRCUIT DIAGNOSIS >

B210F TRANSMISSION RANGE SWITCH/CLUTCH INTERLOCK SWITCH

Description INFOID:0000000007422368

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

- Transmission range switch (CVT models)
- Clutch interlock switch (M/T models)
- · Shift position signal from BCM (CAN)

DTC Logic INFOID:0000000007422369

DTC DETECTION LOGIC

NOTE:

- If DTC B210F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-34, "DTC Loaic"
- If DTC B210F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-34, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210F	INTER LOCK/TRANS- MISSION RANGE 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 transmission range switch input signal (CVT models) • Shift position signal from BCM (CAN)	Harness or connectors [Transmission range switch circuit is open or shorted (CVT models)] or (Clutch interlock switch circuit is open or shorted.) Clutch interlock switch (M/T models) Transmission range switch (CVT models)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

>> Go to SEC-55, "Diagnosis Procedure". YES

NO >> Inspection End.

Diagnosis Procedure

Regarding Wiring Diagrams information, refer to SEC-204, "Wiring Diagram".

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-67, "DTC Index".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

3.CHECK TRANSMISSION RANGE SWITCH INPUT SIGNAL

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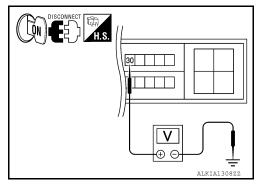
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B210F TRANSMISSION RANGE SWITCH/CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS > [COUPE]

- 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 under following condition.



IPDM E/R		Ground	Condition		Voltage (V)	
Connector	Terminal	Giouna	Condition		vollage (v)	
E18 30		Ground	CVT selector lever	P or N	0	
E10	30	Ground	CV i selector lever	Other than above	Battery voltage	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-45, "Removal and Installation".

NO >> GO TO 4.

4. CHECK TRANSMISSION RANGE 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.

TO	CM	IPDI	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
F16 (VQ35DE)	20	E18	72	Yes
F25 (QR25DE)	2	LIO	12	163

4. Check continuity between TCM harness connector and ground.

TCM		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
F16 (VQ35DE)	20	Ground	No	
F25 (QR25DE)	2	Ground	NO	

Is the inspection result normal?

YES >> GO TO 10.

NO >> Repair harness or connector.

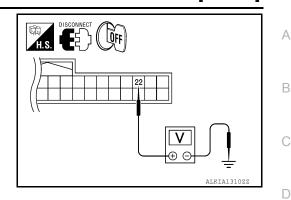
5. CHECK CLUTCH INTERLOCK SWITCH INPUT SIGNAL (BCM)

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

B210F TRANSMISSION RANGE SWITCH/CLUTCH INTERLOCK SWITCH [COUPE]

< DTC/CIRCUIT DIAGNOSIS >

Check voltage between BCM harness connector and ground.



ВСМ		Ground		Condition	Voltage (V)
Connector	Terminal	Glound	Condition		voitage (v)
M18 22 Gro		Ground	Clutch pedal	Not depressed	0
IVI IO	22	Ground	Ciulcii pedai	Depressed	Battery voltage

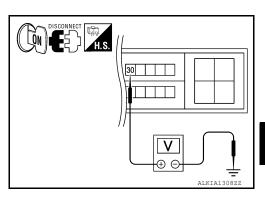
Is the inspection result normal?

>> GO TO 6. YES

NO >> GO TO 7.

6.check clutch interlock switch input signal

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



IPDM E/R		Ground	Condition		Voltage (V)
Connector	Terminal	Ground	Condition		voltage (v)
E18	30	Ground	Clutch pedal	Not depressed	0
E10	30	Ground	Ciutori pedai	Depressed	Battery voltage

Is the inspection result normal?

YES >> Replace the IPDM E/R. Refer to PCS-45, "Removal and Installation".

NO >> Check harness for open between clutch interlock switch and IPDM E/R.

7.CHECK CLUTCH INTERLOCK SWITCH POWER SUPPLY

Disconnect clutch interlock switch harness connector.

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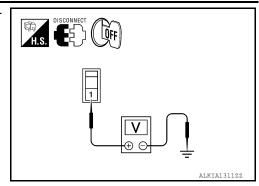
SEC-57 Revision: February 2013 2012 Altima GCC

B210F TRANSMISSION RANGE SWITCH/CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

Check voltage between clutch interlock switch harness connector and ground.



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

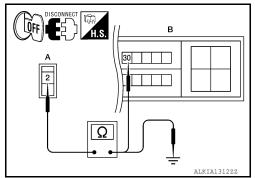
Is the inspection result normal?

YES >> GO TO 8.

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

8. CHECK CLUTCH INTERLOCK SWITCH CIRCUIT

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



Clutch inte	rlock 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-59, "Component Inspection".

Is the inspection result normal?

YES >> Replace the IPDM E/R. Refer to PCS-45, "Removal and Installation".

NO >> Replace clutch interlock switch.

10. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

B210F TRANSMISSION RANGE SWITCH/CLUTCH INTERLOCK SWITCH [COUPE]

< DTC/CIRCUIT DIAGNOSIS >

>> Inspection End.

Component Inspection

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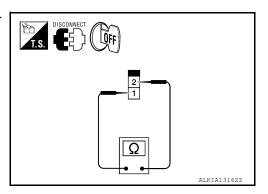
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1.check clutch interlock switch

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



	interlock vitch	С	Condition		
Teri	minal				
1	2	Clutch pedal	Not depressed	No	
1 2	Ciulcii peuai	Depressed	Yes		

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace clutch interlock switch.

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B2110 TRANSMISSION RANGE SWITCH/CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

B2110 TRANSMISSION RANGE SWITCH/CLUTCH INTERLOCK SWITCH

Description INFOID:000000007422372

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

- Transmission range switch (CVT 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-34, "DTC Logic".
- If DTC B2110 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-35</u>, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2110	INTER LOCK/ TRANSMISSION RANGE SW	IPDM E/R detects mismatch between the signals below for 1 second or more. • Clutch interlock input signal (M/T models) • Shift transmission range switch input signal (CVT models)	Harness or connectors [Transmission range switch circuit is open or shorted (CVT models)] or (Clutch interlock switch circuit is open or shorted.) Clutch inter lock switch (M/T models) Transmission range switch (CVT 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.
- CVT selector lever is in the P or N position
- Do not depress the brake pedal
- 2. Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to SEC-60, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422374

Regarding Wiring Diagrams information, refer to <a>SEC-204, "Wiring Diagram".

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-67, "DTC Index".

Is the inspection result normal?

YES >> GO TO 3.

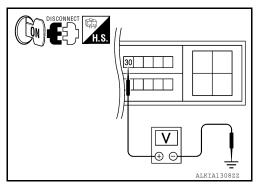
NO >> Repair or replace malfunctioning parts.

${f 3.}$ CHECK TRANSMISSION RANGE SWITCH INPUT SIGNAL

B2110 TRANSMISSION RANGE SWITCH/CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS > [COUPE]

- 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 under following condition.



IPDM E/R		Ground	Condition		Voltage (V)
Connector	Terminal	Ground	Condition		voltage (v)
E18 30		Ground	CVT selector lever	P or N	0
	30	Giouria	CV i selector lever	Other than above	Battery voltage

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-45, "Removal and Installation".

NO >> GO TO 4.

4. CHECK TRANSMISSION RANGE 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.

T	TCM		IPDM E/R	
Connector	Terminal	Connector	Terminal	Continuity
F16	20	E18	72	Yes
F25	2	LIO	12	165

4. Check continuity between TCM harness connector and ground.

T	CM	Ground	Continuity
Connector	Terminal	Ground	Continuity
F16	20	Ground	No
F25	2	Ground	140

Is the inspection result normal?

YES >> GO TO 10.

NO >> Repair harness or connector.

5. CHECK CLUTCH INTERLOCK SWITCH INPUT SIGNAL (BCM)

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

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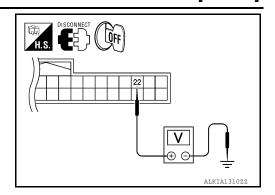
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Revision: February 2013 SEC-61 2012 Altima GCC

B2110 TRANSMISSION RANGE SWITCH/CLUTCH INTERLOCK SWITCH [COUPE]

< DTC/CIRCUIT DIAGNOSIS >

Check voltage between BCM harness connector and ground.



BCM		Ground		Condition	Voltage (V)
Connector	Terminal	Glound	Condition		
M18 22		Ground	Clutch pedal	Not depressed	0
IVI IO	22	Ground	Ciulcii pedai	Depressed	Battery voltage

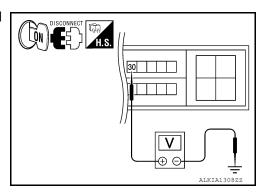
Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 7.

6. CHECK CLUTCH INTERLOCK SWITCH INPUT SIGNAL

- Turn ignition switch OFF.
- Disconnect IPDM E/R harness connector.
- 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	30	Ground	Clutch pedal	Not depressed	0
⊏10	30	Ground	Ciulcii pedai	Depressed	Battery voltage

Is the inspection result normal?

YES >> Replace the IPDM E/R. Refer to PCS-45, "Removal and Installation".

NO >> Check harness for open between clutch interlock switch and IPDM E/R.

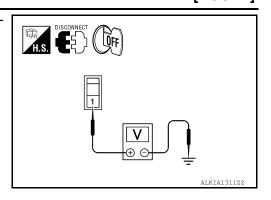
7.check clutch interlock switch power supply

Disconnect clutch interlock switch harness connector.

B2110 TRANSMISSION RANGE SWITCH/CLUTCH INTERLOCK SWITCH [COUPE]

< DTC/CIRCUIT DIAGNOSIS >

Check voltage between clutch interlock switch harness connector and ground.



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

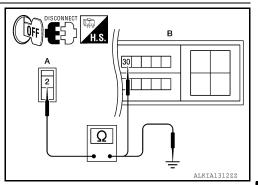
Is the inspection result normal?

YES >> GO TO 8.

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

8.check clutch interlock switch circuit

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

Check continuity between clutch interlock switch harness connector and ground.

Clutch inte	rlock switch	Ground	Continuity
Connector	Terminal		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-64, "Component Inspection".

Is the inspection result normal?

YES >> Replace the IPDM E/R. Refer to PCS-45, "Removal and Installation".

NO >> Replace clutch interlock switch.

10. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

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B2110 TRANSMISSION RANGE SWITCH/CLUTCH INTERLOCK SWITCH [COUPE]

< DTC/CIRCUIT DIAGNOSIS >

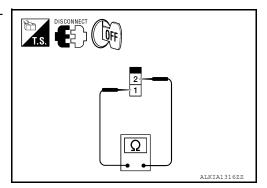
>> Inspection End.

Component Inspection

INFOID:0000000007422375

1. CHECK CLUTCH INTERLOCK SWITCH

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



	interlock vitch	Condition		Continuity
Teri	minal			
1	2	Clutch pedal	Not depressed	No
'	1 2 Clutch peda	Ciulcii peuai	Depressed	Yes

Is the inspection result normal?

YES >> Inspection End.

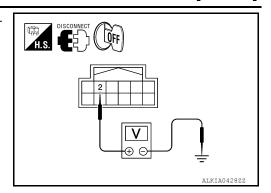
NO >> Replace clutch interlock switch.

B2190. P1610 NATS ANTENNA AMP

	B	2190, P1610 NATS ANTENNA A	
	UIT DIAGNOSIS >	NTENNA AMP	[COUPE]
			А
Description	1		INFOID:000000007422376
Prohibits the	release of steering	BCM and Intelligent Key when push-buttor lock or start of engine when an unregistere	
DTC Logic	;		INFOID:0000000007422377
DTC DETEC	CTION LOGIC		
DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2190 P1610	NATS ANTENNA AMP	Inactive communication between key slot and BCM.	Harness or connectors (The key slot circuit is open or shorted) Key slot BCM
DTC CONFI	RMATION PROC	EDURE	-
1.PERFORM	M DTC CONFIRMA	TION PROCEDURE	
2. Check "S Is DTC detect YES >> C NO >> C 2. PERFORM 1. Press the 2. Check "S Is DTC detect YES >> C NO >> Ir Diagnosis	So to SEC-65, "Diag GO TO 2. M DTC CONFIRMA e push-button ignitic self diagnostic resulted? So to SEC-65, "Diagnospection End. Procedure	t" with CONSULT. gnosis Procedure". TION PROCEDURE on switch. t" with CONSULT.	J
Check the case Case 1: It is Case 2: It is In which case Case 1. >> Case 2. >> Case 2. CHECK KI	detected after Inteles is DTC detected? GO TO 2.	elligent Key is inserted into key slot. ligent Key is inserted into key slot and pusl	h-button ignition switch is pressed.
	ect key slot harness	connector.	P

[COUPE]

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



Key	slot	Ground	Voltage [V]	
Connector	Connector Terminal		(approx.)	
M40	2	Ground	Battery voltage	

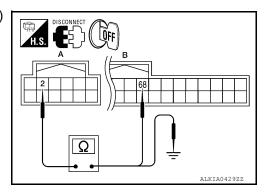
Is the inspection result normal?

YES >> Replace key slot. Refer to <u>SEC-220, "Removal and Installation"</u>.

NO >> GO TO 3.

3. CHECK KEY SLOT CIRCUIT

- 1. Disconnect BCM harness connector.
- 2. Check continuity between key slot harness connector M40 (A) terminal 2 and BCM harness connector M19 (B) terminal 68.



Key	y slot	В	CM	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M40	2	B: M19	68	Yes

3. Check continuity between key slot harness connector M40 (A) terminal 2 and ground.

Key	/ slot	Ground	Continuity	
Connector	Terminal		Continuity	
A: M40	2	Ground	No	

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair harness or connector.

4. CHECK PUSH-BUTTON IGNITION SWITCH OPERATION

Press push-button ignition switch and check if it turns ON.

Does ignition switch turn to ON?

YES >> GO TO 5. NO >> GO TO 7.

5. CHECK KEY SLOT COMMUNICATION SIGNAL

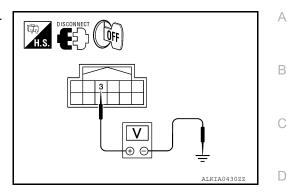
1. Turn ignition switch OFF.

B2190, P1610 NATS ANTENNA AMP

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

- Disconnect key slot harness connector.
- 3. Check voltage between key slot harness connector and ground.



Key	v slot	Ground	Continuity
Connector	Terminal	Giodila	
M40	3	Ground	Yes

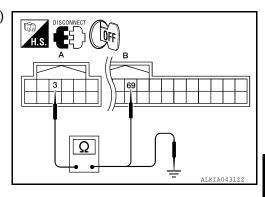
Is the inspection result normal?

YES >> Replace key slot. Refer to <u>SEC-220, "Removal and Installation"</u>.

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		CM	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	
A: M40	3	Ground	No

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair harness or connector.

.CHECK KEY SLOT GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect key slot harness connector.

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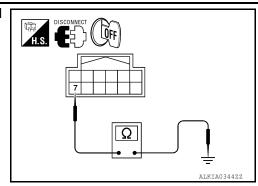
Revision: February 2013 SEC-67 2012 Altima GCC

B2190, P1610 NATS ANTENNA AMP

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

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



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

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair harness or connector.

8.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

B2191, P1615 DIFFERENCE OF KEY

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

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INFOID:0000000007422381

B2191, P1615 DIFFERENCE OF KEY

Description INFOID:0000000007422379

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:0000000007422380

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 Ney

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- Insert the Intelligent Key in the key slot. Press the push-button ignition switch.
- 2. Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to SEC-69, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

1. PERFORM INITIALIZATION

Perform initialization with CONSULT. Re-register all Intelligent Keys.

For initialization and registration of Intelligent Key. Refer to CONSULT Immobilizer mode and follow the onscreen instructions.

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

>> Intelligent Key was unregistered.

NO

- >> BCM is malfunctioning.
 - Replace BCM. Refer to BCS-92, "Removal and Installation".
 - · Perform initialization again

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SEC-69 Revision: February 2013 2012 Altima GCC SEC

B2192, P1611 ID DISCORD, IMMU-ECM

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

B2192, P1611 ID DISCORD, IMMU-ECM

Description INFOID:000000007422382

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 SEC-34. "DTC Logic".
- If DTC B2192 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-35</u>, "DTC Logic".

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

Is DTC detected?

YES >> Go to SEC-70, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422384

1.PERFORM INITIALIZATION

Perform initialization with CONSULT. Re-register all Intelligent Keys.

For initialization and registration of Intelligent Key. Refer to CONSULT Immobilizer mode and follow the onscreen instructions.

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

YES >> ID was unregistered.

NO

- >> BCM is malfunctioning.
 - Replace BCM. Refer to <u>BCS-92</u>, "Removal and Installation".
 - · Perform initialization again
 - Replace ECM

B2193, P1612 CHAIN OF ECM-IMMU

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

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B2193, P1612 CHAIN OF ECM-IMMU

Description INFOID:0000000007422385

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:0000000007422386

DTC DETECTION LOGIC

NOTE:

 If DTC B2193 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-34, "DTC Logic".

 If DTC B2193 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-35, "DTC Logic".

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

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

Is DTC detected?

>> Go to SEC-71, "Diagnosis Procedure". YES

NO >> Inspection End.

Diagnosis Procedure

1.REPLACE BCM

- Replace BCM.
- Perform initialization with CONSULT. For initialization, refer to CONSULT Immobilizer mode and follow the on-screen instructions.

Does the engine start?

YES >> BCM is malfunctioning.

- Replace BCM. Refer to BCS-92, "Removal and Installation".
- Perform initialization again.

NO >> ECM is malfunctioning.

- · Replace ECM.
- · Perform ECM re-communicating function.

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INFOID:0000000007422387

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[COUPE]

B2195 ANTI-SCANNING

Description INFOID.000000007422388

When ignition switch is turned ON, BCM performs ID verification with ECM. If ID verification that is out of the specified specification is detected, BCM prohibits further ID verification and engine cranking.

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2195	ANTI-SCANNING	ID verification between BCM and ECM that is out of the specified specification is detected	ID verification request out of the specified specification

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions.

CVT models

- Selector lever is in the P or N position
- Do not depress brake pedal

M/T models

- Do not depress clutch pedal
- 2. Check "Self-diagnostic result" using CONSULT.

Is DTC detected?

YES >> Refer to <u>SEC-72</u>, "<u>Diagnosis Procedure</u>".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422390

1. CHECK SELF-DIAGNOSTIC RESULT-1

- Perform "Self-diagnostic result" of BCM using CONSULT.
- Erase DTC.
- 3. Perform DTC Confirmation Procedure. Refer to <a>SEC-72, "DTC Logic".

Is DTC B2195 detected?

YES >> GO TO 2.

NO >> Inspection End

2.CHECK EQUIPMENT OF THE VEHICLE

Check that unspecified accessory part related to engine start is not installed.

Is unspecified accessory part related to engine start installed?

YES >> GO TO 3.

NO >> Replace BCM. Refer to BCS-92, "Removal and Installation".

3. CHECK SELF-DIAGNOSTIC RESULT-2

- 1. Obtain the customers approval to remove unspecified accessory part related to engine start, and then remove it.
- Perform "Self-diagnostic result" of BCM using CONSULT.
- Erase DTC.
- Perform DTC Confirmation Procedure. Refer to <u>SEC-72</u>, "DTC Logic".

Is DTC B2195 detected?

YES >> Replace BCM. Refer to BCS-92, "Removal and Installation".

NO >> Inspection End

B2555 STOP LAMP

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

B2555 STOP LAMP

Description

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INFOID:0000000007422393

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

DTC DETECTION LOGIC

DTC	CONSULT	DTC detecting condition	Possible cause
B2555	STOP LAMP	BCM makes a comparison between the upper voltage and lower voltage of stop lamp switch. The BCM then judges from their values to detect the malfunctioning circuit.	FuseStop lamp switchStop lamp relay-1 (with CVT)Harness or connectors

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.

Is DTC detected?

YES >> Refer to <u>SEC-73</u>, "<u>Diagnosis Procedure (With CVT)</u>" or <u>SEC-75</u>, "<u>Diagnosis Procedure (With M/T)</u>".

NO >> Inspection End.

Diagnosis Procedure (With CVT)

Regarding Wiring Diagram information, refer to <a>SEC-181, "Wiring Diagram".

1. CHECK FUSE

Check 10A fuse [No.7, located in fuse block (J/B)].

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the blown fuse after repairing the shorted circuit.

2 .CHECK STOP LAMP SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- Disconnect BCM harness connector.
- Check voltage between BCM harness connector M18 terminal 26 and ground.

В	BCM		Stop lamp	Voltage [V]
Connector	Terminal	Ground	switch position	voltage [v]
M18	26	Ground	Depressed	Battery voltage
IVI I O	20	Giouna	Released	0

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-92, "Removal and Installation".

NO >> GO TO 3.

3.CHECK STOP LAMP SWITCH POWER SUPPLY CIRCUIT

1. Check voltage between stop lamp harness connector E38 terminal 2 and ground.

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Stop lamp switch		Ground	Stop lamp	Voltage [V]
Connector	Terminal	Giodila	switch position	voitage [v]
E38	2	Ground	Depressed	Battery volt- age
			Released	0

Is the inspection result normal?

YES >> GO TO 4. NO >> GO TO 9.

4. CHECK STOP LAMP RELAY-1 SIGNAL CIRCUIT

1. Check voltage between stop lamp relay-1 harness connector E57 terminal 1 and ground.

Stop lamp relay-1		Ground Stop lamp		Voltage [V]
Connector	Terminal	Oround	switch position	voitage [v]
E57	7 1 Crow		Depressed	Battery voltage
LJI		Ground	Released	0

Is the inspection result normal?

YES >> GO TO 5.

NO >> Check harness for open or short between stop lamp relay-1 connector and stop lamp switch. Repair or replace necessary parts.

5. CHECK STOP LAMP RELAY-1 POWER SUPPLY

1. Check voltage between stop lamp relay-1 harness connector E57 terminal 5 and ground.

Stop lam	np relay-1	Ground	Voltage
Connector	Terminal	Giodila	voltage
E57	5	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 6.

NO >> Check pin terminals and connection of stop lamp relay-1 harness connector and harness for abnormal conditions. Repair or replace necessary parts.

6.CHECK STOP LAMP RELAY-1 GROUND CIRCUIT

- 1. Disconnect stop lamp relay-1 E-57 connector.
- 2. Check continuity between stop lamp relay-1 harness connector E57 terminal 2 and ground.

Stop lam	np relay-1	Ground	Continuity
Connector	Connector Terminal		Continuity
E57	2	Ground	Yes

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair harness or connector.

7.CHECK STOP LAMP RELAY-1 OUTPUT CIRCUIT

- 1. Connect stop lamp relay-1 E57 connector.
- 2. Check voltage between stop lamp relay-1 harness connector E57 terminal 3 and ground.

Stop lamp relay-1		Ground	Stop lamp	Voltage [V]
Connector	Terminal	Oround	switch position	voltage [v]
F57	3 Ground		Depressed	Battery voltage
	3	Giodila	Released	0

B2555 STOP LAMP

s the inspecti	JIT DIAGNO on result nor				[COUPE]
	O TO 8.				
_	O TO 10.				
3.CHECK ST	OP LAMP S	WITCH CIR	CUIT		
	ntinuity betweerminal 26.	een stop lam	np relay-1 har	ness connecto	or E57 terminal 3 and BCM harness connec-
Stop lam	p relay-1		ВСМ	2 11 11	_
Connector	Terminal	Connector	Terminal	Continuity	
E57	3	M18	26	Yes	_
2. Check co	ntinuity betw	een stop lan	np relay-1 har	ness connecto	or E57 terminal 3 and ground.
					_
<u> </u>	lamp relay-1		Ground	Continuity	
Connector	Termi	nai	Craund	N1-	_
E57	3	10	Ground	No	_
s the inspecti		mai?			
	O TO 11. epair harnes	c or connoct	or		
_	•		OI.		
		MUTOLI			
	OP LAMP S				
Refer to SEC-	76, "Compor	nent Inspect	on".		
Refer to <u>SEC-</u> s the inspecti	76, "Compor on result nor	nent Inspect mal?			and from blook I/D
Refer to <u>SEC-</u> s the inspecti YES >> R	76, "Compor on result nor epair or repla	nent Inspect mal? ace harness		lamp switch	and fuse block J/B.
Refer to <u>SEC-</u> s the inspecti YES >> R NO >> R	76, "Compor on result nor epair or repla eplace stop I	nent Inspect mal? ace harness amp switch.) lamp switch a	and fuse block J/B.
Refer to <u>SEC-</u> s the inspecti YES >> R NO >> R 10.CHECK	76, "Compor on result nor epair or repla eplace stop I STOP LAMP	nent Inspect mal? ace harness amp switch. RELAY-1	between stop) lamp switch	and fuse block J/B.
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< DTC/CIRCUIT DIAGNOSIS >

3. Check voltage between BCM harness connector and ground.

В	BCM		Stop lamp	Voltage [V]
Connector	Terminal	Ground	switch position	voitage [v]
M18	26	Ground	Depressed	Battery volt- age
			Released	0

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Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-92, "Removal and Installation"</u>

NO >> GO TO 2

2.CHECK STOP LAMP SWITCH POWER SUPPLY CIRCUIT

- 1. Disconnect stop lamp switch harness connector.
- 2. Check voltage between stop lamp harness connector and ground.

Stop lan	np switch	Ground	Voltage [V]
Connector	Connector Terminal		voitage [v]
E38	E38 1		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 terminal 2 and BCM harness connector M18 terminal 26.

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

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

Stop lan	np switch	Ground	Continuity
Connector	Connector Terminal		Continuity
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-76, "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".

>> Inspection End.

Component Inspection

INFOID:0000000007422395

B2555 STOP LAMP

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

1. CHECK STOP LAMP SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect stop lamp switch harness connector E38.
- Check continuity between stop lamp switch terminals 1 and 2 under the following conditions.

Stop lamp switch		Condition		Continuity
Terminal			Condition	
1	2	Brake pedal	Released	No
	i 2 Biake pedai		Depressed	Yes

Is the inspection result normal?

>> Inspection End. YES

NO >> Replace stop lamp switch.

STOP LAMP RELAY-1

1. CHECK STOP LAMP RELAY-1

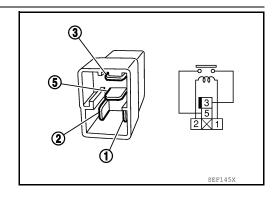
Check continuity between stop lamp relay-1 terminals 3 and 5.

Condition	Continuity
Apply battery voltage between terminals 1 and 2	Yes
No voltage supplied	No

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace stop lamp relay-1.



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SEC-77 Revision: February 2013 2012 Altima GCC В

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INFOID:0000000007422398

B2556 PUSH-BUTTON IGNITION SWITCH

Description INFOID:000000007422396

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

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.
- Check "Self diagnostic result" with CONSULT.

Is DTC detected?

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

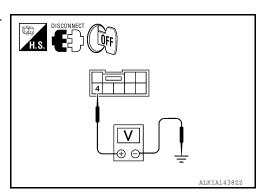
NO >> Inspection End.

Diagnosis Procedure

Regarding Wiring Diagrams information, refer to <u>SEC-204, "Wiring Diagram"</u>.

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]	
Connector	Connector Terminal		voltage [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-79, "Component Inspection".

B2556 PUSH-BUTTON IGNITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

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Is the inspection normal?

YES >> GO TO 3.

NO >> Replace push-button ignition switch. Refer to <u>SEC-221, "Removal and Installation"</u>.

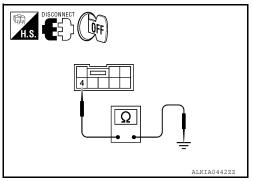
3. CHECK INTERMITTENT INCIDENT

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	
Connector Terminal		Ground	Sommery	
M38	4	Ground	No	

Is the inspection normal?

YES >> Replace BCM. Refer to BCS-92, "Removal and Installation".

NO >> Repair harness or connector.

Component Inspection

INFOID:0000000007422399

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		Condition	Continuity	
Terminal		Condition		
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-221, "Removal and Installation"</u>.

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B2557 VEHICLE SPEED

Description INFOID:000000007422400

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:

- If DTC B2557 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-34, "DTC Logic".
- If DTC B2557 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-35</u>, "DTC Logic".

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.

Is DTC detected?

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

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422402

$1.\mathsf{check}$ dtc with "abs actuator and electric unit (control unit)"

Check "Self diagnostic result" with CONSULT. Refer to BRC-115, "DTC No. Index".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace.

2.CHECK UNIFIED METER.

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

>> Inspection End.

B2560 STARTER CONTROL RELAY

[COUPE] < DTC/CIRCUIT 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:0000000007422404

DTC DETECTION LOGIC

NOTE:

- If DTC B2560 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-34, "DTC Logic".
- If DTC B2560 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-35, "DTC Logic".

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B2560	STARTER CONTROL RELAY	BCM detects a mismatch between the OFF request 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

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

Is DTC detected?

>> Go to SEC-81, "Diagnosis Procedure". YES

>> Inspection End.

Diagnosis Procedure

Check "Self diagnostic result" with CONSULT. Refer to PCS-29, "DTC_Index".

Is the inspection result normal?

1. CHECK DTC WITH IPDM E/R

YES >> GO TO 2.

NO >> Repair or replace.

2.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

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B2601 SHIFT POSITION

Description INFOID:000000007422406

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 SEC-34, "DTC Logic".
- If DTC B2601 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-35, "DTC Logic".
- If DTC B2601 is displayed with DTC B2605, first perform the trouble diagnosis for DTC B2605. Refer to <u>SEC-94, "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 received from IPDM E/R via CAN communication continues for 2 seconds or more	Harness or connectors (CVT shift selector circuit is open or shorted.) CVT shift selector (park position 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.
- Check "Self diagnostic result" with CONSULT.
- 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.
- Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to <u>SEC-82</u>, "<u>Diagnosis Procedure</u>".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422408

Regarding Wiring Diagrams information, refer to <a>SEC-204, "Wiring Diagram".

1. CHECK CVT SHIFT SELECTOR POWER SUPPLY

- Turn ignition switch to ACC.
- Disconnect CVT shift selector (park position switch) harness connector.

B2601 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

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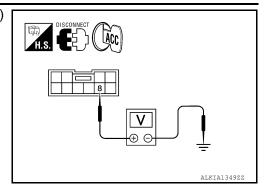
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3. Check voltage between CVT shift selector (park position switch) harness connector and ground.



CVT shift selector (park position switch)	Ground	Voltage [V]	
Connector Terminal		Ground	voltage [v]	
M23	8	Ground	Battery voltage	

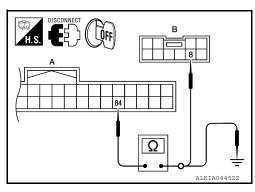
Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK CVT SHIFT SELECTOR POWER SUPPLY CIRCUIT

- 1. Disconnect BCM harness connector.
- Check continuity between BCM harness connector M19 (A) terminal 84 and CVT shift selector (park position switch) harness connector M23 (B) terminal 8.



ВСМ		CVT shift selector (park position 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.

В	CM	Ground	Continuity	
Connector Terminal		Ground	Continuity	
A: M19	84	Ground	No	

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-92, "Removal and Installation".

NO >> Repair harness or connector.

3.CHECK CVT SHIFT SELECTOR CIRCUIT (BCM)

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

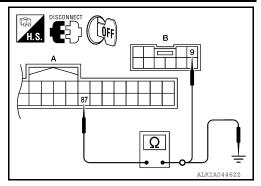
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Revision: February 2013 SEC-83 2012 Altima GCC

Check continuity between BCM harness connector M19 (A) terminal 87 and CVT shift selector (park position switch) harness connector M23 (B) terminal 9.



В	CM	CVT shift selector (park position 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.

В	ВСМ		Continuity	
Connector	Terminal	Ground	Continuity	
A: M19	87	Ground	No	

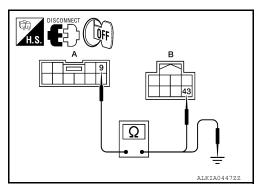
Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

4. CHECK CVT SHIFT SELECTOR CIRCUIT (IPDM E/R)

- 1. Disconnect BCM harness connector.
- 2. Check continuity between CVT shift selector (park position switch) harness connector M23 (A) terminal 9 and IPDM E/R harness connector E17 (B) terminal 43.



	ft selector tion switch)	IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
A: M23	9	B: E17	43	Yes

Check continuity between CVT shift selector (park position switch) harness connector M23 (A) terminal 9 and ground.

CVT shift selector (park position switch)		Ground	Continuity	
Connector	Terminal			
A: M23	9	Ground	No	

Is the inspection result normal?

YES >> GO TO 5.

| Section | Sect

>> Replace CVT shift selector. Refer to TM-239, "Removal and Installation" (RE0F09B), or TM-404,

"Removal and Installation" (RE0F10A).

6.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

Component Inspection

>> GO TO 6.

YES

NO

1. CHECK CVT SHIFT SELECTOR (PARK POSITION SWITCH)

- 1. Turn ignition switch OFF.
- 2. Disconnect CVT shift selector (park position switch) harness connector.
- 3. Check continuity between CVT shift selector (park position switch) terminals as follows.

CVT shift selector (park position switch)		Condition		Continuity
Terminal				
Ω.	9	CVT selector lever	P position	No
	9	CVT Selector level	Other than above	Yes

Is the inspection result normal?

YES >> Inspection End.

NO

>> Replace CVT shift selector. Refer to <u>TM-239</u>, "Removal and Installation" (RE0F09B), or <u>TM-404</u>, "Removal and Installation" (RE0F10A).

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Revision: February 2013 SEC-85 2012 Altima GCC

INFOID:0000000007422412

B2602 SHIFT POSITION

Description INFOID:000000007422410

BCM confirms the shift position with the following 2 signals.

- CVT selector lever
- Speed signal from meter

DTC Logic INFOID:000000007422411

DTC DETECTION LOGIC

NOTE:

- If DTC B2602 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-34, "DTC Logic".
- If DTC B2602 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-35</u>, "DTC Logic".

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 shorted) CVT shift selector (park position 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.
- 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.

Is DTC detected?

YES >> Go to SEC-86, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

Regarding Wiring Diagrams information, refer to <a>SEC-204, "Wiring Diagram".

$1.\mathsf{check}$ dtc with "combination meter"

Check "Self diagnostic result" with CONSULT. Refer to MWI-47, "DTC Index".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace.

2.CHECK CVT SHIFT SELECTOR POWER SUPPLY

- Turn ignition switch to ACC.
- 2. Disconnect CVT shift selector (park position switch) harness connector.

B2602 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

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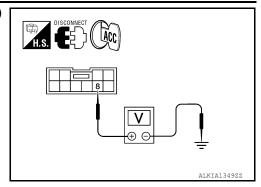
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3. Check voltage between CVT shift selector (park position switch) harness connector and ground.



CVT shift selector (park position switch)	Ground	Voltage [V]	
Connector	Terminal	Giodila	voitage [v]	
M23	8	Ground	Battery voltage	

Is the inspection result normal?

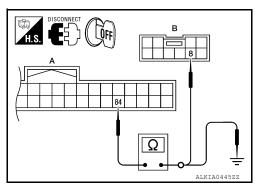
YES >> GO TO 4.

NO >> GO TO 3.

3.check cvt shift selector power supply circuit

1. Disconnect BCM harness connector.

Check continuity between BCM harness connector M19 (A) terminal 84 and CVT shift selector (park position switch) harness connector M23 (B) terminal 8.



В	CM	CVT shift selector (park position 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-92, "Removal and Installation".

NO >> Repair harness or connector.

4. CHECK CVT SHIFT SELECTOR CIRCUIT

1. Disconnect BCM harness connector.

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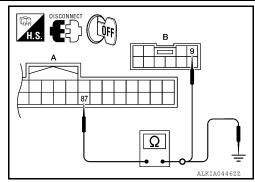
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2. Check continuity between CVT shift selector (park position switch) harness connector and BCM harness connector.



В	CM	CVT shift selector (park position switch)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M19	87	B: M23	9	Yes

3. Check continuity between CVT shift selector (park position switch) harness connector and ground.

В	всм		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 SHIFT SELECTOR

Refer to SEC-85, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace CVT shift selector. Refer to TM-239, "Removal and Installation".

6. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

B2603 SHIFT POSITION STATUS

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

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B2603 SHIFT POSITION STATUS

Description INFOID:0000000007422413

BCM confirms the shift position with the following 2 signals.

- CVT selector lever
- Transmission range switch

DTC Logic INFOID:0000000007422414

DTC DETECTION LOGIC

NOTE:

 If DTC B2603 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-34, "DTC Logic".

 If DTC B2603 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-35, "DTC Logic".

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. Transmission range switch: approx. 0V CVT shift selector (park position switch): approx 0V	Harness or connector (CVT shift selector circuit is open or shorted.) Harness or connectors [Transmission range) switch circuit is open or shorted.] CVT shift selector (park position switch) Transmission range switch

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

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.
- Shift to N and wait for at least 1 second.
- Shift to any gear other than P or N and wait for at least 1 second.
- Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to SEC-89, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

Regarding Wiring Diagrams information, refer to SEC-181, "Wiring Diagram".

1. CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT. Refer to PCS-29, "DTC Index".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK TRANSMISSION RANGE SWITCH CIRCUIT

- Turn ignition switch OFF.
- Disconnect TCM harness connector and BCM harness connector. 2.
- 3. Check continuity between TCM harness connector terminal and BCM harness connector M18 terminal

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B2603 SHIFT POSITION STATUS

[COUPE]

TO	CM	BCM		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
F16 (VQ35DE)	20	M18	48	Yes	
F25 (QR25DE)	2	- IVITO	40	165	

4. Check continuity between TCM harness connector terminal and ground.

To	CM	Ground	Continuity
Connector	Terminal	Ground	Continuity
F16 (VQ35DE)	20	Ground	No
F25 (QR25DE)	2	Ground	INU

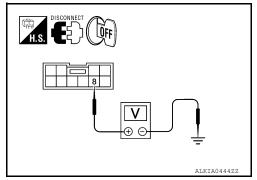
Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3.CHECK CVT SHIFT SELECTOR POWER SUPPLY

- 1. Turn ignition switch OFF.
- Disconnect CVT shift selector (park position switch) harness connector.
- 3. Check voltage between CVT shift selector (park position switch) harness connector and ground.



CVT shift selector (park position switch)	Ground	Voltage [V]	
Connector	Terminal	Ground	voltage [v]	
M23	8	Ground	Battery voltage	

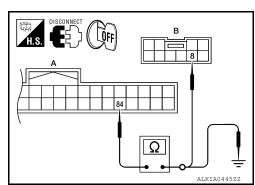
Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4. CHECK CVT SHIFT SELECTOR POWER SUPPLY CIRCUIT

- 1. Disconnect BCM harness connector.
- 2. Check continuity between BCM harness connector M19 (A) terminal 84 and CVT shift selector (park position switch) harness connector M23 (B) terminal 8.



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В	CM	CVT shift selector (park position 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?

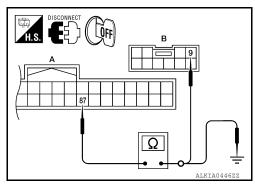
YES >> Replace BCM. Refer to BCS-92, "Removal and Installation".

NO >> Repair harness or connector.

5. CHECK CVT SHIFT SELECTOR CIRCUIT

Disconnect BCM harness connector.

2. Check continuity between BCM harness connector M19 (A) terminal 87 and CVT shift selector (park position switch) harness connector M23 (B) terminal 9.



В	СМ	CVT shift selector (park position switch)		(contain a siting south)		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.

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

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

6.CHECK CVT SHIFT SELECTOR

Refer to SEC-85, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 7.

>> Replace CVT shift selector. Refer to TM-239, "Removal and Installation" (RE0F09B), or TM-404, NO "Removal and Installation" (RE0F10A).

7.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

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SEC-91 Revision: February 2013 2012 Altima GCC

B2604 PNP SWITCH

Description INFOID:000000007422416

BCM confirms the shift position with the following 4 signals.

- CVT selector lever
- Transmission range 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 SEC-34, "DTC Logic".
- If DTC B2604 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-35</u>, "DTC Logic".

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. Transmission range switch indicates vehicle is in P or N shift position. Signal from TCM indicates vehicle is in forward or reverse gear. Transmission range switch indicates vehicle is in forward or reverse gear. Signal from TCM indicates vehicle is in P or N. 	Harness or connectors [The transmission range switch circuit is open or shorted.] Transmission range 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.
- Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to SEC-92, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422418

Regarding Wiring Diagrams information, refer to SEC-181, "Wiring Diagram".

1. CHECK DTC WITH TCM

Check "Self diagnostic result" with CONSULT. Refer to TM-196, "DTC Index" (RE0F09B), or refer to (RE0F10A) TM-359, "DTC Index".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace.

2. CHECK TRANSMISSION RANGE SWITCH CIRCUIT

- Turn ignition switch OFF.
- Disconnect TCM harness connector and BCM harness connector.
- Check continuity between TCM harness connector and BCM harness connector.

B2604 PNP SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

T	CM	ВСМ		Continuity
Connector	Terminal	Connector	Terminal	Continuity
F16 (VQ35DE)	20	M18	48	Yes
F25 (QR25DE)	2	IVITO	40	165

4. Check continuity between TCM harness connector and ground.

TO	CM	Ground	Continuity	
Connector	Terminal	Giodila	Continuity	
F16 (VQ35DE)	20	Ground	No	
F25 (QR25DE)	2	Giouna	INO	

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.

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B2605 PNP SWITCH

Description INFOID:000000007422415

BCM confirms the shift position with the following 4 signals.

- CVT selector lever
- Transmission range 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 SEC-34, "DTC Logic".
- If DTC B2605 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-35, "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 position signal from IPDM E/R exists. 	Transmission range switch

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.

Is DTC detected?

YES >> Go to SEC-94, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422421

Regarding Wiring Diagrams information, refer to SEC-181, "Wiring Diagram".

1. CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT. Refer to PCS-29, "DTC Index".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace.

2.CHECK TRANSMISSION RANGE SWITCH CIRCUIT

- Turn ignition switch OFF.
- Disconnect TCM harness connector and BCM harness connector.
- Check continuity between TCM connector and BCM harness connector.

B2605 PNP SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

TC	CM	ВСМ		Continuity
Connector	Terminal	Connector	Terminal	Continuity
F16 (VQ35DE)	20	M18	48	Yes
F25 (QR25DE)	2	IVITO	40	165

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4. Check continuity between TCM harness connector and ground.

TCM		Ground	Continuity
Connector	Terminal	Orodila	Continuity
F16 (VQ35DE)	20	Ground	No
F25 (QR25DE)	2	Giodila	INO

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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.

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B2606 STEERING LOCK RELAY

Description INFOID:000000007422422

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

DTC DETECTION LOGIC

NOTE:

- If DTC B2606 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-34, "DTC Logic".
- If DTC B2606 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-35</u>, "DTC Logic".

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. Electronic steering column lock ON signal transmitted by IPDM E/R The electronic steering column lock status feedback	Steering lock relay (in IPDM E/R)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to <u>SEC-96</u>, "<u>Diagnosis Procedure</u>".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422424

1. CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT. Refer to PCS-29, "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.

B2607 STEERING LOCK RELAY

< DTC/CIRCUIT DIAGNOSIS >

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B2607 STEERING LOCK RELAY

Description INFOID:0000000007422425

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

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2607 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-34, "DTC Logic".
- If DTC B2607 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-35</u>, "DTC Logic".

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 electronic steering column lock power supply (ON/OFF) IPDM E/R status of electronic steering column lock power supply (ON/OFF)	Harness or connectors (electronic steering column lock 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.
- CVT selector lever is in the P position
- Do not depress brake pedal
- 2. Steering lock is locked.
- 3. Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to SEC-97, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

Regarding Wiring Diagrams information, refer to SEC-181, "Wiring Diagram".

1. CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT. Refer to PCS-29, "DTC_Index".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK ELECTRONIC STEERING COLUMN LOCK POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- Disconnect electronic steering column lock harness connector.

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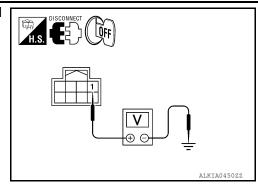
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3. Check voltage between electronic steering column lock and ground under the following conditions.



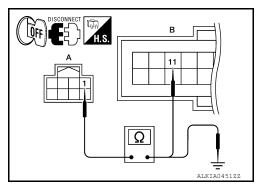
Electronic stee	Electronic steering column lock		Condition	Voltage (V)	
Connector	Terminal	Ground	Condition	voitage (v)	
M32	1	Ground	Press push-button ignition switch when steering lock is in lock condition.	Battery voltage	

Is the inspection result normal?

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

3.CHECK ELECTRONIC STEERING COLUMN LOCK POWER SUPPLY CIRCUIT

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



Electronic steel	ring column lock	IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M32	1	B: E18	11	Yes

4. Check continuity between electronic steering column lock and ground.

Electronic steering column lock		Ground	Continuity
Connector	Terminal	Giodila	Continuity
A: M32	1	Ground	No

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-45, "Removal and Installation".

NO >> Repair harness or connector.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

B2608 STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

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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

DTC DETECTION LOGIC

NOTE:

- If DTC B2608 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-34, "DTC Logic".
- If DTC B2608 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-35</u>, "DTC Logic".

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.
- Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to SEC-99, "Diagnosis Procedure".

NO >> Inspection End.

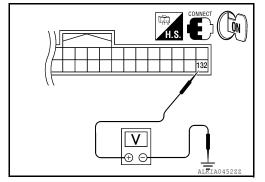
Diagnosis Procedure

INFOID:0000000007422430

Regarding Wiring Diagrams information, refer to SEC-181, "Wiring Diagram".

1. CHECK STARTER RELAY

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



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BCM		Ground		Condition	Voltage (V)
Connector	Terminal	Giodila	Condition		voltage (v)
M04 400	CVT selector lever	N or P position	Battery voltage		
	132	Ground	CVT Sciector level	Other than above	0
IVIZ I	M21 132		Not depressed	0	
			Clutch pedal	Depressed	Battery voltage

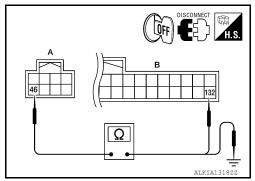
Is the measurement value within the specification?

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.



IPDN	M E/R	В	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.

IPDI	M E/R	Ground	Continuity	
Connector	Terminal	Giodila		
A: E17	46	Ground	No	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-45, "Removal and Installation".

NO >> Repair harness or connector.

3. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

< DTC/CIRCUIT DIAGNOSIS >

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B2609 STEERING STATUS

Description INFOID:0000000007422431

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

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2609 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-34, "DTC Logic".
- If DTC B2609 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-35</u>, "DTC Logic".

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

Is DTC detected?

YES >> Go to SEC-101, "Diagnosis Procedure".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE 2

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

Is DTC detected?

YES >> Go to SEC-101, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

Regarding Wiring Diagrams information, refer to <u>SEC-181</u>, "Wiring Diagram".

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

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< DTC/CIRCUIT DIAGNOSIS >

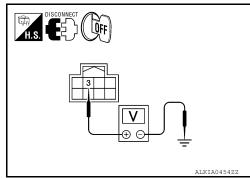
In which case is DTC detected?

Case1 >> GO TO 2.

Case2 >> GO TO 7.

2. CHECK BCM OUTPUT SIGNAL

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



Electronic steering column lock		Ground	Voltage [V]
Connector	Terminal	Giodila	voitage [v]
M32	3	Ground	Battery voltage

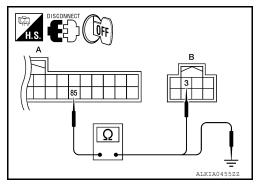
Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

3. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-I

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



В	BCM E		Electronic steering column lock	
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		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

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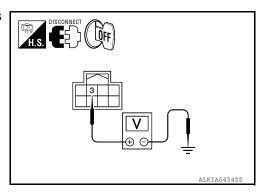
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- 1. Connect IPDM E/R harness connector.
- 2. Disconnect BCM harness connector.
- 3. Check voltage between electronic steering column lock harness connector and ground.



Electronic steering column lock		Ground	Voltage [V]
Connector	Terminal	Oround	voitage [v]
M32	3	Ground	Battery voltage

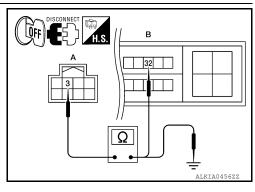
Is the inspection result normal?

YES >> Replace electronic steering column lock.

NO >> GO TO 5.

5. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-II

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



Electronic stee	ring column lock	IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M32	3	B: E18	32	Yes

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

Electronic steering column lock		Ground	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.

7. CHECK BCM OUTPUT SIGNAL

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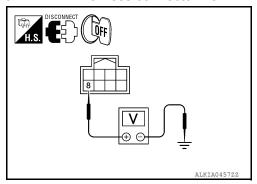
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< DTC/CIRCUIT DIAGNOSIS >

- Turn ignition switch OFF.
- 2. Disconnect electronic steering column lock harness connector and IPDM E/R harness connector E5.
- 3. Check voltage between electronic steering column lock harness connector and ground.



Electronic steering column lock		Ground	Voltage [V]
Connector	Terminal	Ground	voilage [v]
M32	8	Ground	Battery voltage

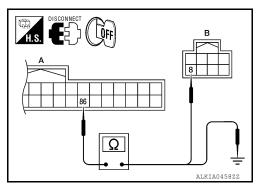
Is the inspection result normal?

YES >> GO TO 9.

NO >> GO TO 8.

8. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-I

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



В	ВСМ		Electronic steering column lock	
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	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.
- Disconnect BCM harness connector M19.

B2609 STEERING STATUS

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

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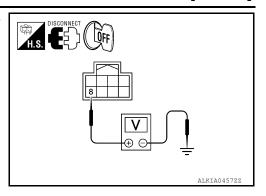
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Check voltage between electronic steering column lock harness connector and ground.



Electronic steering column lock		Ground	Voltage [V]
Connector	Terminal	Ground	voitage [v]
M32	8	Ground	Battery voltage

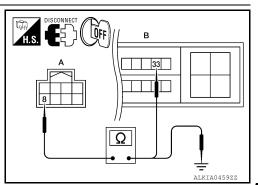
Is the inspection result normal?

YES >> Replace electronic steering column lock.

NO >> GO TO 10.

10. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-II

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



Electronic stee	ring column lock	IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M32	8	B: E18	33	Yes

2. Check continuity between electronic steering column lock harness connector and ground.

Electronic steering column lock		Ground	Continuity
Connector	Terminal	Giodila	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.

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B260B ELECTRONIC STEERING COLUMN LOCK

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

B260B ELECTRONIC STEERING COLUMN LOCK

Description INFOID:000000007422434

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

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260B	ELECTRONIC STEERING COL- UMN LOCK	BCM detects malfunctioning of electronic steering column lock before steering unlocking.	Electronic steering column lock

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- Press the push-button ignition switch, when steering is locked.
- 2. Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to SEC-106, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422436

1. INSPECTION START

- 1. Turn ignition switch ON.
- Check "Self diagnostic result" with CONSULT.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure.

See SEC-106, "DTC Logic".

Is the DTC B260B displayed again?

YES >> Replace electronic steering column lock.

NO >> Inspection End.

B260C ELECTRONIC STEERING COLUMN LOCK

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

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INFOID:0000000007422439

B260C ELECTRONIC STEERING COLUMN LOCK

Description INFOID:000000007422437

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

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260C	ELECTRONIC STEERING COLUMN LOCK	BCM detects malfunctioning of electronic steering column lock before steering locking.	Electronic steering column lock

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-107, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

1.INSPECTION START

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure.

See SEC-107, "DTC Logic".

Is the DTC B260C displayed again?

YES >> Replace electronic steering column lock.

NO >> Inspection End.

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B260D ELECTRONIC STEERING COLUMN LOCK

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

B260D ELECTRONIC STEERING COLUMN LOCK

Description INFOID:000000007422440

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

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260D	ELECTRONIC STEERING COLUMN LOCK	BCM detects malfunctioning of electronic steering column lock after steering locking.	Electronic steering column lock

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to <u>SEC-108</u>, "<u>Diagnosis Procedure</u>".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422442

1.INSPECTION START

- Turn ignition switch ON.
- Check "Self diagnostic result" with CONSULT.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure.

See SEC-108, "DTC Logic".

Is the DTC B260D displayed again?

YES >> Replace electronic steering column lock.

NO >> Inspection End.

B260F ENGINE STATUS

DTC/CIRCUIT DIAGNOSIS >	[COUPE]
3260F ENGINE STATUS	
escription	INFOID:000000007422443
CM receives the engine status signal from ECM via CAN communication.	
OTC Logic	INFOID:000000007422444
TC DETECTION LOGIC OTE: If DTC B260F is displayed with DTC U1000, first perform the trouble diagnosis for SEC-34, "DTC Logic". If DTC B260F is displayed with DTC U1010, first perform the trouble diagnosis for SEC-35, "DTC Logic".	
DTC No. Trouble diagnosis name DTC detecting condition Po	ssible 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	
TC CONFIRMATION PROCEDURE PERFORM DTC CONFIRMATION PROCEDURE	_
Turn ignition switch ON under the following conditions. CVT selector lever is in the P position. Do not depress the brake pedal. Check "Self diagnostic result" with CONSULT. DTC detected? YES >> Go to SEC-109, "Diagnosis Procedure". NO >> Inspection End.	
viagnosis Procedure	INFOID:000000007422445
INSPECTION START	
 Turn ignition switch ON. Check "Self diagnostic result" with CONSULT. Touch "ERASE". Perform DTC Confirmation Procedure. See SEC-109, "DTC Logic". 	
the DTC B260F displayed again? YES >> GO TO 2. NO >> Inspection End.	
REPLACE ECM	
Replace ECM. Go to <u>EC-15</u> , "BASIC INSPECTION: Special Repair Requirement" (QR25DE) INSPECTION: Special Repair Requirement" (VQ35DE).	or <u>EC-330, "BASIC</u>
>> Inspection End.	

B2612 STEERING STATUS

Description INFOID:000000007422446

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

DTC DETECTION LOGIC

NOTE:

- If DTC B2612 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-34, "DTC Logic".
- If DTC B2612 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-35, "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 column lock or unlock • Feedback of steering column lock status from IPDM E/R (CAN)	Harness or connectors [electronic steering column lock circuit (BCM side) is open or shorted] Harness or connectors [electronic steering column lock circuit (IP-DM E/R side) is open or shorted.] Electronic steering column lock 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.
- Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to SEC-110, "Diagnosis Procedure".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE 2

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

Is DTC detected?

YES >> Go to SEC-110, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422448

Regarding Wiring Diagrams information, refer to SEC-181, "Wiring Diagram".

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

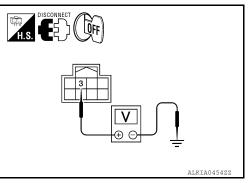
In which case is DTC detected?

< DTC/CIRCUIT DIAGNOSIS >

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

2.CHECK BCM OUTPUT SIGNAL

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



Electronic steering column lock		Ground	Voltage [V]
Connector	Terminal	Giodila	voltage [v]
M32	3	Ground	Battery voltage

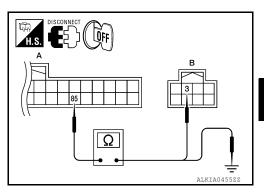
Is the inspection result normal?

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

${f 3.}$ CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-I

Disconnect BCM harness connector.

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



В	CM	Electronic stee	ring column lock	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.

В	CM	Ground	Continuity
Connector	Terminal	Ordana	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

- Connect IPDM E/R harness connector.
- Disconnect BCM harness connector.

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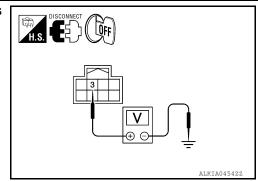
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3. Check voltage between electronic steering column lock harness connector and ground.



Electronic steering column lock		Ground	Voltage [V]
Connector	Terminal	Giodila	voltage [v]
M32	3	Ground	Battery voltage

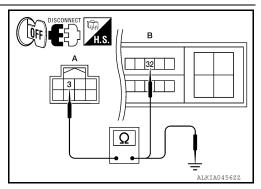
Is the inspection result normal?

YES >> Replace electronic steering column lock.

NO >> GO TO 5.

5. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-II

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



Electronic steel	ring column lock	IPDI	M E/R	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M32	3	B: E18	32	Yes

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

Electronic steering column lock		Ground	Continuity
Connector	Terminal	Ordana	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

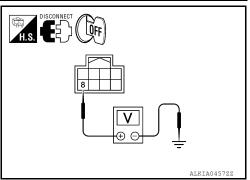
- 1. Turn ignition switch OFF.
- Disconnect electronic steering column lock harness connector and IPDM E/R harness connector.

B2612 STEERING STATUS

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

3. Check voltage between electronic steering column lock harness connector and ground.



Electronic steering column lock		Ground	Voltage [V]
Connector	Terminal	Ground	voltage [v]
M32	8	Ground	Battery voltage

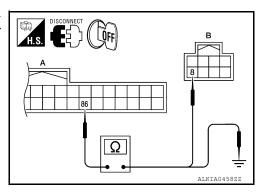
Is the inspection result normal?

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

8. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-I

1. Disconnect BCM harness connector.

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



В	CM	Electronic stee	ring column lock	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	Connector Terminal		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.

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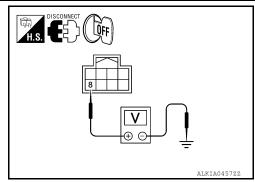
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3. Check voltage between electronic steering column lock harness connector and ground.



Electronic steering column lock		Ground	Voltage [V]
Connector	Terminal	Ground	voltage [v]
M32	8	Ground	Battery voltage

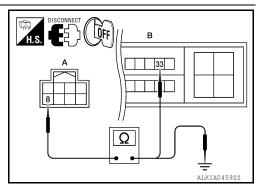
Is the inspection result normal?

YES >> Replace electronic steering column lock.

NO >> GO TO 10.

10. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-II

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



Electronic steel	ring column lock	IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M32	8	B: E18	33	Yes

2. Check continuity between electronic steering column lock harness connector and ground.

Electronic steering column lock		Ground	Continuity
Connector	Terminal	Ordana	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.

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B2617 STARTER RELAY CIRCUIT

Description INFOID:0000000007422449

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

DTC DETECTION LOGIC

NOTE:

- If DTC B2617 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-34, "DTC Logic".
- If DTC B2617 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-35</u>, "DTC Logic".
- If DTC B2617 is displayed with DTC B2611, first perform the trouble diagnosis for DTC B2611. Refer to <u>PCS-62, "DTC Logic"</u>.
- If DTC B2617 is displayed with DTC B210E, first perform the trouble diagnosis for DTC B210E. Refer to <u>SEC-115, "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 shorted.) 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.
- Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to <u>SEC-115</u>, "Diagnosis Procedure".

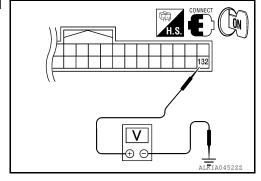
NO >> Inspection End.

Diagnosis Procedure

Regarding Wiring Diagrams information, refer to <a>SEC-181, "Wiring Diagram".

1. CHECK STARTER RELAY

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



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< DTC/CIRCUIT DIAGNOSIS >

ВСМ		Ground Transmission type		Condition	Voltage (V)
Connector	Terminal	Ground	Transmission type	Condition	voitage (v)
			CVT: Select lever in	Ignition switch cranking or request to start	Battery voltage
M24 122	M21 132 Ground	Cround	Faik	Other than above	0
IVIZ I		Giouna	M/T: Clutch pedal	Ignition switch cranking or request to start	Battery voltage
			depressed	Other than above	0

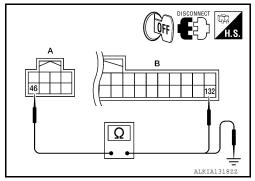
Is the measurement value within the specification.

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK STARTER RELAY CIRCUIT

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



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

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

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

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-92, "Removal and Installation".

NO >> Repair harness or connector.

3. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

B2619 BCM

< DTC/CIRCUIT DIAGNOSIS > [COUPE]

B2619 BCM

Description INFOID:0000000007422452

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

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2619	ВСМ	BCM detects a mismatch between the power supplied to the electronic steering column lock 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.

Is DTC detected?

YES >> Go to SEC-117, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

1. INSPECTION START

- Turn ignition switch ON.
- Check "Self diagnostic result" with CONSULT.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure.

See SEC-117, "DTC Logic".

Is the DTC B2619 displayed again?

YES >> Replace BCM. Refer to BCS-92, "Removal and Installation".

NO >> Inspection End

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B261A PUSH-BUTTON IGNITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

B261A PUSH-BUTTON IGNITION SWITCH

Description INFOID:000000007422455

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

DTC DETECTION LOGIC

NOTE:

- If DTC B261A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-34, "DTC Logic".
- If DTC B261A is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-35</u>, "DTC Logic".

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 ignition 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.
- Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to SEC-118, "Diagnosis Procedure".

NO >> Inspection End.

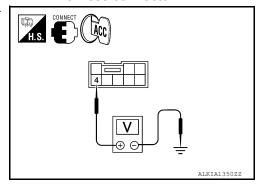
Diagnosis Procedure

INFOID:0000000007422457

Regarding Wiring Diagrams information, refer to SEC-204, "Wiring Diagram".

1. CHECK PUSH-BUTTON IGNITION SWITCH OUTPUT SIGNAL 1

- Turn ignition switch OFF.
- 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.



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

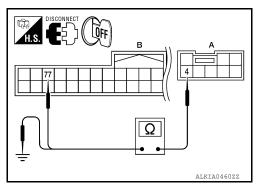
Is the inspection result normal?

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		ВСМ		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		Ordana	
A: M38	4	Ground	No

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3.check push-button ignition switch circuit for short

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

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

SEC-119

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-92, "Removal and Installation".

NO >> Repair harness or connector.

4. CHECK PUSH-BUTTON IGNITION SWITCH

Refer to SEC-119, "Component Inspection".

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace push-button ignition switch. Refer to <u>SEC-221, "Removal and Installation"</u>.

Component Inspection

Revision: February 2013

1. CHECK PUSH-BUTTON IGNITION SWITCH

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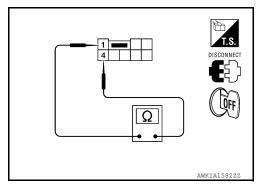
INFOID:0000000007630847

B261A PUSH-BUTTON IGNITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

- 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	4	Pressed	Yes
!	4	Not pressed	No

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace push-button ignition switch. Refer to <u>SEC-221, "Removal and Installation"</u>.

	B261E VI	EHICLE TYPE		
< DTC/CIRCUIT DIAGN	NOSIS >		[COUPE]	
B261E VEHICLE	TYPE			А
Description			INFOID:000000007422458	Α.
There are two types of v • HEV • Conventional	ehicles.			В
DTC Logic			INFOID:000000007422459	С
SEC-34, "DTC Logic".	ayed with DTC U1000, firs	t perform the trouble diagnosi		D E
DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B261E	VEHICLE TYPE	Difference of BCM configuration.	BCM	F
CVT models - Selector lever is in the Do not depress brake M/T models - Do not depress clute 2. Check "Self-diagnost Is DTC detected? YES >> Go to SEC-NO >> Inspection E Diagnosis Procedu	ce pedal ch pedal stic result" using CONSULT. 121, "Diagnosis Procedure" End re		INFOID:0000000007422460	H J SEC
1. Turn ignition switch	ON.			L
 Check "Self-diagnos Touch "ERASE". Perform DTC Confir See <u>SEC-121, "DTC</u> Is the 1st trip DTC B261 	CLogic".			M
· · · · · · · · · · · · · · · · · · ·	M. Refer to BCS-92, "Remo	oval and Installation".		N O
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B26E1 NO RECEPTION OF ENGINE STATUS SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

B26E1 NO RECEPTION OF ENGINE STATUS SIGNAL

Description INFOID:000000007422461

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

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B26E1 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-34, "DTC Logic"</u>.
- If DTC B26E1 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-35, "DTC Logic".

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.

Is DTC detected?

YES >> Go to SEC-122, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422463

1.INSPECTION START

- 1. Turn ignition switch ON.
- Check "Self diagnostic result" with CONSULT.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure.

See SEC-122, "DTC Logic".

Is the DTC B26E1 displayed again?

YES >> GO TO 2.

NO >> Inspection End.

2.REPLACE ECM

- Replace ECM.
- 2. Go to <u>EC-15</u>, "BASIC INSPECTION: Special Repair Requirement" (QR25DE) or <u>EC-330</u>, "BASIC INSPECTION: Special Repair Requirement" (VQ35DE).

>> Inspection End.

B26E8 CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

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B26E8 CLUTCH INTERLOCK SWITCH

Description INFOID:0000000007422464

When clutch interlock switch turns ON, BCM detects that clutch pedal is being depressed and permits to start the engine.

DTC Logic INFOID:0000000007422465

NOTE:

If DTC B26E8 is displayed with DTC B210F, first perform the trouble diagnosis for DTC B210F. Refer to SEC-123, "DTC Logic".

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detection condition	Possible cause
B26E8	CLUTCH INTERLOCK SWITCH	Detects that ASCD cancel switch is in the ON position for 2 seconds or more while ignition switch and clutch interlock switch are ON.	Clutch interlock switch Harness or connector (Clutch interlock switch circuit open or shorted)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- Turn ignition switch ON under the following condition.
- Shift lever is in the neutral position.
- Depress clutch pedal.
- Check "Self-diagnostic result" using CONSULT.

Is DTC detected?

>> Go to SEC-123, "Diagnosis Procedure". YES

NO >> Inspection End

Diagnosis Procedure

Regarding Wiring Diagram information, refer to SEC-204, "Wiring Diagram".

${f 1}.$ check clutch interlock switch power supply

- Turn ignition switch OFF.
- 2. Disconnect clutch interlock switch connector.
- Check voltage between clutch interlock switch harness connector and ground.

(+) Clutch interlock switch		(-)	Voltage (V) (Approx.)
Connector Terminal			
E36	1	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 2.

NO-1 >> Check 10 A fuse [No. 31, located in the fuse and fusible link box]

NO-2 >> Check harness for open or short between clutch interlock switch and fuse.

2.CHECK CLUTCH INTERLOCK SWITCH SIGNAL

- Connect clutch interlock switch connector.
- 2. Disconnect BCM connector.
- Check voltage between BCM harness connector and ground.

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B26E8 CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

INFOID:0000000007422467

	(+) BCM		Condition		Voltage (V) (Approx.)
Connector	Terminal				() ,
M18	22	Ground	Clutch pedal	Depressed	Battery voltage
IVITO	22	Ground	Ciutcii pedai	Released	0

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-92, "Removal and Installation".

NO >> GO TO 3.

${f 3.}$ CHECK CLUTCH INTERLOCK SWITCH SIGNAL CIRCUIT

- Disconnect clutch interlock switch connector.
- Check continuity between clutch interlock switch harness connector and BCM harness connector.

Clutch inte	Clutch interlock switch		BCM	
Connector	Terminal	Connector Terminal		Continuity
E36	2	M18	22	Yes

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

Clutch inte	rlock switch		Continuity
Connector Terminal		Ground	Continuity
E36	2		No

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK CLUTCH INTERLOCK SWITCH

Refer to SEC-124, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace clutch interlock switch. Refer to <u>CL-9</u>, "<u>Exploded View</u>".

5. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End

1. CHECK CLUTCH INTERLOCK SWITCH

1. Turn ignition switch OFF.

Component Inspection

- Disconnect clutch interlock switch connector.
- 3. Check continuity between clutch interlock switch terminals.

Clutch interlock switch Terminal		- Condition		Continuity
				Continuity
1	2	Clutch pedal	Depressed	Yes
ı	2	Ciuton pedai	Released	No

Is the inspection result normal?

YES >> Inspection End

NO >> Replace clutch interlock switch. Refer to CL-9, "Exploded View".

B26E9 STEERING STATUS [COUPE] < DTC/CIRCUIT DIAGNOSIS > **B26E9 STEERING STATUS** Α Description INFOID:0000000007422468 There are 2 switches in the electronic steering column lock (steering lock/unlock switch 1 and 2). BCM com-В pares the 2 switch conditions to judge the present steering status. DTC Logic INFOID:0000000007422469 DTC DETECTION LOGIC NOTE: If DTC B26E9 is displayed with DTC B2609, first perform the trouble diagnosis for DTC B2609. Refer to SEC-D 42, "DTC Logic". Trouble diagnosis Е DTC No. DTC detecting condition Possible cause name BCM requests lock to electronic steering column lock, then electronic steering column lock transmits B26E9 S/L STATUS Electronic steering column lock F a recognition signal to BCM, but electronic steering column lock remains unlocked. DTC CONFIRMATION PROCEDURE ${f 1}$.PERFORM DTC CONFIRMATION PROCEDURE Turn ignition switch ON. Н 2. Turn ignition switch OFF. 3. Press driver side door switch and wait 1 second or more. Turn ignition switch ON. Check "Self-diagnostic result" using CONSULT. Is DTC detected? >> Refer to SEC-125, "Diagnosis Procedure". YES NO >> Inspection End Diagnosis Procedure INFOID:0000000007422470 1.INSPECTION START **SEC** Turn ignition switch ON. Check "Self-diagnostic result" using CONSULT. 2. Touch "ERASE". Perform DTC Confirmation Procedure. Refer to SEC-125, "DTC Logic". Is the DTC B26E9 displayed again? YES >> GO TO 2. NO >> GO TO 3. 2.REPLACE ELECTRONIC STEERING COLUMN LOCK Ν Replace electronic steering column lock. Perform DTC confirmation procedure. Refer to SEC-125, "DTC Logic".

Is the DTC B26E9 displayed again?

YES >> GO TO 3.

NO >> Inspection End

3.check intermittent incident

Refer to GI-42, "Intermittent Incident".

>> Inspection End

B26EA KEY REGISTRATION

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

B26EA KEY REGISTRATION

Description INFOID:000000007422471

When the registered Intelligent Key is carried, the door lock/unlock operation and the push-button ignition switch operation become possible.

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26EA	KEY REGISTRA- TION	Intelligent Key is not registered successfully.	Improper registration operationIntelligent KeyBCM

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- Perform initialization using CONSULT. Reregister all Intelligent Keys.
 For initialization and registration of Intelligent Key, refer to CONSULT Immobilizer mode and follow the onscreen instructions.
- 2. Check "Self-diagnostic result" using CONSULT.

Is DTC detected?

YES >> Go to SEC-123, "Diagnosis Procedure".

NO >> Inspection End

Diagnosis Procedure

INFOID:0000000007422473

1.PERFORM INITIALIZATION

- Perform initialization using CONSULT. Reregister all Intelligent Keys.
 For initialization and registration of Intelligent Key, refer to CONSULT Immobilizer mode and follow the onscreen instructions.
- Check "Self-diagnostic result" using CONSULT.

Is DTC detected?

YES >> GO TO 2.

NO >> Inspection End

2.REPLACE INTELLIGENT KEY

- 1. Replace Intelligent Key. Reregister all Intelligent Keys.
- 2. Perform initialization using CONSULT. For initialization, refer to CONSULT Immobilizer mode and follow the on-screen instructions.
- 3. Check "Self-diagnostic result" using CONSULT.

Is DTC detected?

YES >> Replace BCM. Refer to BCS-92, "Removal and Installation".

NO >> Inspection End

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POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM: Diagnosis Procedure

INFOID:0000000007630939

Regarding Wiring Diagram information, refer to BCS-70, "Wiring Diagram - Coupe" or BCS-79, "Wiring Dia gram - Sedan".

1. CHECK FUSE AND FUSIBLE LINK

Check if the following BCM fuse or fusible link are blown.

Terminal No.	Signal name	Fuse and fusible link No.
1	Rattery nower supply	Н
11	Battery power supply	10

Is the fuse or fusible link blown?

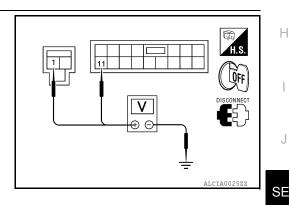
YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

NO >> GO TO 2

$2.\,$ CHECK POWER SUPPLY CIRCUIT

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

(-	+)	(-)	Voltage
ВС	ВСМ		(Approx.)
Connector	Terminal	Ground	
M16	1	Ground	Dotton, voltogo
M17	11		Battery voltage



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Is the measurement normal?

YES >> GO TO 3

NO >> Repair or replace harness.

$oldsymbol{3}$. CHECK GROUND CIRCUIT

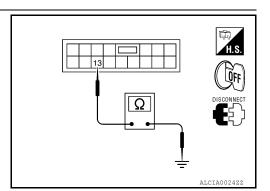
Check continuity between BCM harness connector and ground.

В	ВСМ		Continuity
Connector	Terminal	Ground	Continuity
M17	13		Yes

Does continuity exist?

YES >> Inspection End.

NO >> Repair or replace harness.



INFOID:0000000007630940

BCM: Special Repair Requirement

1. REQUIRED WORK WHEN REPLACING BCM

Initialize control unit. Refer to BCS-3, "ADDITIONAL SERVICE WHEN REPLACING CONTROL Work Procedure".

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>> Work End.

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) : Diagnosis Procedure

Regarding Wiring Diagram information, refer to <u>PCS-31, "Wiring Diagram - Coupe"</u> or <u>PCS-37, "Wiring Diagram - Sedan"</u>.

1. CHECK FUSES AND FUSIBLE LINK

Check that the following IPDM E/R fuses or fusible link are not blown.

Terminal No.	Signal name	Fuses and fusible link No.
1, 2		B, D
_	Battery power supply	42
		43

Is the fuse blown?

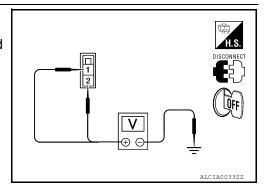
YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

NO >> GO TO 2

2. CHECK POWER SUPPLY CIRCUIT

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

	Terminals		
(+)		(-)	Voltage (V) (Approx.)
IPDI	IPDM E/R		
Connector	Terminal		
E16	1	Ground	Battery voltage
	2		battery voltage



Is the measurement value normal?

YES >> GO TO 3

NO >> Repair harness or connector.

3. CHECK GROUND CIRCUIT

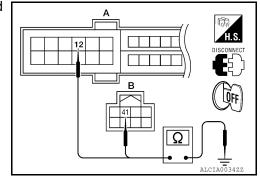
Check continuity between IPDM E/R harness connectors and ground.

IPDM E/R			Continuity
Connector	Terminal	Ground	Continuity
A: E18	12		Yes
B: E17	41		165

Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.



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KEY SLOT

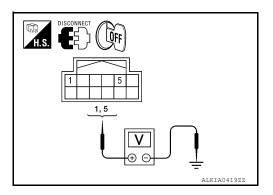
Diagnosis Procedure

INFOID:0000000007422477

Regarding Wiring Diagrams information, refer to <a>SEC-204, "Wiring Diagram".

1. CHECK KEY SLOT POWER SUPPLY CIRCUIT

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



Key slot		Ground	Voltage (V)	
Connector	Terminal	Giodila	(Approx.)	
M40	1	Ground	Battery voltage	
IVI 4 O	5	Ground	Dattery Voltage	

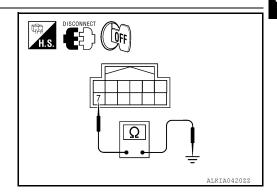
Is the inspection result normal?

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.



Key s	Key slot		Continuity
Connector	Terminal	Ground	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".

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>> Inspection End.

KEY SLOT ILLUMINATION

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

KEY SLOT ILLUMINATION

Description

Blinks when Intelligent Key insertion is required.

Component Function Check

INFOID:0000000007422479

1. CHECK FUNCTION

(P)With CONSULT

Check key slot illumination ("KEY SLOT ILLUMI") Active Test mode.

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Is the inspection result normal?

YES >> Key slot function is OK.

NO >> Refer to <u>SEC-131, "Diagnosis Procedure"</u>.

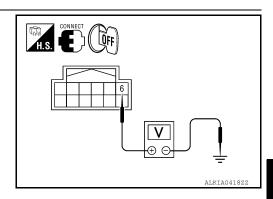
INFOID:0000000007422480

Diagnosis Procedure

Regarding Wiring Diagrams information, refer to SEC-204, "Wiring Diagram".

1. CHECK KEY SLOT ILLUMINATION OUTPUT SIGNAL

Check voltage between key slot connector and ground.



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	Terminals					
(+)		Condition	Key slot	Voltage (V)	
Key slot connector	Terminal	(-)	22	illumination	(Approx.)	
M40	6	Ground	Intelligent Key inserted	OFF	Battery voltage	
IVI4U	0	Ground	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.
- Disconnect key slot connector.

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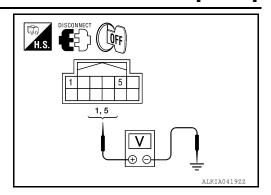
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3. Check voltage between slot connector and ground.



	Terminals			
(+)		()	Voltage (V) (Approx.)	
Key slot connector	Terminal	(-)	(++)	
M40	1	Cround	Pottory voltage	
IVI40	5	Ground	Battery voltage	

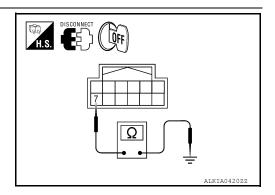
Is the inspection result normal?

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	Oround	Yes

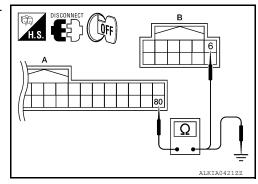
Is the inspection result normal?

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.



KEY SLOT ILLUMINATION

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

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	Oround	No

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness between BCM and key slot.

5. CHECK KEY SLOT

Refer to SEC-131, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace key slot. Refer to <u>SEC-220, "Removal and Installation"</u>.

6.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

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KEY CYLINDER SWITCH

Description INFOID:000000007422481

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.

Component Function Check

INFOID:0000000007422482

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. Refer to <u>BCS-17</u>, "DOOR LOCK : CONSULT Function (BCM - DOOR LOCK)".

Monitor item	Condition		
KEY CYL LK-SW	Lock	: ON	
RET CTL ER-SW	Neutral / Unlock	: OFF	
KEY CYLLIN CW	Unlock	: ON	
KEY CYL UN-SW	Neutral / Lock	: OFF	

Is the inspection result normal?

YES >> Key cylinder switch is OK.

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

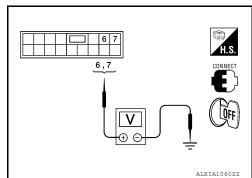
Diagnosis Procedure

INFOID:0000000007422483

Regarding Wiring Diagrams information, refer to SEC-194, "Wiring Diagram".

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	Terminal	(-)	Key position	Voltage (V) (Approx.)	
-	6		Lock	0	
D7	0	Ground	Neutral / Unlock	5	
D1	7	Giodila	Unlock	0	
	,		Neutral / Lock	5	

Is the inspection result normal?

KEY CYLINDER SWITCH

< DTC/CIRCUIT DIAGNOSIS >

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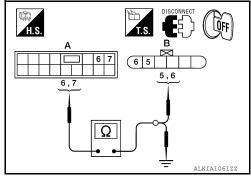
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YES >> Replace main power window and door lock/unlock switch. Refer to <u>DLK-222</u>, "FRONT DOOR <u>LOCK</u>: Removal and Installation". After that, Refer to <u>DLK-11</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

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 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) connector	Terminal	Continuity
A: D7	6	B: D10	6	Yes
۸. ۵۱	7	5.010	5	163

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

Power window main switch connector	Terminal		Continuity
A: D7	6	Ground	No
A. DI	7		INO

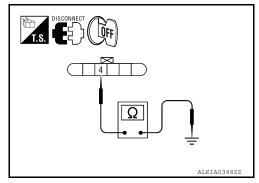
Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

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	4	Orodria	Yes

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

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KEY CYLINDER SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

4. CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch.

Refer to SEC-136, "Component Inspection".

Is the inspection result normal?

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

>> Replace door lock assembly LH (key cylinder switch). Refer to <u>DLK-222, "FRONT DOOR LOCK:</u> Removal and Installation".

Component Inspection

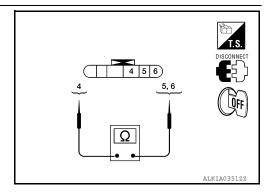
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INFOID:0000000007422484

COMPONENT INSPECTION

1. CHECK DOOR KEY CYLINDER SWITCH

Check front door lock assembly LH (key cylinder switch).



Terminal Front door lock assembly LH (key cylinder switch) connector			
		Key position	Continuity
5		Unlock	Yes
5	6	Neutral / Lock	No
6		Lock	Yes
0		Neutral / Unlock	No

Is the inspection result normal?

YES >> Key cylinder switch is OK.

NO >> Replace front door lock assembly LH (key cylinder switch). Refer to <u>DLK-461, "FRONT DOOR LOCK: Removal and Installation"</u>.

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HORN

Description INFOID:000000007422485

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

- Select HORN in "ACTIVE TEST" mode with CONSULT.
- 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-137</u>, "<u>Diagnosis Procedure</u>".

Diagnosis Procedure

Regarding Wiring Diagrams information, refer to <a>SEC-181, "Wiring Diagram".

1. CHECK HORN FUNCTION

Check horn function with horn switch

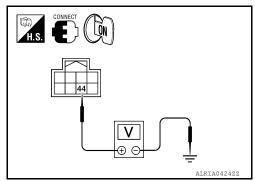
Do the horns sound?

YES >> GO TO 2.

NO >> Refer to <u>HRN-4, "Wiring Diagram"</u>.

2.CHECK HORN RELAY POWER SUPPLY

- Turn ignition switch ON.
- 2. Perform "ACTIVE TEST" ("HORN") with CONSULT.
- 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 Volta		Voltage (V)		
Connector	Terminal	Ground	rest item		(Approx.)	
E17	44	Ground	HORN	ON	Battery voltage →0 → Battery voltage	
L17	74	Ground	HOIN	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.

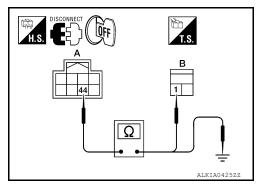
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- 2. Disconnect IPDM E/R and horn relay connector.
- 3. Check continuity between IPDM E/R harness connector and horn relay harness connector.



IPDM E/R		Horn relay		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.

IPD	M E/R	Ground	Continuity	
Connector	Terminal	Giouna	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-45. "Removal and Installation".

NO >> Repair or replace the malfunctioning part.

HEADLAMP		
< DTC/CIRCUIT DIAGNOSIS >	[COUPE]	
HEADLAMP		
Description	INFOID:0000000007422488	
Headlamp lighting when theft warning system is alarm phase.		
Component Function Check	INFOID:0000000007422489	
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-139, "Diagnosis Procedure"</u> .		
Diagnosis Procedure	INFOID:0000000007422490	
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 INTERMITTENT INCIDENT		
Refer to GI-42, "Intermittent Incident".		
Is the inspection result normal?		
>> Inspection End.		
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WARNING LAMP

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

WARNING LAMP

Description INFOID:000000007422491

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

Component Function Check

INFOID:0000000007422492

1. CHECK FUNCTION

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

Test item		Description	
INDICATOR	ON	Warning lamp	ON
	OFF	vvairiing iamp	OFF

Is the inspection result normal?

YES >> Inspection End.

NO >> Go to <u>SEC-140</u>, "<u>Diagnosis Procedure</u>".

Diagnosis Procedure

INFOID:0000000007422493

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.

VEHICLE SECURITY INDICATOR

< DTC/CIRCUIT DIAGNOSIS >

[COUPE]

INFOID:0000000007422495

INFOID:0000000007422496

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VEHICLE SECURITY INDICATOR

Description INFOID:000000007422494

· 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

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

Test item		Description	
THEFT IND	ON	Vehicle security indicator	ON
	OFF	Vehicle security indicator	OFF

Is the inspection result normal?

YES >> Inspection End.

NO >> Go to SEC-141, "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.

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ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
FR WIPER HI	Other than front wiper switch HI	OFF
	Front wiper switch HI	ON
FR WIPER LOW	Other than front wiper switch LO	OFF
	Front wiper switch LO	ON
FR WASHER SW	Front washer switch OFF	OFF
	Front washer switch ON	ON
FR WIPER INT	Other than front wiper switch INT	OFF
	Front wiper switch INT	ON
FR WIPER STOP	Front wiper is not in STOP position	OFF
	Front wiper is in STOP position	ON
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 6	Wiper intermittent dial position
TURN SIGNAL R	Other than turn signal switch RH	OFF
	Turn signal switch RH	ON
TUDN OLONAL I	Other than turn signal switch LH	OFF
TURN SIGNAL L	Turn signal switch LH	ON
TAIL LAMP SW	Other than lighting switch 1ST and 2ND	OFF
TAIL LAWP 5W	Lighting switch 1ST or 2ND	ON
HI BEAM SW	Other than lighting switch HI	OFF
HI BEAIN SW	Lighting switch HI	ON
HEAD LAMP SW 1	Other than lighting switch 2ND	OFF
HEAD LAWF SW 1	Lighting switch 2ND	ON
HEAD LAMP SW 2	Other than lighting switch 2ND	OFF
FILAD LAWF SW 2	Lighting switch 2ND	ON
PASSING SW	Other than lighting switch PASS	OFF
FASSING SW	Lighting switch PASS	ON
AUTO LIGHT SW	Other than lighting switch AUTO	OFF
AOTO LIGITI SW	Lighting switch AUTO	ON
FR FOG SW	Front fog lamp switch OFF	OFF
11(100 0W	Front fog lamp switch ON	ON
DOOR SW-DR	Driver door closed	OFF
DOOK SW-DK	Driver door opened	ON
DOOR SW-AS	Passenger door closed	OFF
DOOK SW-AS	Passenger door opened	ON
DOOR SW-RR	Rear RH door closed	OFF
	Rear RH door opened	ON
DOOR SW-RL	Rear LH door closed	OFF
	Rear LH door opened	ON

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[COUPE]

Monitor Item	Condition	Value/Status	
CDL LOCK SW	Other than power door lock switch LOCK	OFF	_
	Power door lock switch LOCK	ON	-
CDL UNLOCK SW	Other than power door lock switch UNLOCK	OFF	_
	Power door lock switch UNLOCK	ON	_
KEY CYL LK-SW	Other than driver door key cylinder LOCK position	OFF	_
	Driver door key cylinder LOCK position	ON	_
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK position	OFF	=
	Driver door key cylinder UNLOCK position	ON	=
HAZARD SW	When hazard switch is not pressed	OFF	=
	When hazard switch is pressed	ON	_
REAR DEF SW	When rear window defogger switch is pressed	ON	=
FAN ON SIG	When AUTO switch or fan switch is pressed	ON	=
AIR COND SW	When A/C switch is pressed	ON	_
-D 04146=1 0111	Trunk lid opener cancel switch OFF	OFF	-
TR CANCEL SW	Trunk lid opener cancel switch ON	ON	-
5D/DD 05511511	Trunk lid opener switch OFF	OFF	-
TR/BD OPEN SW	While the trunk lid opener switch is turned ON	ON	=
	Trunk lid closed	OFF	=
TRNK/HAT MNTR	Trunk lid opened	ON	-
	When LOCK button of Intelligent Key is not pressed	OFF	-
RKE-LOCK	When LOCK button of Intelligent Key is pressed	ON	-
	When UNLOCK button of Intelligent Key is not pressed	OFF	=
RKE-UNLOCK	When UNLOCK button of Intelligent Key is pressed	ON	=
	When TRUNK OPEN button of Intelligent Key is not pressed	OFF	=
RKE-TR/BD	When TRUNK OPEN button of Intelligent Key is pressed	ON	-
21/5 21110	When PANIC button of Intelligent Key is not pressed	OFF	- (
RKE-PANIC	When PANIC button of Intelligent Key is pressed	ON	
	When UNLOCK button of Intelligent Key is not pressed and held	OFF	-
RKE-P/W OPEN	When UNLOCK button of Intelligent Key is pressed and held	ON	-
RKE-MODE CHG	When LOCK/UNLOCK button of Intelligent Key is not pressed and held simultaneously	OFF	=
	When LOCK/UNLOCK button of Intelligent Key is pressed and held simultaneously	ON	_
ODTICAL CENCOD	When outside of the vehicle is bright	Close to 5 V	=
OPTICAL SENSOR	When outside of the vehicle is dark	Close to 0 V	=
	When driver door request switch is not pressed	OFF	_
REQ SW-DR	When driver door request switch is pressed	ON	_
DEO SW AS	When passenger door request switch is not pressed	OFF	_
REQ SW-AS	When passenger door request switch is pressed	ON	-
REQ SW-BD/TR	When trunk request switch is not pressed	OFF	-
	When trunk request switch is pressed	ON	-
PUSH SW	When engine switch (push switch) is not pressed	OFF	-
	When engine switch (push switch) is pressed	ON	-
IGN RLY -F/B	Ignition switch OFF or ACC	OFF	-
	Ignition switch ON	ON	-

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[COUPE]

Monitor Item	Condition	Value/Status
ACC RLY -F/B	Ignition switch OFF	OFF
	Ignition switch ACC or ON	ON
CLUTCH SW	When the clutch pedal is not depressed	OFF
	When the clutch pedal is depressed	ON
BRAKE SW 1	When the brake pedal is not depressed	ON
	When the brake pedal is depressed	OFF
DETE/CANCL SW	When selector lever is in P position	OFF
	When selector lever is in any position other than P	ON
SFT PN/N SW	When selector lever is in any position other than P or N	OFF
	When selector lever is in P or N position	ON
S/L -LOCK	Electronic steering column lock LOCK status	OFF
	Electronic steering column lock UNLOCK status	ON
S/L -UNLOCK	Electronic steering column lock UNLOCK status	OFF
	Electronic steering column lock LOCK status	ON
O/L DELAY/E/D	Ignition switch OFF or ACC	OFF
S/L RELAY-F/B	Ignition switch ON	ON
LINII IZ OENI DD	Driver door UNLOCK status	OFF
UNLK SEN-DR	Driver door LOCK status	ON
DUCU CW IDDM	When engine switch (push switch) is not pressed	OFF
PUSH SW -IPDM	When engine switch (push switch) is pressed	ON
ION DI VA E/D	Ignition switch OFF or ACC	OFF
IGN RLY1 F/B	Ignition switch ON	ON
DETE SW -IPDM	When selector lever is in P position	OFF
DETE SW -IPDIVI	When selector lever is in any position other than P	ON
CET DAL IDDM	When selector lever is in any position other than P or N	OFF
SFT PN -IPDM	When selector lever is in P or N position	ON
OCT D. MCT	When selector lever is in any position other than P	OFF
SFT P -MET	When selector lever is in P position	ON
OFT N. MET	When selector lever is in any position other than N	OFF
SFT N -MET	When selector lever is in N position	ON
	Engine stopped	STOP
ENGINE CTATE	While the engine stalls	STALL
ENGINE STATE	At engine cranking	CRANK
	Engine running	RUN
C/L L OOK IDDM	Electronic steering column lock LOCK status	OFF
S/L LOCK-IPDM	Electronic steering column lock UNLOCK status	ON
	Electronic steering column lock UNLOCK status	OFF
S/L UNLCK-IPDM	Electronic steering column lock LOCK status	ON
0/L DEL 2// DEC	Ignition switch OFF or ACC	OFF
S/L RELAY-REQ	Ignition switch ON	ON
VEH SPEED 1	While driving	Equivalent to speedometer reading
VEH SPEED 2	While driving	Equivalent to speedometer reading

< ECU DIAGNOSIS INFORMATION >

[COUPE]

Monitor Item	Condition	Value/Status
	Driver door LOCK status	LOCK
DR DOOR STATE	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door UNLOCK status	UNLK
	Passenger door LOCK status	LOCK
AS DOOR STATE	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door UNLOCK status	UNLK
ID OK ELAC	Ignition switch ACC or ON	RESET
ID OK FLAG	Ignition switch OFF	SET
DDMT ENG STAT	When the engine start is prohibited	RESET
PRMT ENG STAT	When the engine start is permitted	SET
KEN OM CLOT	When Intelligent Key is not inserted into key slot	OFF
KEY SW -SLOT	When Intelligent Key is inserted into key slot	ON
RKE OPE COUN1	During the operation of Intelligent Key	Operation frequency of Intelligent Key
AIR PRESS FL	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of rear LH tire
ID DECCT EL 4	When ID of front LH tire transmitter is registered	DONE
ID REGST FL1	When ID of front LH tire transmitter is not registered	YET
ID DECCT ED4	When ID of front RH tire transmitter is registered	DONE
ID REGST FR1	When ID of front RH tire transmitter is not registered	YET
ID DECCE DD4	When ID of rear RH tire transmitter is registered	DONE
ID REGST RR1	When ID of rear RH tire transmitter is not registered	YET
ID DECCT DL1	When ID of rear LH tire transmitter is registered	DONE
ID REGST RL1	When ID of rear LH tire transmitter is not registered	YET
MAYA DANIANO IL AAAD	Tire pressure indicator OFF	OFF
WARNING LAMP	Tire pressure indicator ON	ON

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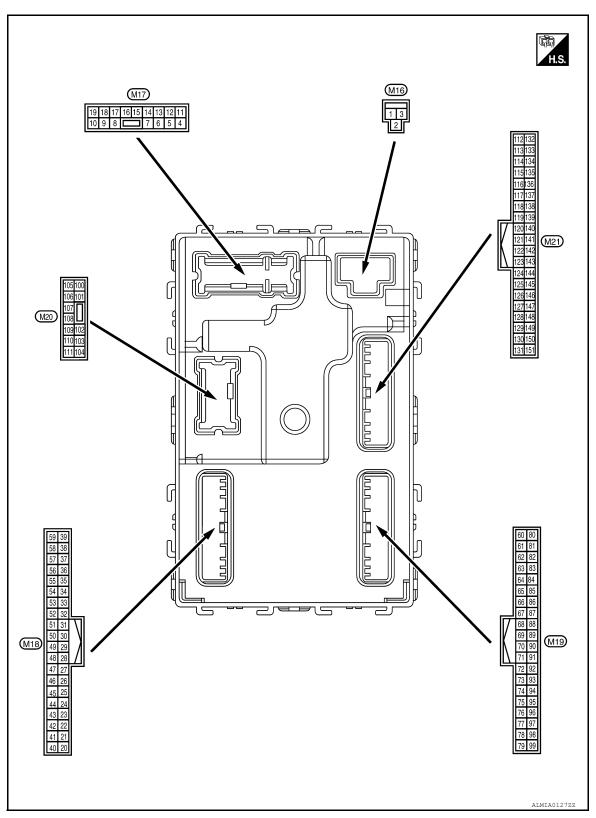
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Terminal Layout

INFOID:0000000007630943



Physical Values

< ECU DIAGNOSIS INFORMATION >

	inal No. e color)	Description				Value
(+)	(-)	Signal name	Input/ Output	Condition		(Approx.)
1 (W/B)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (R/Y)	Ground	Battery power supply output	Output	Ignition switch OF	F	Battery voltage
3 (L/W)	Ground	Ignition power supply output	Output	Ignition switch ON	1	Battery voltage
4	0	Interior room lamp	0 1: 1	After passing the in er operation time	nterior room lamp battery sav-	0V
(P/W)	Ground	power supply	Output	Any other time after lamp battery save	er passing the interior room roperation time	Battery voltage
5		Front door RH UN-	0 1 1	5 () 50	UNLOCK (actuator is activated)	Battery voltage
(G/Y)	Ground	LOCK	Output	Front door RH	Other than UNLOCK (actuator is not activated)	0V
7	0	Otan James	0.4.4	Otan Inno	ON	0V
(R/W)	Ground	Step lamp	Output	Step lamp	OFF	Battery voltage
8		All 1 2001	0 1 1		LOCK (actuator is activated)	Battery voltage
(V)	Ground	All doors LOCK	Output	Output All doors	Other than LOCK (actuator is not activated)	0V
9		Front door LH UN-			UNLOCK (actuator is activated)	Battery voltage
(G)	Ground	LOCK	Output	Front door LH	Other than UNLOCK (actuator is not activated)	0V
10 ¹	0	Rear door RH and	0 1: 1	Rear door RH	UNLOCK (actuator is activated)	Battery voltage
(G/Y)	Ground	rear door LH UN- LOCK	Output	and rear door LH	Other than UNLOCK (actuator is not activated)	0V
11 (Y/R)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
13 (B)	Ground	Ground	_	Ignition switch ON	1	0V
					OFF	0V
14 ¹ (O/W)	Ground	Engine switch (push switch) illumination ground	Input	Tail lamp	ON	NOTE: When the illumination brightening/dimming level is in the neutral position (V) 10 0 2 ms

	inal No.	Description				Value
(+)	e color)	Signal name	Input/ Output		Condition	(Approx.)
14 ⁸ (R/Y)	Ground	Engine switch (push switch) illumination ground	Input	Tail lamp	OFF	NOTE: When the illumination brightening/dimming level is in the neutral position (V) 10 0 2 ms JSNIA0010GB
15	Ground	ACC indicator lamp	Output	Ignition switch	OFF	Battery voltage
(Y/L)	Ground	7 to o maioator iamp	Сигриг	- ignition ownton	ACC	0V
17 (G/B)	Ground	Turn signal (RH)	Output	Ignition switch ON	Turn signal switch OFF Turn signal switch RH	(V) 15 10 1 1 1 1 1 1 1 1 1 1
18 (G/Y)	Ground	Turn signal (LH)	Output	Ignition switch ON	Turn signal switch OFF Turn signal switch LH	(V) 15 10 5 0 1 s PKID0926E 6.5 V
19	Ground	Room lamp timer	Output	Interior room	OFF	Battery voltage
(Y) 21	Ground	control Optical sensor signal	Input	Ignition switch	ON When outside of the vehicle is bright	OV Close to 5V
(P/B)				ON	When outside of the vehicle is dark OFF (clutch pedal is not	Close to 0V
22 ² (R/Y)	Ground	Clutch interlock switch	Input	Clutch interlock switch	depressed) ON (clutch pedal is depressed)	Battery voltage
24 (R/W)	Ground	Stop lamp switch 1	Input		_	Battery voltage
26 (O/L)	Ground	Stop lamp switch 2	Input	Stop lamp switch	OFF (brake pedal is not depressed) ON (brake pedal is depressed)	0V Battery voltage

< ECU DIAGNOSIS INFORMATION >

	inal No. e color)	Description			O a saliti a a	Value
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)
27 (G/W)	Ground	Front door lock assembly LH (unlock sensor)	Input	Front door LH	LOCK status	(V) 15 10 5 0 10 ms 10 ms JPMIA0011GB
					UNLOCK status	OV
29	Cround	Koy slot switch	Input	When Intelligent K	ey is inserted into key slot	Battery voltage
(Y)	Ground	Key slot switch	Input	When Intelligent K	ey is not inserted into key slot	0V
30	Granad	ACC feedback signal	Innut	lanition switch	OFF	0
(V/Y)	Ground	ACC feedback signal	Input	Ignition switch	ACC or ON	Battery voltage
31	Ground	Rear window defog-	Input	Rear window de-	OFF	0V
(G)	Cround	ger feedback signal	mput	fogger switch	ON	Battery voltage
32 (R/B)	Ground	Front door RH switch	Input	Front door RH switch	OFF (when front door RH closes) ON (when front door RH	(V) 15 10 5 0 10 ms 10 ms JPMIA0011GB
					opens)	0V
33 (SB)	Ground	Compressor ON sig- nal	Input	A/C switch	OFF	9V - 12V 0V
(02)		Front door lock as-		Front door lock	ON OFF (neutral)	Battery voltage
34 ³ (L/R)	Ground		Input	assembly LH (key cylinder switch)	ON (unlock)	0V
36 ³				Door lock/unlock	Lock	Battery voltage
(GR)	Ground	Lock switch signal	Input	switch	Unlock	0V
37 (O)	Ground	Trunk lid opener cancel switch	Input	Trunk lid opener cancel switch	CANCEL	(V) 15 10 5 0 10 ms JPMIA0012GB 1.1V
					ON	0V
38		Door window defe-		Doorwindered	OFF	Battery voltage
(GR/ W)	Ground	Rear window defog- ger ON signal	Input	Rear window de- fogger switch	ON	ov
39 ³				Door lock/unlock	Unlock	Battery voltage
(GR/	Ground	Unlock switch signal	Input	switch	Lock	0V

< ECU DIAGNOSIS INFORMATION >

	inal No. e color)	Description	1 1/		Condition	Value
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)
40 ⁴ (Y/G)	Ground	Power window serial link	Input/ Output	Ignition switch ON		(V) 15 10 5 0 10 ms JPMIA0013GB
				Ignition switch OF		0V
41 (W)	Ground	Engine switch (push switch) illumination	Output	Engine switch (push switch) illu- mination	ON OFF	5.5V 0V
42	Ground	LOCK indicator lamp	Output	LOCK indicator	ON	0V
(R)	Giodila		Output	lamp	OFF	Battery voltage
45 (P)	Ground	Receiver & sensor ground	Input	Ignition switch ON		0V
46	Ground	Receiver & sensor	Output	Ignition switch	OFF	0V
(V/W)		power supply output			ACC or ON	5.0V
47	Ground	Tire pressure receiv-	Input/	Ignition switch	Standby state	(V) 6 4 2 0 *** 0.2s
(G/O)		er signal	Output	ON	When receiving the signal from the transmitter	(V) 6 4 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
48 (R/G)	Ground	Selector lever P/N position signal	Input	Selector lever	P or N position Except P and N positions	12.0V 0V
					ON	0V
49 (L/O)	Ground	Security indicator signal	Output	Security indicator	Blinking	(V) 15 10 5 0 JPMIA0014GB 11.3V
					OFF	Battery voltage
						Sattory voltage

< ECU DIAGNOSIS INFORMATION >

Term	inal No.	Description				Value	Α.
(Wire (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)	Α
50 (LG/ B)	Ground	Combination switch OUTPUT 5	Input	Combination switch (Wiper intermit- tent dial 4)	All switch OFF Lighting switch 1ST Lighting switch high-beam Lighting switch 2ND Turn signal switch RH	0V (V) 15 10 5 0 2 ms JPMIA0031GB	C
51 (L/W)	Ground	Combination switch OUTPUT 1	Input	Combination switch	All switch OFF (Wiper intermittent dial 4) Front wiper switch HI (Wiper intermittent dial 4) Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3 • Wiper intermittent dial 6 • Wiper intermittent dial 7	10.7V OV (V) 15 10 5 0 2 ms JPMIA0032GB	F
52 (G/B)	Ground	Combination switch OUTPUT 2	Input	Combination switch	All switch OFF (Wiper intermittent dial 4) Front washer switch ON (Wiper intermittent dial 4) Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	0V (V) 15 10 5 0 2 ms JPMIA0033GB 10.7V	J
53 (LG/ R)	Ground	Combination switch OUTPUT 3	Input	Combination switch (Wiper intermit- tent dial 4)	All switch OFF Front wiper switch INT Front wiper switch LO Lighting switch AUTO	0V (V) 15 10 5 0 2 ms JPMIA0034GB 10.7V	L M
54 (G/Y)	Ground	Combination switch OUTPUT 4	Input	Combination switch (Wiper intermit- tent dial 4)	All switch OFF Front fog lamp switch ON Lighting switch 2ND Lighting switch flash-to- pass Turn signal switch LH	0V (V) 15 10 2 ms JPMIA0035GB	C
55 (BR/ W)	Ground	Front blower monitor	Input	Front blower motor switch	ON OFF	10.7V Battery voltage 0V	

< ECU DIAGNOSIS INFORMATION >

	inal No. e color)	Description			Condition	Value
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)
56 ³	Ground	Front door lock as- sembly LH (key cylin-	Innut	Front door lock assembly LH (key	OFF (neutral)	Battery voltage
(L/B)	Giodila	der switch) (lock)	Input	cylinder switch)	ON (lock)	0V
57 (W)	Ground	Tire pressure warning check switch	Input		_	Battery voltage
58 (SB)	Ground	Front door LH switch	Input	Front door LH switch	OFF (front door LH CLOSE)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8V
					ON (front door LH OPEN)	0V
59	Ground	Rear window defog-	Output	Rear window de-	Active	Battery voltage
(G/R)	Ground	ger relay	Output	fogger	Not activated	OV
60 (B/R)	Ground	Front console antenna 2 (-)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 S MKIA0062GB
				Off	When Intelligent Key is not in the passenger compartment	(V) 15 10 0 1 s JMKIA0063GB
61	Ground	Center console an-	Output	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 JMKIA0062GB
(W/R)	Sidili	tenna 2 (+)	Suput	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 1 s JMKIA0063GB

< ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value	
(+)	e color)	Signal name	Input/ Output		Condition	(Approx.)	
62		Front outside handle		When the front door RH request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB	
(B/Y)	Ground	RH antenna (-)	Output	switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB	
63	Ground	Front outside handle	Output	When the front door RH request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB	
(LG)	Ground	RH antenna (+)	Output	switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB	
64	Ground	Front outside handle	Output	When the front door LH request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB	
(V)	Ciounu	LH antenna (-)	Cutput	switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	

< ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value	
(+)	e color)	Signal name	Input/ Output		Condition	(Approx.)	
65	Ground	Front outside handle	Output	When the front door LH request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	
(P)		LH antenna (+)		switch is operat- ed with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB	
68 (G/O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.	
69 (O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.	
70 (R/B)	Ground	Ignition relay-2 control	Output	Ignition switch	OFF or ACC	0V Battery voltage	
71	Ground	Remote keyless entry	Input/	During waiting		(V) 15 0 5 0 1 ms JMKIA0064GB	
(L/O)	Giouna	receiver signal	Output	When operating e	ither button on Intelligent Key	(V) 15 10 5 0 1 ms JMKIA0065GB	

< ECU DIAGNOSIS INFORMATION >

[COUPE]

	inal No.	Description				Value	
(Wir	e color)	Signal name	Input/ Output		Condition	(Approx.)	1
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 JPMIA0041GB 1.4V)
75 (R/Y)	Ground	Combination switch INPUT 5	Output	Combination switch	Front fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB	F
						1.50	(
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	(V) 15 10 5 0 2 ms JPMIA0040GB	ŀ

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< ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value
(Wire (+)	e color)	Signal name	Input/ Output		Condition	Value (Approx.)
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB
76 (R/G)	Ground	Combination switch INPUT 3	Output	Combination switch	Lighting switch high-beam (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0036GB
(100)				Lighting switch 2ND (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB 1.3V	
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	(V) 15 10 5 0 2 ms JPMIA0040GB
77 (BR)	Ground	Engine switch (push switch)	Input	Engine switch (push switch)	Pressed Not pressed	0V Battery voltage
78 (P)	Ground	CAN-L	Input/ Output		_	_
79 (L)	Ground	CAN-H	Input/ Output		_	_
					OFF	0V
80 (R/L)	Ground	Key slot illumination	Output	Key slot illumina- tion	Blinking	(V) 15 10 5 0 JPMIA0015GB
					ON	6.5V Battery voltage
						<i>y</i> -g-

< ECU DIAGNOSIS INFORMATION >

[COUPE]

	inal No. e color)	Description			Condition	Value
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)
81 (LG)	Ground	ON indicator lamp	Output	Ignition switch	OFF or ACC	Battery voltage
(LG)					ON	0V
83 (L)	Ground	ACC relay-1 control	Output	Ignition switch	OFF ACC or ON	0V Battery voltage
84 ⁵ (Y/R)	Ground	CVT shift selector	Output			Battery voltage
85		Electronic steering		Electronic steer-	Lock status	0V
(L/O)	Ground	column lock condition No. 1	Input	ing column lock	Unlock status	Battery voltage
86	0	Electronic steering	la a d	Electronic steer-	Lock status	Battery voltage
(G/R)	Ground	column lock condition No. 2	Input	ing column lock	Unlock status	0V
87 ⁵	Ground	Selector lever P posi-	Input	Selector lever	P position	0V
(G/B)	Ground	tion switch	Input	Selector level	Any position other than P	Battery voltage
88 (P/L)	Ground	Front door RH request switch	Input	Front door RH request switch	OFF (not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB
					ON (pressed)	0V
89 (B/W)	Ground	Front door LH request switch	Input	Front door LH request switch	OFF (not pressed)	(V) 15 10 10 ms JPMIA0016GB
90 (Y)	Ground	Blower fan motor re- lay control	Output	Ignition switch	OFF or ACC ON	0V Battery voltage
91 (L/R)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OF	F	Battery voltage
94	Ground	Electronic steering column lock power	Output	Ignition switch	OFF or ACC	Battery voltage

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< ECU DIAGNOSIS INFORMATION >

	inal No.	Description	ı			Value
(Wire	e color) (-)	Signal name	Input/ Output	Condition	(Approx.)	
					All switch OFF	(V) 15 10 5 0 JPMIA0041GB 1.4V
					Turn signal switch LH	(V) 15 10 5 0 2 ms JPMIA0037GB
95 (R/W)	Ground	Combination switch INPUT 1	Output	Combination switch (Wiper intermit- tent dial 4)	Turn signal switch RH	(V) 15 10 5 0 2 ms JPMIA0036GB
					Front wiper switch LO	(V) 15 10 2 ms JPMIA0038GB 1.3V
					Front washer switch ON	(V) 15 10 5 0 JPMIA0039GB 1.3V

< ECU DIAGNOSIS INFORMATION >

[COUPE]

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	inal No. e color)	Description			O and the a	Value
(+)	(-)	Signal name	Input/ Output	Condition		(Approx.)
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB
96	Ground	Combination switch	Output	Combination	Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10 2 ms JPMIA0038GB 1.3V
(P/B)		INPUT 4		switch	Lighting switch 1ST (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	(V) 15 10 5 0 2 ms JPMIA0039GB 1.3V

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< ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF	(V) 15 10 2 ms JPMIA0041GB 1.4V
					Lighting switch flash-to- pass	(V) 15 10 5 0 2 ms JPMIA0037GB
97 (R/B)	Ground	Combination switch INPUT 2	Output	Combination switch (Wiper intermit- tent dial 4)	Lighting switch 2ND	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3V
					Front wiper switch INT	(V) 15 10 5 0 2 ms JPMIA0038GB 1.3V
					Front wiper switch HI	(V) 15 10 5 0 2 ms JPMIA0040GB
					Pressed	0 V
98 (G/O)	Ground	Hazard switch	Input	Hazard switch	Not pressed	(V) 15 10 5 0 10 ms 1.1V

< ECU DIAGNOSIS INFORMATION >

[COUPE]

	inal No. e color)	Description	1			Value	А		
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)	, ,		
					LOCK status	Battery voltage	В		
99 (L/Y)	Ground	Electronic steering column lock unit communication	Input/ Output	Electronic steer- ing column lock	LOCK or UNLOCK	(V) 15 10 50 ms JMKIA0066GB	C		
					For 15 seconds after UN- LOCK	Battery voltage	Е		
				15 seconds or later after UNLOCK	0V	_			
103	Ground	Trunk lid opening	Output	Trunk lid	Open (trunk lid opener actuator is activated)	Battery voltage	F		
(V)	Oround	Trunk ilu operiing	Output	Trunk na	Close (trunk lid opener actuator is not activated)	0V	G		
110	Ground	Trunk room lamp	Output	Trunk room lamp	ON	0V			
(V/W)	0.000		Catpat		OFF	Battery voltage	Н		
114		Trunk room antenna		Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 JMKIA0062GB	J		
(B)	Ground	1 (-)	Output	OFF			SE		
			in				When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB	L

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< ECU DIAGNOSIS INFORMATION >

	inal No. e color)	Description			Condition	Value	
(+)	(-)	Signal name	Input/ Output			(Approx.)	
115	Ground	Trunk room antenna	Output	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 JMKIA0062GB	
(W) Ground 1 (+)	Suipui	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB			
118	Ground	Rear bumper antenna (-)	Output	When the trunk lid request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB	
(L/O)	(L/O) Ground				When Intelligent Key is not in the antenna detection area	(V) 15 10 5 11 1 s JMKIA0063GB	
119	Cround	Rear bumper anten-	Output	When the trunk	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1	
(BR/ W)	Ground	na (+)	Output	is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB	

< ECU DIAGNOSIS INFORMATION >

Terminal No.		Description				Value
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)
127 (BR/	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	Battery voltage 0V
130 (Y/G)	Ground	Trunk room lamp switch	Input	Trunk room lamp switch	OFF (trunk is closed)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8V
					ON (trunk is open)	0V
				Ignition switch OFF (M/T vehi-	When the clutch pedal is depressed	Battery voltage
				cle)	When the clutch pedal is not depressed	0V
132 (R)	Ground	Starter motor relay control	Output	Ignition switch	When selector lever is in P or N position and the brake is depressed	Battery voltage
			ON (other than M/ T vehicle)	When selector lever is in P or N position and the brake is not depressed	0V	
					ON (pressed)	0V
141 (G/R)	Ground	Trunk request switch	Input	Trunk request switch	OFF (not pressed)	(V) 15 10 5 0 JPMIA0016GB 1.0V
144	Ground	Request switch buzz-	Output	Request switch	Sounding	0V
(GR)	2.34.14	er	- Lipat	buzzer	Not sounding	Battery voltage
147	Ground	Trunk lid opener	Input	Trunk lid opener	Pressed	0V
(L/R)		switch	•	switch	Not pressed	Battery voltage
148 ¹ (R/W)	Ground	Rear door RH switch	Input	Rear door RH switch	OFF (when rear door RH closes)	(V) 15 10 5 0 10 ms 11.8V
					ON (when rear door RH opens)	ov

< ECU DIAGNOSIS INFORMATION >

[COUPE]

	inal No.	Description				Value
(Wire color) (+) (-)		Signal name	Input/ Output		Condition	(Approx.)
149 ¹ (R/B)	Ground	Rear door LH switch	Input	Rear door LH switch	OFF (when rear door LH closes) ON (when rear door LH opens)	(V) 15 10 5 0 JPMIA0011GB 11.8V

- 1: Sedan only
- 2: M/T only
- 3: With LH front window anti-pinch
- 4: With LH and RH front window anti-pinch.
- 5: CVT only
- 6: With auto lights
- 7: With low tire pressure warning system
- 8: Coupe only

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 ANTENNA AMP	Inhibit engine cranking	Erase DTC
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
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
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

< ECU DIAGNOSIS INFORMATION >

Display contents of CONSULT	Fail-safe	Cancellation
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
32605: 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/transmission 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) - transmission switch signal (CAN): ON
32606: 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)
32607: 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)
32608: 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)
32609: 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
3260A: 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 fulfilled • Power position changes to ACC • Receives 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

< ECU DIAGNOSIS INFORMATION >

[COUPE]

Display contents of CONSULT	Fail-safe	Cancellation	
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM becomes normal	
B2619: BCM	Inhibit engine cranking	1 second after the electronic steering column lock unit power supply 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 fulfilled • Power position changes to ACC • Receives engine status signal (CAN)	
B26E8: CLUTCH SW	Inhibit engine cranking	When any of the following BCM recognition conditions are fulfilled Status 1 Clutch switch signal (CAN from ECM): ON Clutch interlock switch signal: OFF (0 V) Status 2 Clutch switch signal (CAN from ECM): OFF Clutch interlock switch signal: OFF (Battery voltage)	
B26E9: S/L STATUS	Inhibit engine cranking Inhibit electronic steering column lock	When BCM transmits the LOCK request signal to the steering lock unit and receives LOCK response signal from steering lock unit, the following conditions are fulfilled • Steering condition No 1 signal: LOCK (0V) • Steering condition No 2 signal: LOCK (Battery voltage)	

DTC Inspection Priority Chart

INFOID:0000000007630946

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

Priority	DTC
1	B2562: LOW VOLTAGE
2	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)
3	B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM B2195: ANTI SCANNING

< ECU DIAGNOSIS INFORMATION >

Priority	DTC	
	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 DESCRIPTION OF THE AVAILABLE O	
	B2560: STARTER CONT RELAY B2601: SHIFT POSITION B2602: SHIFT POSITION B2603: SHIFT POSI STATUS	
	B2604: PNP SWB2605: PNP SWB2606: S/L RELAY	
	B2607: S/L RELAY B2608: STARTER RELAY B2609: S/L STATUS B260A: IGNITION RELAY	
4	B260B: STEERING LOCK UNIT B260C: STEERING LOCK UNIT B260D: STEERING LOCK UNIT B260F: ENG STATE SIG LOST	
	B2611: ACC RELAY B2612: S/L STATUS B2614: ACC RELAY CIRC	
	 B2615: BLOWER RELAY CIRC B2616: IGN RELAY CIRC B2617: STARTER RELAY CIRC B2618: BCM 	
	B2619: BCM B261A: PUSH-BTN IGN SW B261E: VEHICLE TYPE B26E1: ENG STATE NO RECIV	
	 B26E8: CLUTCH SW B26E9: S/L STATUS B26EA: KEY REGISTRATION C1729: VHCL SPEED SIG ERR U0415: VEHICLE SPEED SIG 	
	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] RL C1712: [CHECKSUM ERR] FL C1713: [CHECKSUM ERR] FR 	
5	C1714: [CHECKSUM ERR] RR C1715: [CHECKSUM ERR] RL C1716: [PRESSDATA ERR] FL C1717: [PRESSDATA ERR] FR	
	C1718: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RL C1720: [CODE ERR] FL	
	 C1721: [CODE ERR] FR C1722: [CODE ERR] RR C1723: [CODE ERR] RL C1724: [BATT VOLT LOW] FL 	
	C1725: [BATT VOLT LOW] FR C1726: [BATT VOLT LOW] RR C1727: [BATT VOLT LOW] RL	
	C1734: CONTROL UNIT	

< ECU DIAGNOSIS INFORMATION >

[COUPE]

DTC Index

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	_	_	_	BCS-32
U1010: CONTROL UNIT (CAN)	_	_	_	BCS-33
U0415: VEHICLE SPEED SIG	_	_	_	BCS-34
B2013: ID DISCORD BCM-S/L	×	_	_	SEC-36 (Coupe), SEC-250 (Sedan)
B2014: CHAIN OF S/L-BCM	×	_	_	SEC-37 (Coupe), SEC-251 (Sedan)
B2190: NATS ANTENNA AMP	×	_	_	SEC-65 (Coupe), SEC-281 (Sedan)
B2191: DIFFERENCE OF KEY	×	_	_	SEC-69 (Coupe), SEC-285 (Sedan)
B2192: ID DISCORD BCM-ECM	×	_	_	SEC-70 (Coupe), SEC-286 (Sedan)
B2193: CHAIN OF BCM-ECM	×	_	_	SEC-71 (Coupe), SEC-287 (Sedan)
B2195: ANTI-SCANNING	_	_	_	<u>SEC-72</u>
B2553: IGNITION RELAY	_	_	_	PCS-59
B2555: STOP LAMP	_	_	_	SEC-73 (Coupe), SEC-289 (Sedan)
B2556: PUSH-BTN IGN SW	_	×	_	SEC-78 (Coupe), SEC-294 (Sedan)
B2557: VEHICLE SPEED	×	×	_	SEC-80 (Coupe), SEC-296 (Sedan)
B2560: STARTER CONT RELAY	×	×	_	SEC-81 (Coupe), SEC-297 (Sedan)
B2562: LOW VOLTAGE	_	_	_	BCS-35
B2601: SHIFT POSITION	×	×	_	SEC-82 (Coupe), SEC-298 (Sedan)
B2602: SHIFT POSITION	×	×	_	SEC-86 (Coupe), SEC-302 (Sedan)
B2603: SHIFT POSI STATUS	×	×	_	SEC-89 (Coupe), SEC-305 (Sedan)
B2604: PNP SW	×	×	_	SEC-92 (Coupe), SEC-308 (Sedan)
B2605: PNP SW	×	×	_	SEC-94 (Coupe), SEC-310 (Sedan)
B2606: S/L RELAY	×	×	_	SEC-96 (Coupe), SEC-312 (Sedan)

< ECU DIAGNOSIS INFORMATION >

[COUPE]

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2607: S/L RELAY	×	×	_	SEC-97 (Coupe), SEC-313 (Sedan)
B2608: STARTER RELAY	×	×	_	<u>SEC-99</u> (Coupe), <u>SEC-315</u> (Sedan)
B2609: S/L STATUS	×	×	_	SEC-101 (Coupe), SEC-317 (Sedan)
B260A: IGNITION RELAY	×	×	_	PCS-61
B260B: STEERING LOCK UNIT	_	×	_	SEC-106 (Coupe), SEC-322 (Sedan)
B260C: STEERING LOCK UNIT	_	×	_	SEC-107 (Coupe), SEC-323 (Sedan)
B260D: STEERING LOCK UNIT	_	×	_	SEC-108 (Coupe), SEC-324 (Sedan)
B260F: ENG STATE SIG LOST	×	×	_	SEC-109 (Coupe), SEC-325 (Sedan)
B2611: ACC RELAY		_	_	PCS-62
B2612: S/L STATUS	×	×	_	SEC-110 (Coupe), SEC-331 (Sedan)
B2614: ACC RELAY CIRC	_	×	_	PCS-64
B2615: BLOWER RELAY CIRC	_	×	_	PCS-67
B2616: IGN RELAY CIRC	_	×	_	PCS-70
B2617: STARTER RELAY CIRC	×	×	_	SEC-115 (Coupe), SEC-336 (Sedan)
B2618: BCM	×	×	_	PCS-73
B2619: BCM	×	×	_	SEC-117 (Coupe), SEC-338 (Sedan)
B261A: PUSH-BTN IGN SW	_	×	_	SEC-118 (Coupe), SEC-339 (Sedan)
B261E: VEHICLE TYPE	×	× (Turn ON for 15 seconds)	_	SEC-121
B2622: INSIDE ANTENNA	_	_	_	DLK-282
B2623: INSIDE ANTENNA	_	_	_	DLK-285
B26E1: ENG STATE NO RES	×	×	_	<u>SEC-326</u>
B26E8: CLUTCH SW	×	×		<u>SEC-123</u>
B26E9: S/L STATUS	×	× (Turn ON for 15 seconds)	_	SEC-125
B26EA: KEY REGISTRATION	×	× (Turn ON for 15 seconds)	_	SEC-126
C1704: LOW PRESSURE FL	_	_	×	<u>WT-8</u>
C1705: LOW PRESSURE FR	_	_	×	<u>WT-8</u>
C1706: LOW PRESSURE RR	_	_	×	WT-8
C1707: LOW PRESSURE RL	_	_	×	WT-8
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-15</u>

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< ECU DIAGNOSIS INFORMATION >

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
C1713: [CHECKSUM ERR] FR	_	_	×	<u>WT-15</u>
C1714: [CHECKSUM ERR] RR	_	_	×	<u>WT-15</u>
C1715: [CHECKSUM ERR] RL	_	_	×	<u>WT-15</u>
C1716: [PRESSDATA ERR] FL	_	_	×	<u>WT-17</u>
C1717: [PRESSDATA ERR] FR	_	_	×	<u>WT-17</u>
C1718: [PRESSDATA ERR] RR	_	_	×	<u>WT-17</u>
C1719: [PRESSDATA ERR] RL	_	_	×	<u>WT-17</u>
C1720: [CODE ERR] FL	_	_	×	<u>WT-15</u>
C1721: [CODE ERR] FR	_	_	×	<u>WT-15</u>
C1722: [CODE ERR] RR	_	_	×	<u>WT-15</u>
C1723: [CODE ERR] RL	_	_	×	<u>WT-15</u>
C1724: [BATT VOLT LOW] FL	_	_	×	<u>WT-15</u>
C1725: [BATT VOLT LOW] FR	_	_	×	<u>WT-15</u>
C1726: [BATT VOLT LOW] RR	_	_	×	<u>WT-15</u>
C1727: [BATT VOLT LOW] RL	_	_	×	<u>WT-15</u>
C1729: VHCL SPEED SIG ERR	_	_	×	<u>WT-18</u>
C1734: CONTROL UNIT	_	_	×	<u>WT-19</u>

< ECU DIAGNOSIS INFORMATION >

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

Reference Value INFOID:0000000007630948

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VALUES ON THE DIAGNOSIS TOOL

Monitor Item	(Condition				
RADFAN REQ	Engine idle speed	Changes depending on engine coolant temperature, air conditioner operation status, vehicle speed, etc.	0 - 100 %			
		A/C switch OFF	Off			
AC COMP REQ	Engine running	A/C switch ON (Compressor is operating)	On			
TAIL&CLR REQ	Lighting switch OFF		Off			
TAILOCLININLO	Lighting switch 1ST, 2ND, HI or	AUTO (Light is illuminated)	On			
HL LO REQ	Lighting switch OFF		Off			
TIE EO NEQ	Lighting switch 2ND HI or AUTO	(Light is illuminated)	On			
HL HI REQ	Lighting switch OFF		Off			
TILTITILLO	Lighting switch HI	Lighting switch HI				
FR FOG REQ	Lighting switch 2ND or	Front fog lamp switch OFF	Off			
TRIOGREQ	AUTO (Light is illuminated)	Front fog lamp switch ON	On			
		Front wiper switch OFF	STOP			
FR WIP REQ	Ignition switch ON	Front wiper switch INT	1LOW			
		Front wiper switch LO	Low			
		Front wiper switch HI	Hi			
WIP AUTO STOP		Front wiper stop position	STOP P			
	Ignition switch ON	Any position other than front wiper stop position	ACT P			
		Front wiper operates normally	Off			
WIP PROT	Ignition switch ON	Front wiper stops at fail-safe operation	BLOCK			
ION DIVI DEO	Ignition switch OFF or ACC		Off			
IGN RLY1 -REQ	Ignition switch ON		On			
ION DLV	Ignition switch OFF or ACC		Off			
IGN RLY	Ignition switch ON		On			
DUOLLOW/	Release the push-button ignition	switch	Off			
PUSH SW	Press the push-button ignition sv	On				
	Ignition switch ON	CVT selector lever in any position other than P or N (CVT models) Release clutch pedal (M/T models)	Off			
INTER/NP SW	CVT selector lever in P or N position (CVT models)		On			
ST RLY CONT	Ignition switch ON		Off			
	At engine cranking		On			
IHBT RLY -REQ	Ignition switch ON		Off			
	At engine cranking	On				

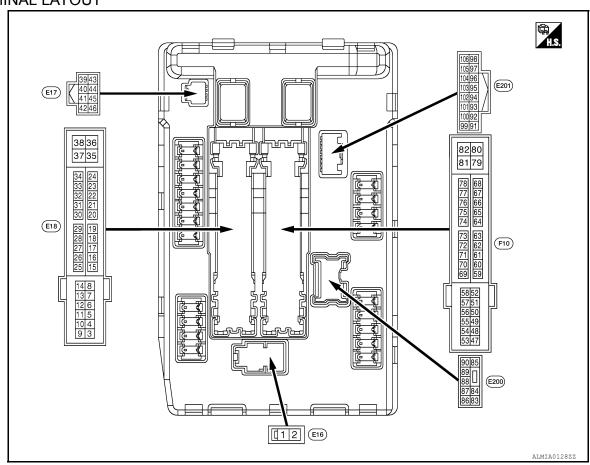
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< ECU DIAGNOSIS INFORMATION >

Monitor Item	Co	Value/Status		
	Ignition switch ON		Off	
	At engine cranking		ST →INHI	
ST/INHI RLY	The status of starter relay or starter the battery voltage malfunction, etc starter control relay is OFF	UNKWN		
DETENT SW	Ignition switch ON	Press the selector button with CVT selector lever in P position CVT selector lever in any position other than P	Off	
	Release the CVT selector button v NOTE: The lever is fixed ON for M/T	On		
	None of the conditions below are p	Off		
S/L RLY -REQ	 Open the driver door after the ig seconds) Press the push-button ignition s ed Depress the clutch pedal when the second se	On		
	Steering lock is activated		LOCK	
S/L STATE	Steering lock is deactivated		UNLK	
	[DTC B210A] is detected	UNKWN		
	Ignition switch OFF, ACC or engine	e running	Open	
OIL P SW	Ignition switch ON		Close	
	Not operated		Off	
THFT HRN REQ	Panic alarm is activated Horn is activated with VEHICLE TEM	On		
LIODN CHIDD	Not operated		Off	
HORN CHIRP	Door locking with Intelligent Key (h	Door locking with Intelligent Key (horn chirp mode)		

< ECU DIAGNOSIS INFORMATION >

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal		Description		Value												
(Wire co	olor) _	Signal name	Input/ Output			(Approx.)	SEC									
1 (R)	Ground	Battery power supply	Input	Ignition swi	tch OFF	Battery voltage										
2 (L)	Ground	Battery power supply	Input	Ignition swi	tch OFF	Battery voltage	L									
4	01	Foot Soul C	0 1 1	Ignition	Front wiper switch OFF	0 V										
(LG)	Ground	Front wiper LO	Output	Output	Output	Output	Output	switch ON	Front wiper switch LO	Battery voltage	M					
5	Cround	Front wines III	Outout	Ignition	Front wiper switch OFF	0 V										
(Y)	Ground	Front wiper HI	Output	Output	Output	switch ON	Front wiper switch HI	Battery voltage	N							
7	Ground	Tail, license plate lamps &	Output	Ignition	Lighting switch OFF	0 V										
(GR)	Ground	interior lamps	Output	Output	Output	Output	Output	Output	Output	Output	Output	Output	switch ON	Lighting switch 1ST	Battery voltage	
40				Ignition swi (For a few s switch OFF	seconds after turning ignition	0 V	0									
10 (BR)	Ground ECM relay nower supply	Ignition switch ON Ignition switch OFF (More than a few seconds after tuing ignition switch OFF)		witch OFF an a few seconds after turn-	Battery voltage	Р										

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< ECU DIAGNOSIS INFORMATION >

Terminal	-	Description				Value
(Wire col	or) 	Signal name	Input/ Output		Condition	(Approx.)
				Ignition switch OFF	A few seconds after opening the driver door	Battery voltage
11 (O)	Ground	Electronic steering column lock power supply	Output	Ignition switch LOCK	Press the push-button ig- nition switch	Battery voltage
				Ignition sw	itch ACC or ON	0 V
12 (B)	Ground	Ground	_	Ignition sw	itch ON	0 V
					itely 1 second or more after ignition switch ON	0 V
13 (SB)	Ground	Fuel pump power supply	Output		mately 1 second after turning on switch ON running	Battery voltage
15	Cround	Ignition relay-1 power sup-	Output	Ignition sw	itch OFF	0 V
(W)	Ground	ply	Output	Ignition sw	itch ON	Battery voltage
16				Ignition	Front wiper stop position	0 V
16 (R)	Ground	Front wiper auto stop	Input	Ignition switch ON	Any position other than front wiper stop position	Battery voltage
19	Cround	Ignition relay-1 power sup-	Outout	Ignition sw	itch OFF	0 V
(Y)	Ground	ply	Output	Ignition switch ON		Battery voltage
20 (L)	Ground	Ambient sensor ground	_	Ignition switch ON		0V
21 (LG)	Ground	Ambient sensor	_	Ignition sw	itch ON	5V
22 (W/R)	Ground	Refrigerant pressure sensor ground	_	Ignition sw	itch ON	0V
23 (B/R)	Ground	Refrigerant pressure sensor	_	Both A/C	switch ON (READY) C switch and blower motor N (electric compressor oper-	1.0 - 4.0V
24 (BR/W)	Ground	Refrigerant pressure sensor power supply	_	Ignition sw	itch ON	5V
25	Ground	Ignition relay-1 power sup-	Output	Ignition sw	itch OFF	0 V
(GR)	Ground	ply	Output	Ignition sw	itch ON	Battery voltage
27	Ground	Ignition relay monitor	Input	Ignition sw	itch OFF or ACC	Battery voltage
(W)	Ground	ignition relay months	input	Ignition switch ON		0 V
28	Ground	Push-button ignition	Input	Press the push-button ignition switch		0 V
(SB)	Ciound	switch	iiiput	Release th	e push-button ignition switch	Battery voltage
30 (R)				CVT mod-	CVT selector lever in any position other than P or N (ignition switch ON)	0 V
(with M/T) 30 (BR) (with CVT)	Ground	Starter relay control	Input	CIS	CVT selector lever P or N (ignition switch ON)	Battery voltage
(WILIT CVT)				M/T mod- els	Release the clutch pedal	0 V
					Depress the clutch pedal	Battery voltage

< ECU DIAGNOSIS INFORMATION >

Termina (Wire co		Description		_	Condition	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
32	Ground	Electronic steering column	Input	Electronic s	steering column lock is acti-	0 V
(P)	0.000	lock unit condition-1		Electronic s tivated	steering column lock is deac-	Battery voltage
33	Cround	Electronic steering column	lanut	Electronic s	steering column lock is acti-	Battery voltage
(G)	Ground	lock unit condition-2	Input	Electronic s	steering column lock is deac-	0 V
34	Cround	Cooling for roley 2 control	Innut	Ignition swi	tch OFF or ACC	0 V
(O)	Ground	Cooling fan relay-3 control	Input	Ignition swi	tch ON	0.7 V
35	Ground	Cooling fan moter centrel	Outout	Ignition swi	tch OFF or ACC	0 V
(P)	Ground	Cooling fan motor control	Output	Ignition swi	tch ON	0.7 V
36 (G)	Ground	Battery power supply	Input	Ignition swi	tch OFF	Battery voltage
38	Ground	Cooling fan motor control	Output	Ignition swi	tch OFF or ACC	0 V
(GR)	Ground			Ignition swi	tch ON	0.7 V
39 (P)	_	CAN - L	Input/ Output		_	_
40 (L)	_	CAN - H	Input/ Output	_		_
41 (B)	Ground	Ground	_	Ignition switch ON		0 V
42	Ground	Cooling fan relay-2 control	Input	Ignition swi	tch OFF or ACC	0 V
(SB)	Ground	Cooling lan relay-2 control	iliput	Ignition swi	tch ON	0.7 V
					Press the CVT selector button (CVT selector lever P)	Battery voltage
43 (Y)	Ground	CVT shift selector (Detention switch)	Input	Ignition switch ON	 CVT selector lever in any position other than P Release the CVT selector button (CVT selector lever P) 	0 V
44	Ground	Horn relay control	Input	The horn is	deactivated	Battery voltage
(W)	0.00			The horn is	activated	0 V
45	Ground	Anti theft horn relay control	Input	The horn is	deactivated	Battery voltage
(GR)		, , , , , , , , , , , , , , , , , , , ,		The horn is		0 V
				CVT mod-	CVT selector lever in any position other than P or N (ignition switch ON)	0 V
46 (BR)	Ground	Starter relay control	Input	GIS	CVT selector lever P or N (ignition switch ON)	Battery voltage
				M/T mod-	Release the clutch pedal	0 V
				els	Depress the clutch pedal	Battery voltage
					A/C switch OFF	0 V
48 (W)	Ground	A/C relay power supply	Output	Engine running	A/C switch ON (A/C compressor is operating)	Battery voltage

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< ECU DIAGNOSIS INFORMATION >

Terminal N	-	Description				Value	
(Wire cold	- -	Signal name	Input/ Output		Condition	(Approx.)	
				Ignition swi (For a few s switch OFF	seconds after turning ignition	0 V	
49 (V)	Ground	ECM relay power supply	Output	`		Battery voltage	
51	Ground	lanition roley newer aunnly	Output	Ignition swi	itch OFF	0 V	
(SB)	Oround	Ignition relay power supply	Output	Ignition swi	itch ON	Battery voltage	
52	Ground	Ignition relay power supply	Output	Ignition swi	itch OFF	0 V	
(Y)	Giodila	ignition relay power supply	Output	Ignition swi	itch ON	Battery voltage	
53 (V)				Ignition swi (For a few s switch OFF	seconds after turning ignition	0 V	
(with QR25DE) 53 (G) (with VQ35DE)	Ground	ECM relay power supply	Output	,		Battery voltage	
					Ignition swi (For a few s switch OFF	seconds after turning ignition	0 V
54 (GR)	Ground	Throttle control motor relay power supply Outp	(-iround ()utput			Battery voltage	
55 (LG)	Ground	ECM power supply	Output	Ignition switch OFF		Battery voltage	
56	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V	
(R)	Giodila	ignition relay power supply	Output	Ignition swi	itch ON	Battery voltage	
57	Ground	Ignition relay power supply	Output	Ignition swi	itch OFF	0 V	
(O)	Giodila	ignition relay power supply	Output	Ignition swi	itch ON	Battery voltage	
58				Ignition swi	itch OFF	0 V	
(BR) (with CVT)	Ground	Ignition relay power supply	Output	Ignition swi	itch ON	Battery voltage	
69				Ignition swi (For a few s switch OFF	seconds after turning ignition	Battery voltage	
(SB)	Ground	ECM relay control	Output	(More the	switch ON switch OFF an a few seconds after turn- on switch OFF)	0 - 1.5 V	
						0 -1.0 V	
70		Throttle central mater :-		lanition swi	itch ON → OFF	↓ Battery voltage	
70 (G)	Ground	Throttle control motor re- lay control	Output	Ignition switch ON → OFF		↓ 0 V	
				Ignition swi	itch ON	0 - 1.0 V	
		-			CVT selector lever in P or N position	Battery voltage	
72 (W)	Ground	Transmission range switch signal	Input	Ignition switch ON	CVT selector lever in any position other than P or N position	0 V	

< ECU DIAGNOSIS INFORMATION >

Termina		Description				Value			
(Wire co	olor)	Signal name	Input/ Output		Condition	(Approx.)			
74	Cround	lanition relevance comple	Output	Ignition swi	tch OFF	0 V			
(L)	Ground	Ignition relay power supply	Output	Ignition swi	tch ON	Battery voltage			
75		0.1		Ignition	Engine stopped	0 V			
(LG)	Ground	Oil pressure switch	Input	switch ON	Engine running	Battery voltage			
				Ignition swi	tch ON	(V) 6 4 2 0 			
						6.3 V			
76 (Y)	Ground	Power generation com- mand signal	Output	Output	Output		40% is set on "Active test", "ALTERNATOR DUTY" of "ENGINE"		(V) 6 4 2 0
									3.8 V
				80% is set on "Active test", "ALTERNATOR DUTY" of "ENGINE"		(V) 6 4 2 0 			
77 (B/R)	Ground	Fuel pump relay control	Output	Approximately 1 second after turning the ignition switch ON Engine running		0 - 1.0 V			
(6/14)					tely 1 second or more after ignition switch ON	Battery voltage			
80 (R)	Ground	Starter motor	Output	At engine of	eranking	Battery voltage			
83	Ground	Headlamp LO (RH)	Output	Ignition	Lighting switch OFF	0 V			
(R/Y)	Ground	ricadianip LO (INT)	Output	switch ON	Lighting switch 2ND	Battery voltage			
84	Ground	Headlamp LO (LH)	Output	Ignition	Lighting switch OFF	0 V			
(L)	Giouna	Headianip LO (LD)	Output	switch ON	Lighting switch 2ND	Battery voltage			
86		Front fog lamp (RH)		Lighting	Front fog lamp switch ON	Battery voltage			
(W/R)	Ground	(If equipped)	Output	switch 2ND	Front fog lamp switch OFF	0 V			
07		Front for lawy (LLI)		Lighting	Front fog lamp switch ON	Battery voltage			
87 (L/Y)	Ground	Front fog lamp (LH) (If equipped)	Output	switch 2ND	Front fog lamp switch OFF	0 V			
88 (R/W)	Ground	Washer pump power supply	Output	Ignition swi	tch ON	Battery voltage			

< ECU DIAGNOSIS INFORMATION >

Terminal	-	Description				Value	
(Wire col	or) _	Signal name	Input/ Output		Condition	(Approx.)	
89 (L/W)	Ground	Headlamp HI (RH)	Output	Ignition switch ON	Lighting switch HI lighting switch PASS	Battery voltage	
(L/VV)				SWILCH ON	Lighting switch OFF	0 V	
90 (G)	Ground	Headlamp HI (LH)	Output	Ignition switch ON	Lighting switch HI Lighting switch PASS	Battery voltage	
(G)				SWILCH ON	Lighting switch OFF	0 V	
91	Ground	Parking lamp (RH)	Output	Ignition	Lighting switch 1ST	Battery voltage	
(LG/R)	Ground	Parking lamp (RH)	Output	switch ON	Lighting switch OFF	0 V	
92	Ground	Parking lamp (LH)	Output	Ignition	Lighting switch 1ST	Battery voltage	
(LG/B)	Ground	raiking lamp (LH)	Output	switch ON	Lighting switch OFF	0 V	
99 (BR/W)	Ground	Ambient sensor ground	_	Ignition swi	itch ON	0V	
100 (SB)	Ground	Ambient sensor	_	Ignition swi	itch ON	5V	
101 (O/L)	Ground	Refrigerant pressure sensor ground	_	Ignition switch ON		0V	
102 (R/B)	Ground	Refrigerant pressure sensor	_	Ignition switch ON (READY) Both A/C switch and blower motor switch ON (electric compressor operates)		1.0 - 4.0V	
103 (P)	Ground	Refrigerant pressure sensor power supply	_	Ignition switch ON		5V	

Fail Safe

CAN COMMUNICATION CONTROL

When CAN communication with ECM and BCM is impossible, IPDM E/R performs fail-safe control. After CAN communication recovers normally, it also returns to normal control.

If No CAN Communication Is Available With ECM

Control part	Fail-safe in operation
Cooling fan	 Signals cooling fans ON when the ignition switch is turned ON Signals cooling fans OFF when the ignition switch is turned OFF
A/C compressor	A/C relay OFF
Generator	Outputs the power generation command signal (PWM signal) 0%

If No CAN Communication Is Available With BCM

Control part	Fail-safe in operation		
Headlamp	 Turns ON the headlamp low relay when the ignition switch is turned ON Turns OFF the headlamp low relay when the ignition switch is turned OFF Headlamp high relay OFF 		
Parking lampsLicense plate lampsIlluminationTail lamps	Turns ON the tail lamp relay when the ignition switch is turned ON Turns OFF the tail lamp relay when the ignition switch is turned OFF		
Front wiper	 The status just before activation of fail-safe control is maintained until the ignition switch is turned OFF while the front wiper is operating at LO or HI speed. The wiper is operated at LO speed until the ignition switch is turned OFF if the fail-safe control is activated while the front wiper is set in the INT mode and the front wiper motor is operating. 		

< ECU DIAGNOSIS INFORMATION >

Control part	Fail-safe in operation	
Front fog lamps (if equipped)	Front fog lamp relay OFF	
Horn	Horn OFF	
Ignition relay	The status just before activation of fail-safe is maintained.	
Starter motor	Starter control relay OFF	
Electronic steering column lock unit	Steering lock relay OFF	

IGNITION RELAY MALFUNCTION DETECTION FUNCTION

- IPDM E/R monitors the voltage at the contact circuit and excitation coil circuit of the ignition relay inside it.
- IPDM E/R judges the ignition relay error if the voltage differs between the contact circuit and the excitation coil circuit.
- If the ignition relay cannot turn OFF due to contact seizure, it activates the tail lamp relay for 10 minutes to alert the user to the ignition relay malfunction when the ignition switch is turned OFF.

DTC	Ignition switch	Ignition relay	Tail lamp relay
_	ON	ON	_
_	OFF	OFF	_
B2098: IGN RELAY ON	OFF	ON	ON (10 minutes)
B2099: IGN RELAY OFF	ON	OFF	_

NOTE:

The tail lamp turns OFF when the ignition switch is turned ON.

FRONT WIPER CONTROL

IPDM E/R detects front wiper stop position by a front wiper auto stop signal.

When a front wiper auto stop signal is in the conditions listed below, IPDM E/R stops power supply to wiper after repeating a front wiper 10 second activation and 20 second stop five times.

Ignition switch Front wiper switch		Auto stop signal		
ON	OFF	Front wiper stop position signal cannot be input 10 seconds.		
	ON	The signal does not change for 10 seconds.		

NOTE:

This operation status can be confirmed on the IPDM E/R "Data Monitor" that displays "BLOCK" for the item "WIP PROT" while the wiper is stopped.

STARTER MOTOR PROTECTION FUNCTION

IPDM E/R turns OFF the starter control relay to protect the starter motor when the starter control relay remains active for 90 seconds.

DTC Index

CONSULT display	Fail-safe	TIME ^{NOTE}		Refer to
No DTC is detected. further testing may be required.	_	_	_	_
U1000: CAN COMM CIRCUIT	×	CRNT	1 – 39	PCS-17
B2098: IGN RELAY ON	×	CRNT	1 – 39	PCS-18
B2099: IGN RELAY OFF	_	CRNT	1 – 39	PCS-19
B2108: STRG LCK RELAY ON	_	CRNT	1 – 39	<u>SEC-255</u>
B2109: STRG LCK RELAY OFF	_	CRNT	1 – 39	<u>SEC-256</u>
B210A: STRG LCK STATE SW	_	CRNT	1 – 39	<u>SEC-257</u>
B210B: START CONT RLY ON	_	CRNT	1 – 39	SEC-262
B210C: START CONT RLY OFF	_	CRNT	1 – 39	<u>SEC-263</u>

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CONSULT display	Fail-safe	TIME ^{NOTE}		Refer to
B210D: STARTER RELAY ON	_	CRNT	1 – 39	SEC-264
B210E: STARTER RELAY OFF	_	CRNT	1 – 39	SEC-266
B210F: INTRLCK/TRANSMISSION RANGE SW ON	_	CRNT	1 – 39	SEC-269
B2110: INTRLCK/TRANSMISSION RANGE SW OFF	_	CRNT	1 – 39	<u>SEC-275</u>

NOTE:

The details of TIME display are as follows.

- CRNT: The malfunctions that are detected now
- 1 39: The number is indicated when it is normal at present and a malfunction was detected in the past. It increases like 0 → 1 → 2 ··· 38 → 39 after returning to the normal condition whenever IGN OFF → ON. It is fixed to 39 until the self-diagnosis results are erased if it is over 39. It returns to 0 when a malfunction is detected again in the process.

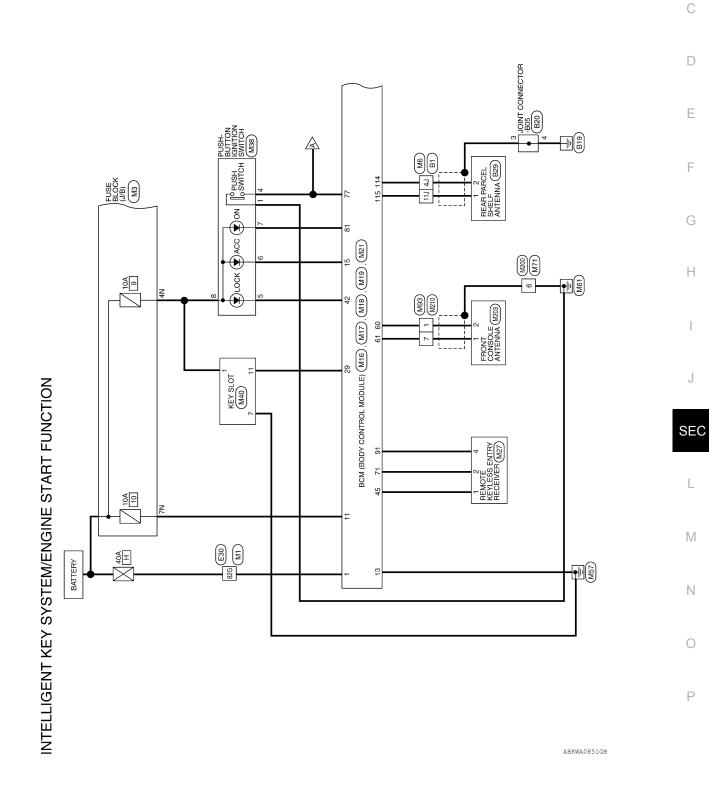
< WIRING DIAGRAM > [COUPE]

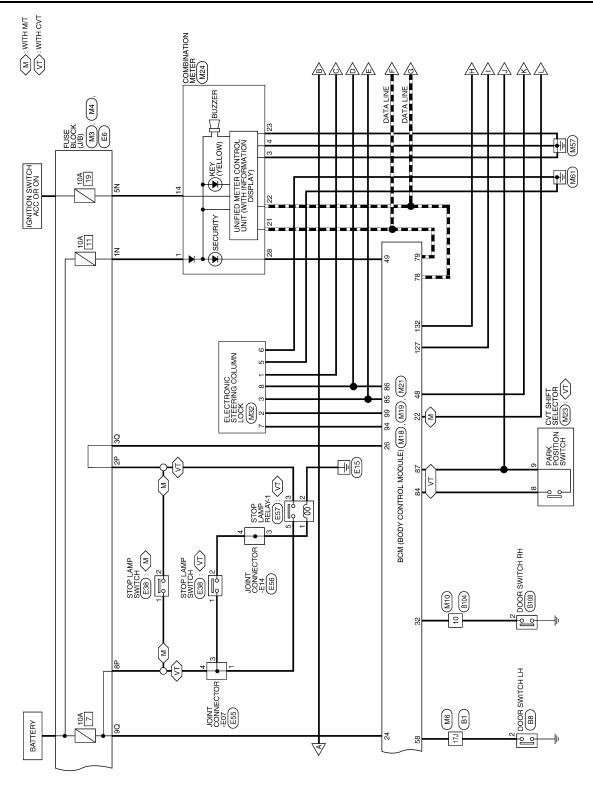
WIRING DIAGRAM

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

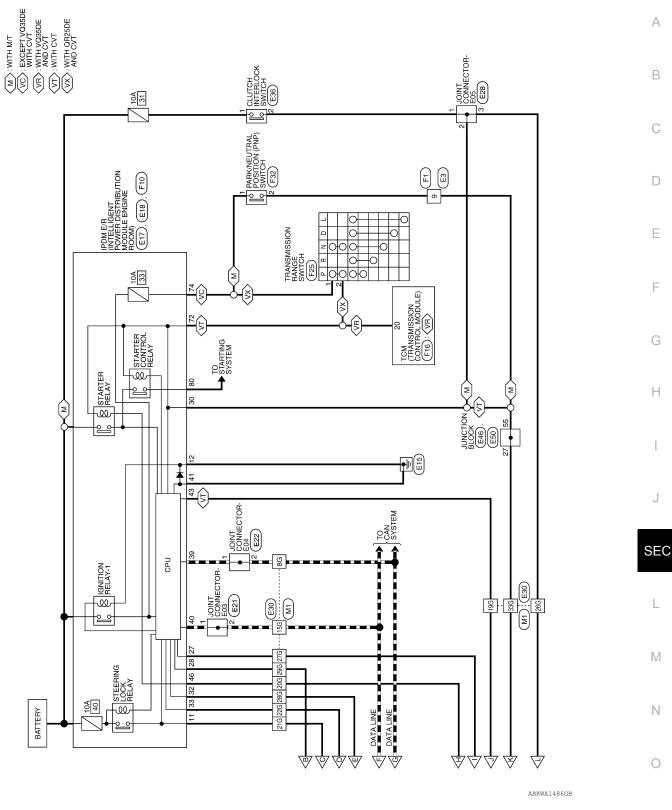
Wiring Diagram

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ABKWA1485GB



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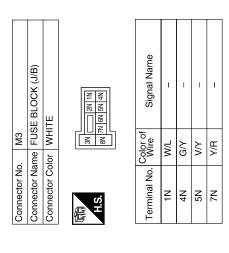
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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION CONNECTORS

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Connector No.



Signal Name	1	
Color of Wire Wire P P P P P P P P P P P P P P P P P P P	M/B	
20G	82G	

36 206 206 206 356 436 436 436 436 436 666 666 736 666 666 816			
Connector Name WIRE TO WIRE Connector Color WHITE WHITE 170 166 156 146 136 126 116 116 116 116 116 116 116 116 11	S. 96 86 76 86 86 46 39 176 18	286 286 246 236 226 216 206 236 236 236 236 236 236 236 236 236 23	796 786 776 776 776 776 736 826 816

	Connector Name FUSE BLOCK (J/B)	TE	40 30	Signal Name	1	
M4	me FUS	lor WHI	40 30 100 90	Color of Wire	O/L	/V/ G
Connector No.	Connector Na	Connector Color WHITE	fin	Terminal No. Wire	30	5

ABKIA1057GB

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< WIRING DIAGRAM > [COUPE]

Connector No. M10 Connector Name WIRE TO WIRE		A B C D
Terminal No. Color of Wire Signal Name 4.0 B - 11.0 W - 17.0 SB -	Connector No. M17 Connector Name BCM (BODY CONTROL MODULE) Connector Color WHITE	F G H
Connector No. M6 Connector Name WIRE TO WIRE Connector Color WHITE Su Su To Su Su To Su Su To To Su Su To Su Su To Su Su To Su Su Su Su Su Su Su S	Connector No. M16 Connector Name BCM (BODY CONTROL MODULE) Connector Color BLACK Terminal No. Color of Signal Name 1 W/B BAT_POWER_F/L	SEC L M N

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			13112					
	BCM (BODY CONTROL MODULE)	λħ	मुद्धे H.S. 130	Signal Name	TRUNK_ANT_1_B	TRUNK_ANT_1_A	IGN_USM_CONT1	ST_CONT_USM
M21		or GRAY	\$12512411 \$14514411	Color of Wire	m	Μ	BR/W	<u>~</u>
Connector No.	Connector Name	Connector Color	(中) H.S. 131 130 129 128 127 128 151 150 149 148 147 148	Terminal No.	114	115	127 E	132

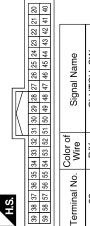
Connector No.	Connector Name	Connector Color	原 H.S.	131 130 129 128 127 126 12!	151 150 149 148 147 146 14	
				61 60	81 80	
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	BCM (BOE MODULE)			8	8	
_) 	Ş		12	8	
M19	ő	١LA		7	6	
_	ш≥	Ш		3/2	8	
	ne	or		7	9	
ġ	۱ar	Sol		75	8	
5	or ľ	or (92	8	
ğ	sct)		79 78 77 76 75 74 73 72 71 70 69 68 67 66 65 64 63 62 61	99 98 97 96 95 94 93 92 91 90 89 88 87 86 85 84 83 82 81	
ПÉ	uu.	nn.	H.S.	8	88	
Connector No.	Connector Name BCM (BODY CONTROL MODULE)	Connector Color BLACK	唇兰	20	88	
_		_			_	J

Signal Name	ROOM_ANT_2_B	ROOM_ANT_2_A	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	B/R	W/R	9	BR	۵	٦	ГG	Y/R	9	G/R	G/B	L/R	G/Y	₹
Terminal No.	09	61	71	77	78	79	81	84	85	98	87	91	94	66

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

Connector No.	Connector No. M18
ector ivallie	MODULE)
Connector Color GREEN	GREEN

Connector No.



of 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	IMMO_LED	DR_DOOR_SW
Color of Wire	R/Υ	₽/W	0/F	>	R/B	Œ	Д	R/G	9	SB
Terminal No.	22	24	26	59	32	42	45	48	49	58

Connector No.	M23
Connector Name	Connector Name CVT SHIFT SELECTOR
Connector Color WHITE	WHITE





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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< WIRING DIAGRAM > [COUPE]

ENTRY Connector Name ELECTRONIC STEERING COLUMN LOCK Connector Color WHITE	H.S. (8 7 6 5 1	Terminal No. Wire Signal Name	3/L_12V_MECHANICAL		2 L/Y S/L_COM	3 L/O S/L_CONDITION_1	5 B GND	6 B GND	7 G/Y S/L_12V_CPU (V2)	8 G/R S/L_CONDITION_2	Connector No. M71	Connector Name WIRE TO WIRE	_	S	Color of	al No.	- B 9					
M2/ REMOTE KEYLESS ENTRY RECEIVER BLACK	1 2 3 4	Color of Signal Name	P GND	L/O SIGNAL	L/R 12V						M40	E KEY SLOT		7 8 9 10 11 12	Color of Signal Name	G/Y B+	B GND	Y CARD_SW_1				
Connector No. Connector Name Connector Color	赋 H.S.	Terminal No.	-	2	4						Connector No.	Connector Name KEY SLOT		H.S.	Terminal No.	-	7	+				
COMBINATION METER WHITE	9 10 11 12 13 14 15 16 17 18 19 20	Signal Name	BAT	GND (POWER)	GND (ILL)	ACC	CAN-H	CAN-L	GND (CIRCUIT)	SECURITY		PUSH-BUTTON IGNITION SWITCH	NWC	4 5 6 7 8	Signal Name	GND	START_SW	LOCK	ACC	NO	B+	
-	6 7 8 26 27 28	Color of Wire	M/L	В	В	A/A	٦	Ь	В	071). M38		olor BROWN	<u>-4</u>	Color of Wire	В	BR	ш	J//L	ГG	G/Y	
Connector Name Connector Color	H.S. 1 2 3 4 5 21 22 23 24 25	Terminal No.	-	3	4	14	21	22	23	28	Connector No.	Connector Name	Connector Color	用.S.	Terminal No.	-	4	2	9	7	8	

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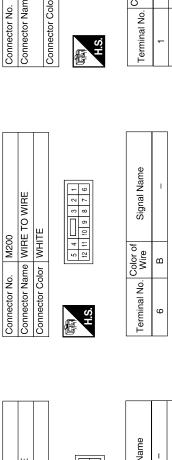
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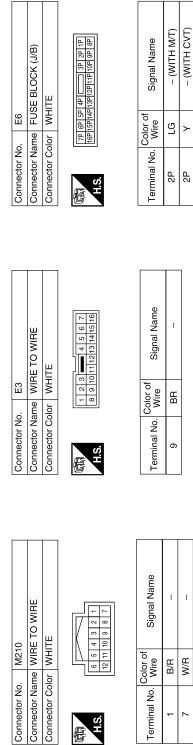
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< WIRING DIAGRAM >

Connector No. M203	M203
Connector Name	Connector Name FRONT CONSOLE
	ANIENNA
Connector Color GRAY	GRAY

				_	_
ANTENNA	٨t		Signal Name	+LNY	-INA
A A	lor GRAY		Color of Wire	W/R	B/R
	unnector Color	H.S.	erminal No.	1	2





	WIRE TO WIRE	ITE	8 2 3 4 5 6 9 10 11 12 12 12 12 12 12 12 12 12 12 12 12	Signal Name	1	ı
. M93	1	lor WHITE		Color of Wire	B/R	W/R
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	-	7

.	E TO WIRE		0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Signal Name	I	1
	me WIF	lor WHITE	12 11 11 11 11 11 11 11 11 11 11 11 11 1	Color of Wire	B/R	W/B
	Connector Name WIRE TO WIRE	Connector Color	H.S.	Terminal No.	1	7

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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

[COUPE] < WIRING DIAGRAM >

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Signal Name	ESCL	GND (POWER)	IGN_SIGNAL	PUSH_START_SW	CLUTCH_I/L_SW (WITH M/T)	ECM (WITH CVT)	SL_CONDITION_1	SL_CONDITION_2						JOINT CONNECTOR-E05 WHITE	2 1 0		Signal Name	1	ı	1	В
Terminal No. Wire	11 0	12 B	27 W	28 SB	30 B	30 BR	32 P	33 G		-	36		Connector No. E28	Connector Name JOINT C	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	30,000	Terminal No. Wire	1 R		ж С	C D
TNEDI	NOIL													OR-E04			ne				F
	lame POWER DISTRIBUTION	_	_							12 13 14				lame JOINT CONNECTOR-E04			Wire Signal Name	Ь	- П		G H
Connector No.	Connector Name	i de la constance de la consta		E	H.S.					9 10 1	.		Connector No.	Connector Name	E.S.		Terminal No.	-	2		J
LNEGLIERN	POWER DISTRIBUTION						Signal Name	CAN-I	CAN-H	GND (SIGNAL)	START CONT			INECTOR-E03			Signal Name	1	1		SEC
Connector No. E17	Connector Name POWER D	MODOLL I	_		42 41 40 39 46 45 44 43		Color of	۵		ω >	- BB		Connector No. E21	Connector Name JOINT CONNECTOR.	043210		Color of Wire		7		M
Connec	Connec	0		Œ	H.S.		Terminal No.	08	40	14	46		Connec	Connec	(南) H.S.		Terminal No.	-	2	AAKIAO610GB	0

SEC-189 Revision: February 2013 2012 Altima GCC

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Connector Name CLUTCH INTERLOCK	Swiller Connector Color BBOWN	_		H.S.		Jo volo	Terminal No. Wire Signal Name	1 W	2 R						Connector No. E46	Connector Name JUNCTION BLOCK		31 30 29 28 (25 25 26 25 40 39 38 37 36 38 34 33 32 4 5		Terminal No. Wire Signal Name	27 BR –	
me																СН				J. J		
Signal Name	ı			1	1	ı	I	1	1	I	1	I	ı			STOP LAMP SWITCH (WITH M/T)	X	<u></u>]	Signal Name	1	1
Wire	Դ -	- >	BB	0	g	ш	Α	۵	BR	BR	7	۵	re). E38		olor BLACK	c	7	Color of Wire	Œ	ГG
Terminal No.	58 5	19G	20G	21G	22G	26G	27G	28G	29G	33G	51G	52G	82G		Connector No.	Connector Name	Connector Color	晋	H.S.	Terminal No.	-	2
			76 86 96		000	18G 19G 27G 28G 29G 30G 31G 32G 33G 33G		39G 40G 41G		546 586 616 616 626 636		66G 67G 68G 69G 70G 71G 72G	76 786 796 806			SWITCH				al Name		

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< WIRING DIAGRAM > [COUPE]

Connector No. E56 Connector Name JOINT CONNECTOR-E14 Connector Color WHITE H.S.	Terminal No. Color of Signal Name 3 LG - 4 LG -	PDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM) Connector Color WHITE See 57 58 57 5	A B C D E
Connector No. E55 Connector Name JOINT CONNECTOR-E07 Connector Color WHITE	Terminal No. Color of Signal Name 1 W - 3 R - 4 R R -	Connector No. F1	G H J
Connector No. E50 Connector Name JUNCTION BLOCK Connector Color WHITE M.S. Sel 55	Terminal No. Wire Signal Name 55 BR –	Connector No. E57	L M N
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[COUPE]

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Connector No. F32	TRANSMISSION RANGE Connector Name PARK/NEUTRAL POSITION SWITCH (PNP) SWITCH	Connector Color BLACK	H.S.	Signal Name Terminal No. Wire Signal Name		P N OUTPUT 2 W		Signal Name Connector No. B8 Connector Name DOOB SWITCH I H		_		ν <u>;</u>		Terminal No. Wire Signal Name	2 SB DOOR SW (DR)		
r No. F25		r Color BLACK	8 0 4 0 8 0	No. Wire	_	>	- -	No. Wire	В	×	SB						
Connector No.	Connector Name	Connector Color	原 H.S.	Terminal No.	-	α		Terminal No.	P 4	117	17J						
Connector No. F16	Connector Name TCM (TRANSMISSION CONTROL MODULE)	Connector Color BLACK	43 45	1 2 3 4 5 6 7 8 9 10 41 42	Terminal No. Wire Signal Name		1	Connector No. B1 Connector Name WIRE TO WIRE	- 1	_		S. 1.1 2J 10J 11J 12J 13J	18J 20J 21J 26J 25J 28J 29J 30J	36J 38J 40J 41 42J 43J 44J 45J 46J	49J 50J 51J 52J 53J 54J 55J 47J 48J 55J 57J 58J 58J 59J 60J 61J 62J 63J	64J [65J [65J [65J [65J [75J]75J]]] [71J [72J [73J]74J [75J]75J]75J [75J]75J [75J]73J]	100 100

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

[COUPE] < WIRING DIAGRAM >

34	WIRE TO WIRE	BROWN	3	Signal Name	_
. B104			6 7	Color of Wire	GR
Connector No.	Connector Name	Connector Color	赋 H.S.	Terminal No. Wire	10

B29	Connector Name REAR PARCEL SHELF ANTENNA	GRAY	
Connector No.	Sonnector Name	Connector Color GRAY	



Connector No.	o. B20	
Connector Name		JOINT CONNECTOR-B05
Connector Color	olor GRAY	AY
(京) H.S.		## F C C C C C C C C C C C C C C C C C C
Terminal No.	Color of Wire	Signal Name
ဗ	В	ı
4	В	1

Signal Name	ANT+	ANT-	
Color of Wire	M	В	
Ferminal No.	1	2	

Signal Name	_	1	
Color of Wire	В	В	
erminal No.	3	4	

B108	DOOR SWITCH RH	WHITE	
Connector No.	Connector Name	Connector Color	南 H.S.

WHITE		Signal Name	DOOR SW (A
		Color of Wire	GR
Connector Color	斯 H.S.	Terminal No.	2

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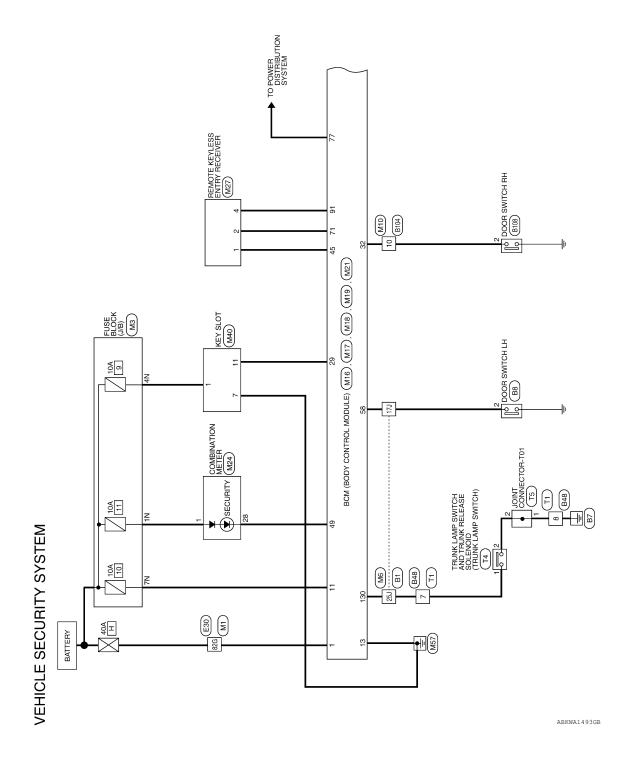
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SEC-193 Revision: February 2013 2012 Altima GCC

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Wiring Diagram



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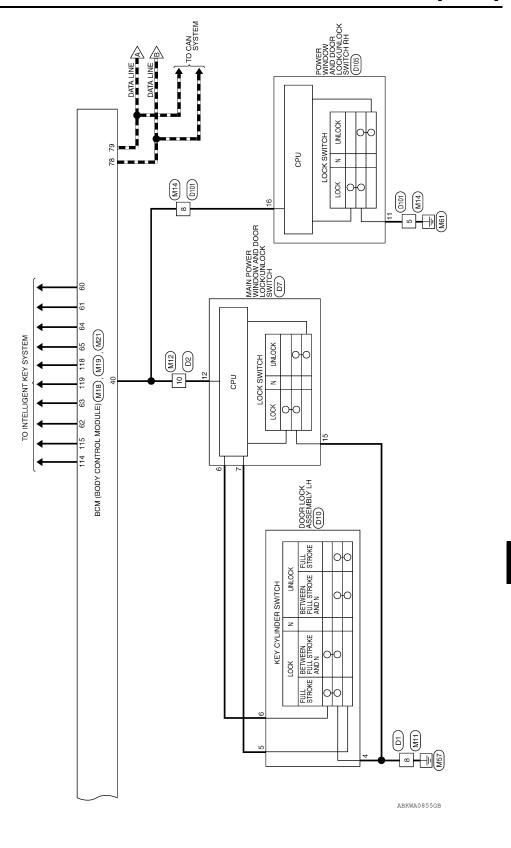
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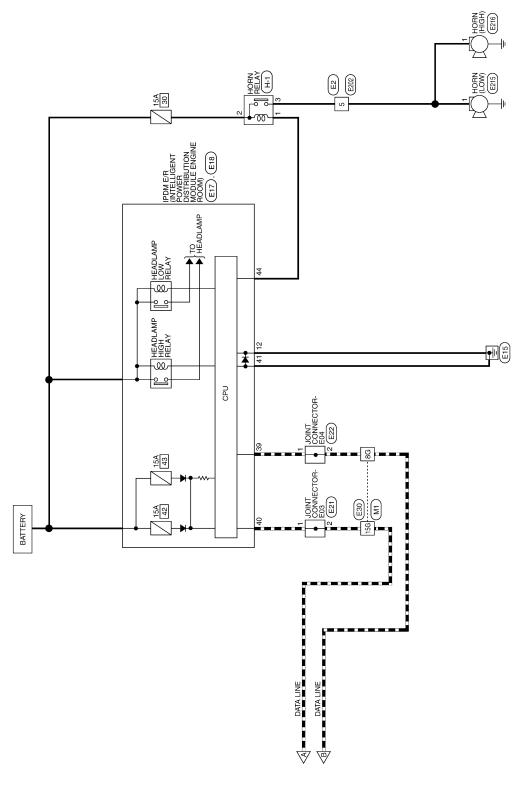
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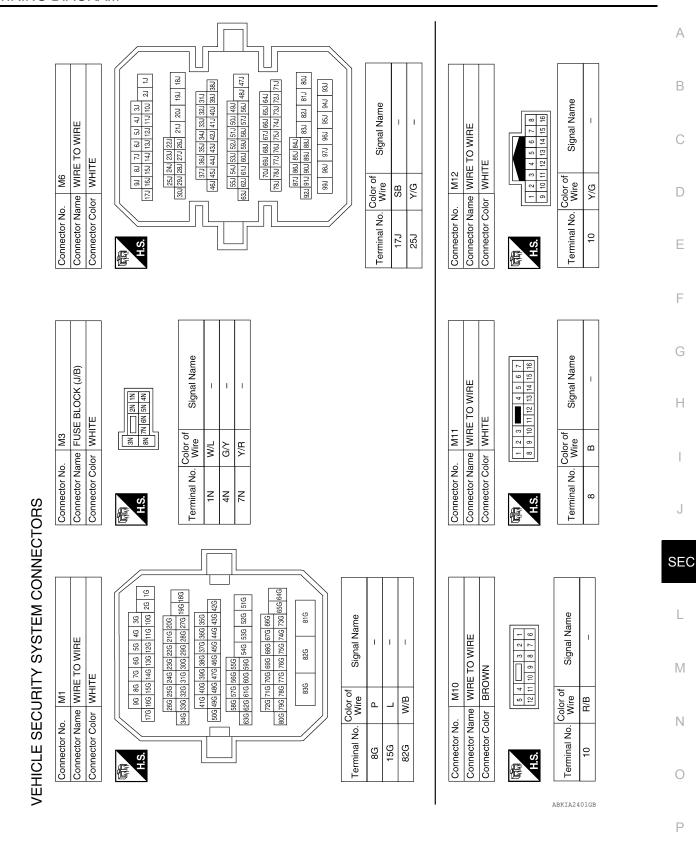
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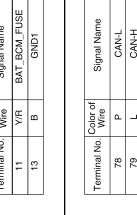




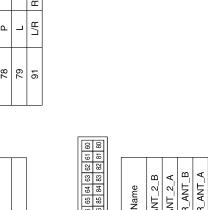
Revision: February 2013 SEC-197 2012 Altima GCC

		Connector No. M17	M17
onnector Name BCM (BODY CONTROL MODULE)	Y CONTROL	Connector Name	Connector Name BCM (BODY CONTROL MODULE)
onnector Color BLACK		Connector Color WHITE	WHITE

				1
11 12 13 14 15 16 17 18 19	Signal Name	BAT_BCM_FUSE	GND1	
4 5 6 1112 13	Color of Wire	Y/R	В	
明.S.	Terminal No.	11	13	







BCM (BODY CONTROL MODULE)	BLACK		71 70 69 68 67 66 65 64 63 62 91 90 89 88 87 86 85 84 83 82	Signal Name	ROOM_ANT_2_B	ROOM_ANT_2_A	AS_DOOR_ANT_B	AS_DOOR_ANT_A	DR_DOOR_ANT_B	DR_DOOR_ANT_A	RF1_TUNER_SIGNAL
			74 73 72 7	Color of Wire	B/R	W/R	B/Y	ГG	۸	Ь	9
Connector Name	Connector Color	麻 H.S.	78 78 77 76 75 7 99 98 97 96 95 9	Terminal No.	09	61	62	63	64	65	71

M16	ne BCM (B MODUL	or BLACK	
Connector No.	Connector Name	Connector Color	

Connector No. M14
Connector Name WIRE TO WIRE

Connector Color WHITE



1 3

Terminal No.	Color of Wire	M/B	
	Terminal No.	1	

BAT_POWER_F/L Signal Name

Terminal No.	1	

Signal Name

Color of Wire

Terminal No.

Y/G

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M19

Connector No.



		21 20	41 40							
		22	45							
		ន	43							_
		24	45 44	<u>o</u>	FOB_IN_SW_1	AS_DOOR_SW	ш	קן		S.
	55		Signal Name	[%	ار	PW_K-LINE	[2]	Щ	اما	
	56	46	Z		Ö	J	GND_RF2_A/L	IMMO_LED	DR_DOOR_SW	
	_	27	47	Па	=,	18	_		lĕ	12
	1/	28	48	ję.	le.		ĕ	닏	≥	-
	29	49	0)	Щ	¥	-	മ		占	
	Λ	30	20							
	П	33	5		_					
		32	25	Color of Wire	l	m	(T			
		88	23	color c Wire	≻	R/B	Y/G	₾	9	SB
		34	汉	0						
		88	22	o.						
		38	29	Z						
,	3	37	22	nal	53	32	40	45	49	28
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1	1	ස	23	Terminal No.						

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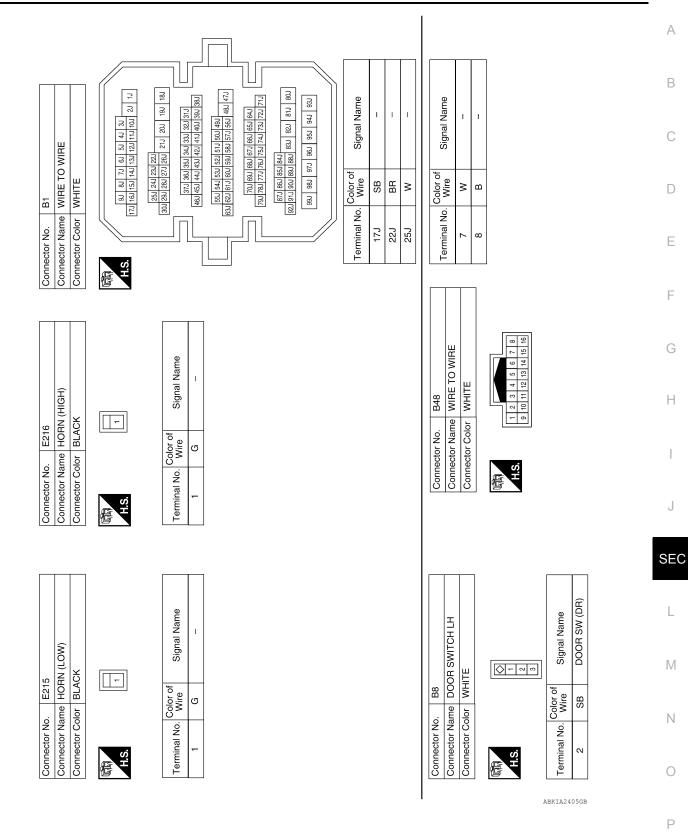
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Connector No. M27 Connector Name REMOTE KEYLESS ENTRY RECEIVER Connector Color BLACK Terminal No. Wire Signal Name 1 P GND 2 L/O SIGNAL 4 L/R 12V	Connector No. E17 IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) Connector Color WHITE
Connector No. M24 Connector Name COMBINATION METER Connector Color WHITE Connector Color WHITE	Connector No. E2 Connector Name WIRE TO WIRE Connector Color WHITE Terminal No. Color of Signal Name 5 O -
Connector No. M21	Connector No. M40 Connector Name KEY SLOT Connector Color WHITE H.S. T 2 3 4 5 6 10 11 12 T 2 3 4 5 6 10 11 12 Signal Name T 6/Y B+ T 8 GND T 8 GND T 9 CARD SW 1

Connector No. E22 Connector Name JOINT CONNECTOR-E04 Connector Color WHITE	Terminal No. Wire Signal Name 1 P	Connector No. E202 Connector Name WIRE TO WIRE Connector Color WHITE H.S. Signal Name 5 G -
Connector No. E21 Connector Name JOINT CONNECTOR-E03 Connector Color WHITE Connector Color WHITE A.S. H.S.	Terminal No. Color of Signal Name 1 L - 2 L 1	Terminal No. Wire Signal Name Con 8G P – Con 15G L – Con 82G LG – Terminal No. Wire Signal Name Con 15G LG – Con 15G LG LG – Con 15G LG LG – Con 15G LG
Connector No. E18 Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM) Connector Color WHITE	9 10 11 12 13 14	Connector No. E30 Connector Name WIRE TO WIRE Connector Color WHITE Connector Color WHITE Connector Color WHITE Connector Color WHITE 16 26 106 116 126 126 126 126 126 126 126 176 176 176 176 176 176 176 176 176 17

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< WIRING DIAGRAM > [COUPE]



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	Connector Name WIRE TO WIRE	HTE.	13 6 11 12 12 11 10 9 1 1 10 9 1 1 1 10 9 1 1 1 1 1 1		Signal Name	ı
F	me WI	lor	8 7 16 15		Color of Wire	>
Connector No. T1	Connector Na	Connector Color WHITE	哥 H.S.		Terminal No. Wire	7
98	Connector Name DOOR SWITCH RH	IITE			Signal Name	DOOR SW (AS)
. B108	me DO	lor WF			Color of Wire	GR
Connector No.	Connector Na	Connector Color WHITE	H.S.		Terminal No. Wire	2
			l		\Box	
74	RE TO WIRE	NMC	8 9 10 11 12	Signal Name	ı	
. B104	me WIF	lor BR	1 9 7	Color of Wire	GR	
Connector No.	Connector Name WIRE TO WIR	Connector Color BROWN	H.S.	Terminal No. Wire	10	

	RE TO WIRE	5 4	13 12 11 10	Signal Name	ı	
	me WII	9	16 15	Color of Wire	В	
Connector No. D1	Connector Name WIRE TO WIRE Connector Color WHITE		H.S.	Terminal No. Wire	8	
					ı	
	Connector Name JOINT CONNECTOR-T01 Connector Color WHITE		2 Z 1 I	Signal Name	I	ı
T5	me JOI			Color of Wire	B/Y	B/Y
Connector No. T5	Connector Name JOINT Connector Color WHITE		H.S.	Terminal No. Wire	-	2
	ı				1	
	Connector Name AND TRUNK RELEASE SOLENOID	TE	S 4 C C C C C C C C C	Signal Name	ı	1
T4	me AND SOL	or WHI		Solor of Wire	>	Β/Y
Connector No.	Connector Nar	Connector Color WHITE	原 H.S.	Terminal No. Wire	-	2

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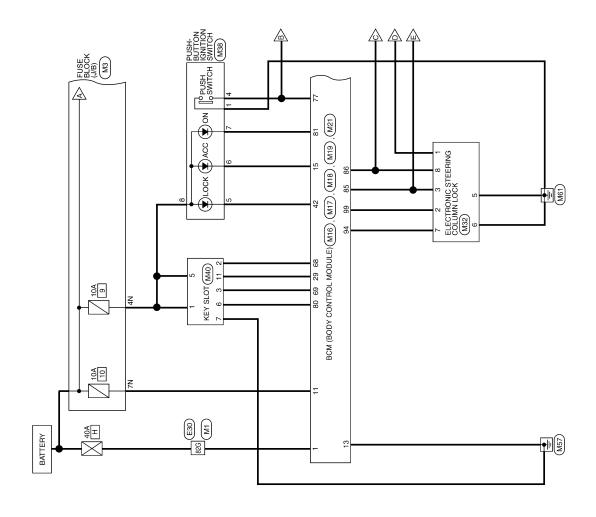
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DOOR LOCK ASSEMBLY LH GRAY	0 S	of Signal Name	GND	DOOR_KEY/C_	DOOR KEY/C	H-1	FUSE AND FUSIBLE LINK BOX (HORN RELAY)		F G H I 25 26 27 F 50 27 F 15 A A A A A A A A A A A A A A A A A A	2 3 10 15 10	A A A		of Signal Name		1	1	
nector Name	H.S.	Terminal No. Wire	4 B	5 R	9	Connector No.	Connector Name E						Color of	M M			
JOW JOCK							9×										
MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH	11	Signal Name	LOCK	UNLOCK	COM	5	POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH	TE	2 3 4 5 6 7 9 10 11 12 13 14 15 16		Signal Name	GND	WOO OO				
	8 10 2 3 10 1	Color of Wire		Œ	BB BB	D105		_	1 2 3 4	Color of	Wire	В	m				
Connector Name Connector Color	呵可 H.S.	Terminal No.	9	7	51	Connector No.	Connector Name	Connector Color	H.S.		Terminal No.	11	16				
			I	1													
WIRE TO WIRE WHITE	13 12 11 10 9	Signal Name	ı				TO WIRE E		1 ~		Signal Name	I	1				
	8 7 6 16 15 14	Color of Wire	BB			D101	me WIRE T	6		Color of	Wire	В	<u></u>				
Connector Name Connector Color	S.	Terminal No.	10	_		Connector No.	Connector Name WIRE TO WIRE Connector Color WHITE		H.S.		Terminal No.	2	ω				

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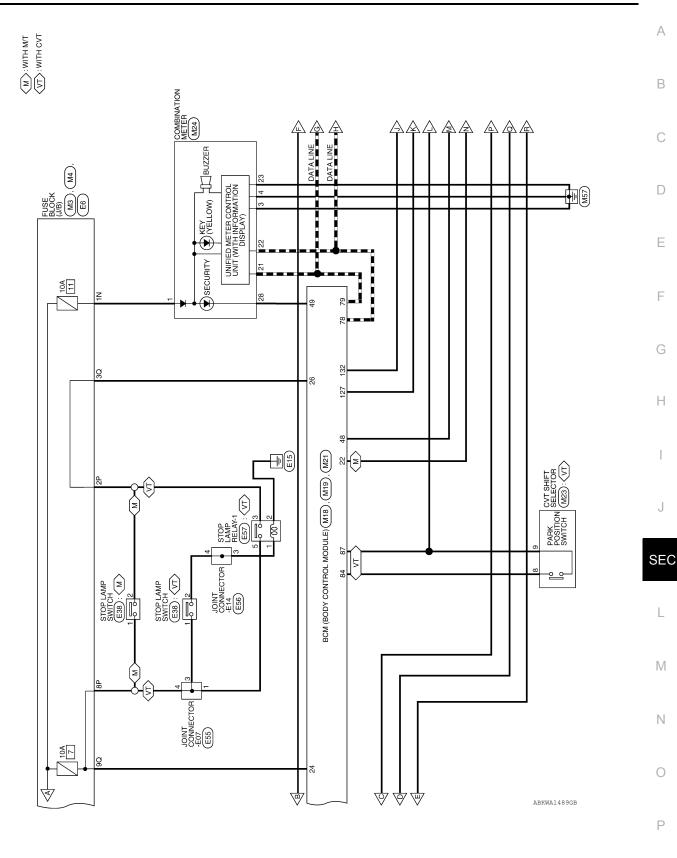
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Wiring Diagram

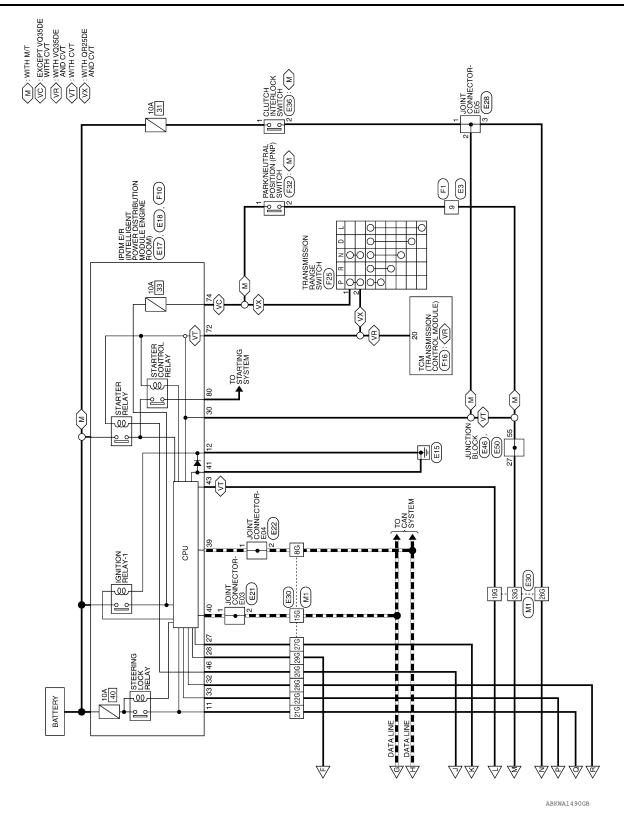


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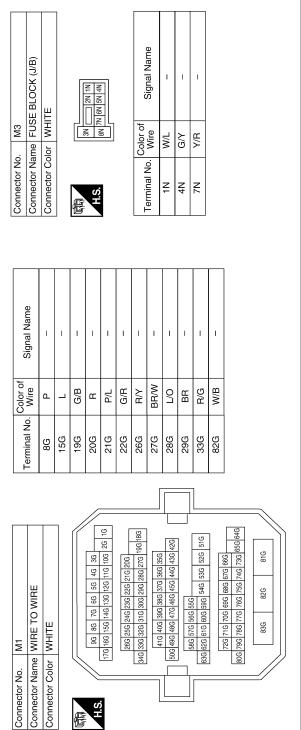
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1	1	1			BCM (BODY CONTROL MODULE)	TE	7 8 9 10	Signal Name	BAT_BCM_FUSE	GND1
M/L	G/Y	Y/R				or WHITE	4 5 6 11 12 13	Color of Wire	Y/R	В
Z	N4	N		Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	=	13

NVIS

	Sonnector Name BCM (BODY CONTROL MODULE)	CK CK		Signal Name	BAT_POWER_F/L	
M16	e BCN MOI	r BLACK		Color of Wire	M/B	
Connector No.	Sonnector Nam	Connector Color	扇 H.S.	rerminal No.	1	

Connector No.	M	
Connector Name		FUSE BLOCK (J/B)
Connector Color	lor WHITE	ITE
赋 H.S.	40 30 100 90	40 SQ SQ TQ SQ TQ SQ SQ TQ SQ S
Terminal No. Wire	Color of Wire	Signal Name
30	J/O	_
90	B/W	_

Signal Name	1	I	
Color of Wire	O/L	B/W	
Terminal No.	30	90	

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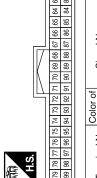
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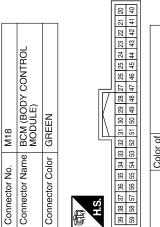
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Connector No.	M19
Connector Name	Connector Name BCM (BODY CONTROL MODULE)
Connector Color BLACK	BLACK

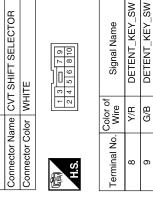


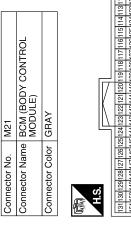


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	65	82		Signal Name	الصا	FOB_READER_DATA	
	99	98		l ar	ᅵ핃	DE	
	67	87		=	I₹	ΕA	
	89	88		l iii	ᇤ	В.	
		88		Š	6	B	
	70	90			FOB_READER_CLOCK	Ы	
	71	91		_	Ë		
ī	72	8		Color of Wire	lol	_	
	73	83		응통	0/5	0	
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	22	97		≝	89	69	
	79 78 77 76 75 74 73 72 71 70 69	88		Ferminal No.	-	_	
	79	88		₽	ĺ		

Signal Name	CLUTCH_SW	STOP_LAMP_LOW_SW	STOP_LAMP_HIGH_SW	FOB_IN_SW_1	S/L_LOCK_LED	GHIFT_N/P	IMMO_LED	
Wire	R/Y	B/W	O/L	У	В	R/G	0/7	
Terminal No.	22	24	56	59	42	48	49	

MZ3	Connector Name CVT SHIFT SELECTOR	WHITE	1 3	Color of Secretary
Connector No.	Connector Name	Connector Color WHITE	原 H.S.	Col





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

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Connector No.	M32
Connector Name	Connector Name ELECTRONIC STEERING COLUMN LOCK
Connector Color WHITE	WHITE

\$\frac{4}{0} \\ \frac{6}{0} \\ \frac{1}{0} \\ \frac	Signal Name	S/L_12V_MECHANICAL (V1)	S/L_COM	S/L_CONDITION_1	GND	GND	S/L_12V_CPU (V2)	S/L_CONDITION_2
4 8	Color of Wire	P/L	ζ	0/1	В	В	G/Y	G/R
咸南 H.S.	Terminal No.	-	2	3	5	9	7	8

GND (CIRCUIT)

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22 22 23 28 28

SECURITY

GND (POWER)

В В

BAT

M/L

GND (ILL)

CAN-H CAN-L

Signal Name

Terminal No. Wire

S/L_COM	S/L_CONDITION_1	GND	GND	S/L_12V_CPU (V2)	S/L_CONDITION_2	
Γ	0/7	В	В	G/Y	G/R	
2	3	2	9	7	8	

ı	BB	6
Signal Name	Color of Wire	Terminal No.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	8 9 10 1	H.S.
IITE	lor WHITE	Connector Color
WIRE TO WIRE		Connector Name
	E3	Connector No.

								_
2 3 3 4 1 1 1 2 6 8 8 8 8 9 10 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Signal Name	B+	CLOCK	DATA	LIGHT_BAT+	LIGHT_A	GND	
1-1-	Color of Wire	G/Y	G/O	0	G/Y	R/L	В	
	٥.							Г

	SLOT	Е	
M40	KEY §	WHIT	
Connector No.	Connector Name KEY SLOT	Connector Color WHITE	



Signal Name	+8	CLOCK	DATA	-IGHT_BAT	A_THÐIJ	QN9	. WS GARO
Color of Wire	G/Y	G/O	0	G/Y	B/L	В	>
Terminal No.	1	2	3	5	9	7	;

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			1	-	8
				=	88
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	回			9	36
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	≥			14	34
				13	88
	COMBINATION METER		1 17	9 10 11 12 13 14 15 16 17 18 19	21 22 23 24 25 26 27 28 29 30 31 32 33 34 35
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	B	Щ	I IN	9	30
7	⋈	WHITE		6	53
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	(I)			7	27
	Ĕ	ō		9	26
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Ĕ	Ē	ŭ	E.S.	2	22
Connector No.	Connector Name	Connector Color	優王	-	21

M38	Connector Name PUSH-BUTTON IGNITION SWITCH	BROWN	1 5 6 7 8
Connector No.	Connector Name	Connector Color BROWN	哥 H.S.

Signal Na	dn5	START	1007	ACC	NO	
Color of Wire	В	BR	Н	7/A	57	
erminal No.	+	4	2	9	7	

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Connector No. E21 Connector Name JOINT CONNECTOR-E03 Connector Color WHITE MATE IN THE TENT OF THE T	Signal Name	1	1
DOINT (WHITE)	Color of Wire	_	_
Connector No. Connector Name Connector Color	Terminal No.	-	2

7P 6P 5P 4P 3P 2P 1P 1P 1P 1P 1P 1P 1P

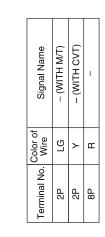
Connector Name FUSE BLOCK (J/B)

9<u>=</u>

Connector No.

Connector Color WHITE

Signal Name	CAN-L	CAN-H	GND (SIGNAL)	RANGE SW	START CONT	
Color of Wire	Ь	٦	В	Y	BR	
Terminal No. Wire	39	40	41	43	46	



Signal Name	ESCL	GND (POWER)	IGN_SIGNAL	PUSH_START_SW	CLUTCH_I/L_SW (WITH M/T)	ECM (WITH CVT)	SL_CONDITION_1	SL_CONDITION_2
Color of Wire	0	В	8	SB	Œ	BB	Ь	ŋ
Terminal No. Wire	1	12	27	28	30	30	32	33

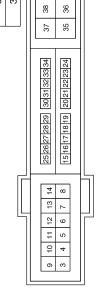
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

Connector Name

Connector Color

E18

Connector No.



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	E36 CLUTCH INTERLOCK SWITCH BROWN r of Signal Name	С
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	Connector No. Connector Color Terminal No. W 2 F	Е
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E46 JUNCTION BLOCK WHITE 30 28 27 38 38 37 38 38 38 38 38 38 38 38 38 38 38 38 38	Signal Name	Connector No. E56 Connector Name JOINT CONNECTOR-E14 Connector Color WHITE	3 2 1	Signal Name	1	ı	
	Color of Wire BR	E56 me JOIN	4	Color of Wire	LG	ГG	
Connector No. Connector Color Management	Terminal No. 27	Connector No. E56 Connector Name JOINT Connector Color WHITE	高.H.S.	Terminal No.	က	4	
□							
E38 STOP LAMP SWITCH (WITH M/T) BLACK	Signal Name	Connector No. E55 Connector Name JOINT CONNECTOR-E07 Connector Color WHITE	3 2 1	Signal Name	1	1	ı
	Color of Wire R	. E55 me JOINT lor WHITE	4	Color of Wire	>	Œ	œ
Connector No. Connector Color	Terminal No.	Connector No. Connector Name Connector Color	H.S.	Terminal No.	-	က	4
E38 STOP LAMP SWITCH (WITH CVT) WHITE	Signal Name	E50 JUNCTION BLOCK WHITE	88 88	Signal Name	1		
	Color of Wire R LG		التلا	Color of Wire	BB		
Connector No. Connector Color H.S.	Terminal No.	Connector No. Connector Name Connector Color	H.S.	Terminal No.	55		

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Connector No. F10 Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)	Connector Color WHITE 順	S3 54 55 56 57 58	Connector No. F32 Connector Name PARKNEUTRAL POSITION (PNP) SWITCH Connector Color BLACK	Terminal No. Wire Signal Name 1 L
Connector No. F1 Connector Name WIRE TO WIRE Connector Color WHITE	所 7 6 5 4 <u> </u>	Terminal No. Color of Signal Name 9 W -	Connector No. F25 Connector Name TRANSMISSION RANGE SWITCH Connector Color BLACK	Terminal No. Color of Signal Name 1 L IGN P N 2 W P N OUTPUT
Connector No. E57 Connector Name STOP LAMP RELAY-1 Connector Color BLUE	H.S.	Terminal No. Color of Wire Signal Name 1 LG	Connector No. F16 Connector Name TCM (TRANSMISSION CONTROL MODULE) Connector Color BLACK 31 22 33 43 35 37 38 39 40 47 48 21 12 23 24 25 25 17 28 29 30 45 46 11 12 12 14 15 15 17 18 19 20 43 44 11 12 13 14 15 15 17 18 19 10 41 41 12 3 4 5 6 7 8 9 10 41 42 11 2 3 4 6 7 8 9 10 41 42 11 2 3 4 6 7 8 9 10 41 42 11 2 3 4 6 7 8 9 10	Terminal No. Color of Signal Name 20 Wire ST RLY

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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION SYMPTOMS

< SYMPTOM DIAGNOSIS > [COUPE]

SYMPTOM DIAGNOSIS

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION SYMPTOMS

Symptom Table INFOID:000000007422509

Engine cannot be started with all Intelligent Keys.

CAUTION:

- Follow Trouble Diagnosis Flowchart referring to "SEC-8, "Work Flow"". 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.
- 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 p	Reference page	
1. Cheek newer cumply and ground circuit	ВСМ	BCS-36
Check power supply and ground circuit	IPDM E/R	PCS-20
2. Check push button ignition switch	<u>SEC-78</u>	
3. Check Intermittent Incident	<u>GI-42</u>	

VEHICLE SECURITY SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

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VEHICLE SECURITY SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000007422510

Procedure		dure	Diagnostic procedure	Defer to page
	Symptom		- Diagnostic procedure	Refer to page
		Door switch	Check door switch	<u>DLK-65</u>
	Vehicle security sys-	Trunk	Check trunk room lamp switch	<u>DLK-90</u>
	tem cannot be set by	Door outside key	Check key cylinder switch	<u>DLK-76</u>
1		Intelligent Key	Check Intelligent Key.	DLK-119
		_	Check Intermittent Incident	<u>GI-42</u>
	Consider in disorter door	ON	Check vehicle security indicator	SEC-141
	Security indicator does	s not turn ON.	Check Intermittent Incident	<u>GI-42</u>
	* Vehicle security		Check door switch	DLK-65
2	system does not sound alarm when ····	Any door is opened.	Check Intermittent Incident	<u>GI-42</u>
		Hana alama	Check horn	SEC-137
^	Vehicle security	Horn alarm	Check Intermittent Incident	<u>GI-42</u>
3	alarm does not activate.	1111	Check head lamp alarm	SEC-139
		Head lamp alarm	Check Intermittent Incident	<u>GI-42</u>
		De en entride les	Check key cylinder switch	DLK-76
	Vehicle security sys-	Door outside key	Check Intermittent Incident	<u>GI-42</u>
4	tem cannot be can- celed by ····	Intelligent Marr	Check Intelligent Key	DLK-119
		Intelligent Key	Check Intermittent Incident	<u>GI-42</u>

^{*:} Check the system is in the armed phase.

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NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS SYMPTOMS

< SYMPTOM DIAGNOSIS >

[COUPE]

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS SYMPTOMS

Symptom Table INFOID:000000007422511

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
Check vehicle security indicator	<u>SEC-141</u>
2. Check Intermittent Incident	<u>GI-42</u>

PRECAUTIONS

[COUPE] < PRECAUTION >

PRECAUTION

PRECAUTIONS

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRF-TFNSIONER"

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

WARNING:

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

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing
- When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

Precaution Necessary for Steering Wheel Rotation After Battery Disconnect

INFOID:0000000007422513

NOTE:

- Before removing and installing any control units, first turn the push-button ignition switch to the LOCK position, then disconnect both battery cables.
- · After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- · Always use CONSULT to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

This vehicle is equipped with a push-button ignition switch and a steering lock unit.

If the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.

If turning the steering wheel is required with the battery disconnected or discharged, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

Connect both battery cables.

NOTE:

Supply power using jumper cables if battery is discharged.

- 2. Carry the Intelligent Key or insert it to the key slot and turn the push-button ignition switch to ACC position. (At this time, the steering lock will be released.)
- 3. Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.
- Perform the necessary repair operation.

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PRECAUTIONS

< PRECAUTION > [COUPE]

5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the push-button ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the push-button ignition switch is turned to LOCK position.)

Perform self-diagnosis check of all control units using CONSULT.

Precaution for Work

- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- · Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- · After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components.
- Water soluble dirt: Dip a soft cloth into lukewarm water, and wring the water out of the cloth to wipe the dirty area.
 - Then rub with a soft and dry cloth.
- Oily dirt: Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%), and wipe the dirty area.
 - Then dip a cloth into fresh water, and wring the water out of the cloth to wipe the detergent off. Then rub with a soft and dry cloth.
- Do not use organic solvent such as thinner, benzene, alcohol, or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

PREPARATION [COUPE] < PREPARATION > **PREPARATION** Α **PREPARATION Special Service Tools** INFOID:0000000007422515 В The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here. Tool number Description C (Kent-Moore No.) Tool name Removing trim components D (J-46534) Trim Tool Set Е AWJIA0483ZZ G Н J

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REMOVAL AND INSTALLATION

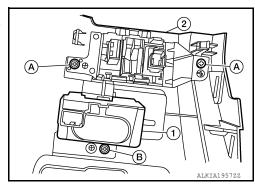
KEY SLOT

Removal and Installation

INFOID:0000000007422516

REMOVAL

- 1. Remove the instrument lower panel LH. Refer to IP-18, "Removal and Installation".
- 2. Remove the switch assembly screws (A), remove the key slot screw (B), and then remove key slot (1) from instrument lower panel LH (2).



INSTALLATION

Installation is in the reverse order of removal.

PUSH BUTTON IGNITION SWITCH

< REMOVAL AND INSTALLATION >

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PUSH BUTTON IGNITION SWITCH

Removal and Installation

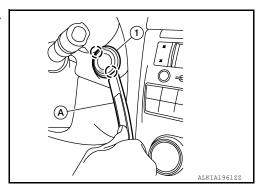
INFOID:0000000007422517

REMOVAL

- 1. Remove the push button ignition switch (1) from cluster lid A using suitable tool (A).
 - (): Pawl

Tool number : — (J-46534)

2. Disconnect the electrical harness connector and remove the push button ignition switch.



INSTALLATION

Installation is in the reverse order of removal.

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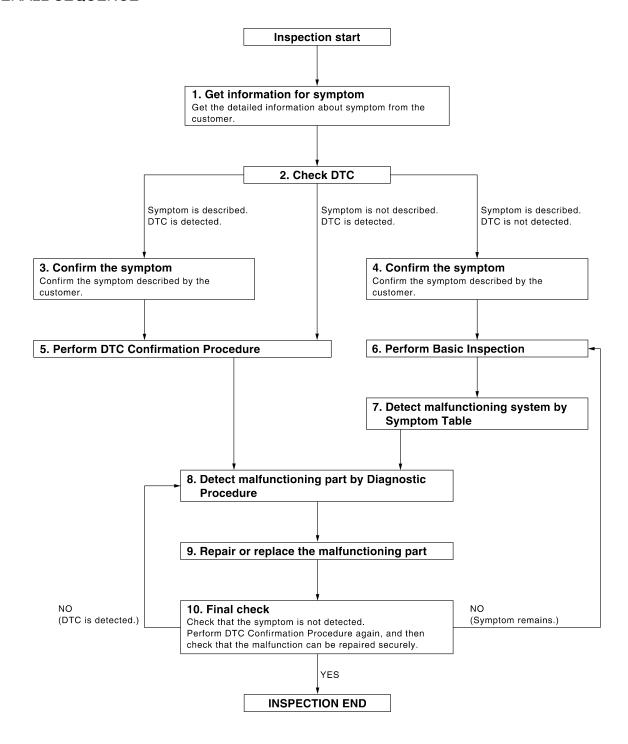
< BASIC INSPECTION > [SEDAN]

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

OVERALL SEQUENCE



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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION > [SEDAN]

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.
- 2. Perform the following procedure if DTC is displayed.
- Record DTC and freeze frame data (Print them out with CONSULT.)
- 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 to the vehicle in "Data Monitor" mode and check real time diagnosis results.

Verify relationship between the symptom and the condition when the symptom is detected.

>> GO TO 5.

f 4.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

Connect CONSULT to the vehicle in "Data Monitor" mode and check real time diagnosis results.

Verify relationship 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 connected to the vehicle, and check diagnostic results in real time. If two or more DTCs are detected, refer to BCS-65. "DTC Inspection Priority Chart" 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 GI-42, "Intermittent Incident".

PERFORM BASIC INSPECTION

Perform PCS-48, "Pre-Inspection for Multi-System Diagnostic".

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-437</u>, "Symptom Table".
- Vehicle security system: <u>SEC-438</u>, "Symptom Table".

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION > [SEDAN]

Nissan vehicle immobilizer system-NATS: <u>SEC-439</u>, "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.

<u>Is malfunctioning part detected?</u>

YES >> GO TO 9.

NO >> Check voltage of related BCM terminals using CONSULT.

$9.\mathsf{REPAIR}$ OR REPLACE THE MALFUNCTIONING PART

- 1. Repair or replace the malfunctioning part.
- Reconnect parts or connectors disconnected during Diagnostic Procedure again after repair or replacement.
- 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.

PRE-INSPECTION FOR DIAGNOSTIC

[SEDAN] < BASIC INSPECTION > PRE-INSPECTION FOR DIAGNOSTIC Α Pre-Inspection for Multi-System Diagnostic INFOID:0000000007422519 The engine start function, door lock function, power distribution system and NATS-IVIS/NVIS are closely related to each other. Narrow down the system in question by performing this inspection to identify which system is malfunctioning. For example, the vehicle security system can operate only when the door lock and power distribution system are operating normally. 1. CHECK DOOR LOCK OPERATION Check the door lock for normal operation with the Intelligent Key and door request switch. Successful door lock operation with the Intelligent Key and request switch indicates that the remote keyless D entry receiver and inside key antenna required for engine start are functioning normally. Can the door be locked with the Intelligent Key and door request switch? YES >> GO TO 2. Е NO >> Refer to <u>DLK-423</u>, "Symptom Table". 2. CHECK ENGINE STARTING Check that the engine starts when the Intelligent Key is inserted into the key slot. Does the engine start? YES >> GO TO 3. NO >> Refer to <u>SEC-437</u>, "Symptom Table". 3.CHECK STEERING LOCK OPERATION Check that the steering locks when operating the door switch after switching the power supply from ON position (or ACC position) to LOCK position. If the door switch is malfunctioning, BCM cannot lock the steering. If BCM does not detect DTC, electronic steering column lock is normal. Does steering lock? YES >> GO TO 4. NO >> Refer to DLK-289, "Component Function Check". f 4.CHECK POWER SUPPLY INDICATOR SWITCHING Press push-button ignition switch and check that the position indicator switches from LOCK, through ACC to SEC ON when steering is locked. Is each position indicator illuminating? YES >> GO TO 5. NO >> Refer to PCS-79, "Component Function Check". 5. CHECK VEHICLE SECURITY SYSTEM Refer to SEC-225, "Vehicle Security Operation Check". Are the inspection results normal? YES >> Inspection End. >> Repair vehicle security system as necessary. N Vehicle Security Operation Check INFOID:0000000007422520 1.INSPECTION START Turn ignition switch "OFF" and pull out Intelligent Key from key slot. NOTE: Р Before starting operation check, open front windows. >> GO TO 2. 2.CHECK SECURITY INDICATOR LAMP Lock doors using Intelligent Key or mechanical key.

Check that security indicator lamp illuminates for 30 seconds.

PRE-INSPECTION FOR DIAGNOSTIC

< BASIC INSPECTION > [SEDAN]

Does security indicator lamp illuminate?

YES >> GO TO 3.

NO >> Perform diagnosis and repair. Refer to <u>SEC-359</u>, "Component Function Check".

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.

Does alarm function properly?

YES >> GO TO 4.

NO >> Check the following.

- The vehicle security system does not phase in alarm mode. Refer to <u>SEC-438</u>, "Symptom Table".
- Alarm (horn, headlamp and hazard lamp) do not operate. Refer to SEC-438, "Symptom Table".

4. CHECK ALARM CANCEL OPERATION

Unlock any door or open trunk lid using Intelligent Key or mechanical key.

Does alarm (horn, headlamp and hazard lamp) stop?

YES >> Inspection End.

NO >> Check door lock function. Refer to <u>DLK-244, "INTELLIGENT KEY: System Description".</u>

INSPECTION AND ADJUSTMENT

[SEDAN] < BASIC INSPECTION > INSPECTION AND ADJUSTMENT Α ECM RE-COMMUNICATING FUNCTION ECM RE-COMMUNICATING FUNCTION: Description INFOID:0000000007422521 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 is not necessary) NOTE: When registering new Key IDs or replacing the ECM that is not brand new, refer to CONSULT Immo-D bilizer mode and follow the on-screen instructions. • If multiple keys are attached to the key holder, separate them before work. Distinguish keys with unregistered key ID from those with registered ID. Е ECM RE-COMMUNICATING FUNCTION: Special Repair Requirement INFOID:0000000007422522 ${f 1}$.PERFORM ECM RE-COMMUNICATING FUNCTION Install ECM. Insert the registered Intelligent Key (*2), turn ignition switch to "ON". 2. *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. Turn ignition switch to "OFF". Start engine. Can engine be started? Н YES >> Procedure is completed. NO >> Initialize control unit. Refer to CONSULT Immobilizer mode and follow the on-screen instructions.

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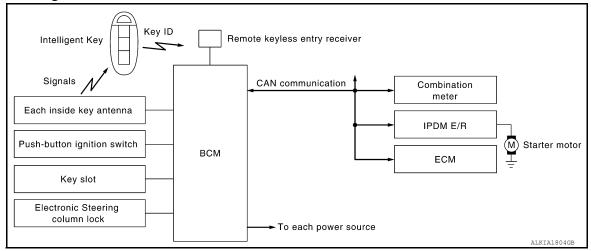
[SEDAN]

SYSTEM DESCRIPTION

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

System Diagram

INFOID:0000000007422523



System Description

INFOID:0000000007422524

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM function	Actuator		
Push-button ignition switch	Push switch				
CVT shift selector (CVT models)	P range		Steering lock relay Electronic steering column lock Starter relay (IPDM E/R) Starter control relay (IPDM E/		
Transmission range switch (CVT models)	N, P range	Engine start function •			
Clutch interlock switch (M/T models)	Clutch ON/OFF				
Stop lamp switch	Brake ON/OFF		R)		
Each inside key antenna	Request signal		- Starter motor		
Remote keyless entry receiver	Key ID				
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.

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Intelligent Key can be registered up to 4 keys (Including the standard Intelligent Key) on request from the owner.

NOTE:

• Refer to SEC-228, "System Description" 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.
- The Intelligent Key sends the request signal and transmits the Intelligent Key ID signal to the BCM via the remote keyless entry receiver.
- The BCM receives the Intelligent Key ID signal and verifies it with the registered ID.
- BCM transmits the steering lock unlock signal to electronic steering column lock and IPDM E/R if the verification results are OK.
- IPDM E/R turns the steering lock relay ON and supplies power to the electronic steering column lock.
- 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 unlock condition.
- 8. IPDM E/R turns the steering lock relay OFF and stops power supply to the electronic steering column lock.
- 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.
- 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.) 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 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

SEC-229

For details relating to starting the engine using key slot, refer to SEC-238, "System Description".

BATTERY SAVER SYSTEM

Revision: February 2013

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2012 Altima GCC

< SYSTEM DESCRIPTION >

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

- 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 electronic steering column lock 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 start	Push-button ignition switch op-		
Power supply position	Brake pedal (CVT) /clutch pedal (M/T)	CVT selector lever position	eration frequency	
LOCK → ACC	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	
LOCK → START ACC → START ON → START (Engine start)	Depressed	P or N position (*1)	I [If the switch is pressed once, the engine starts from any pow- er supply position (LOCK, ACC, and ON)]	
Engine is running → OFF (Engine stop)	_	Any position Vehicle speed < 4 km/h (2 MPH)	1	

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	Engine start/	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 operation 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)

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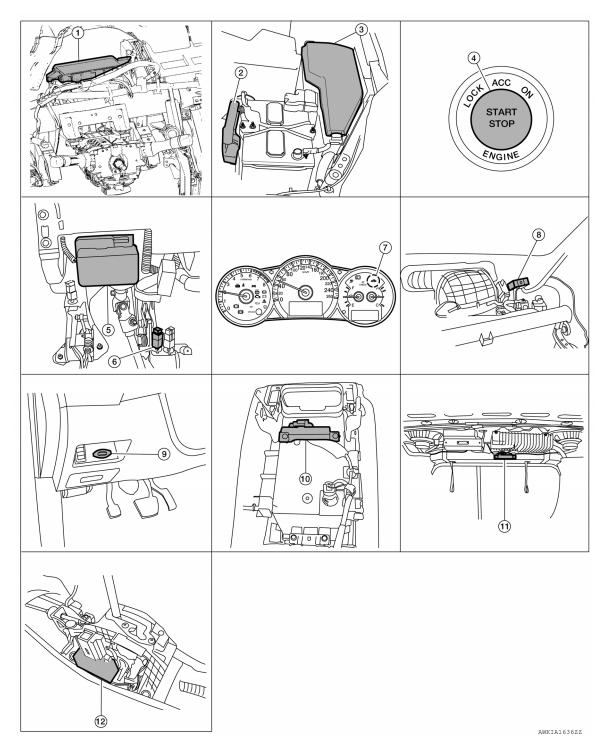
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Revision: February 2013 SEC-231 2012 Altima GCC

Component Parts Location

INFOID:0000000007422525



- Body control module M16, M17, M18, M18, M21 (view with instrument panel removed)
- 4. Push-button ignition switch M38
- 7. Security indicator lamp
- 10. Front console antenna M203 (bottom view of console)

- 2. ECM E10
- 5. Electronic steering column lock (steer- 6. ing column) M32
- 8. Remote keyless entry receiver M27 (view with instrument panel removed)
- 11. Rear parcel shelf antenna B29

- 3. IPDM E/R E17, E18, F10
- Stop lamp switch E38 (view with lower driver instrument panel removed)
- 9. Key slot M40
- 12. CVT shift selector (park position switch) M23

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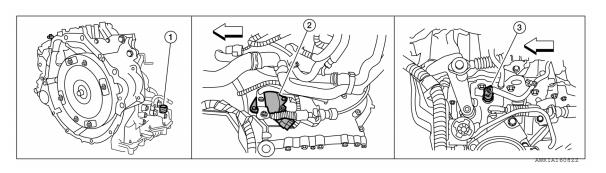
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- F16 (switch inside trans) (CVT/VQ)
- 1. Transmission range switch connector 2. Transmission range switch F25 (CVT/QR)
- Park neutral position switch F32 (M/T)

Component Description

INFOID:0000000007422526

Component	Reference
BCM	<u>SEC-338</u>
Electronic steering column lock	<u>SEC-322</u>
Push-button ignition switch	<u>SEC-294</u>
Door switch	DLK-289
CVT shift selector (park position switch)	<u>SEC-298</u>
Inside key antenna	DLK-282
Remote keyless entry receiver	DLK-349
Stop lamp switch	<u>SEC-289</u>
Transmission range switch	<u>SEC-308</u>
Clutch switch	<u>SEC-269</u>
Steering lock relay	<u>SEC-256</u>
Starter relay	<u>SEC-264</u>
Starter control relay	<u>SEC-262</u>
Security indicator	<u>SEC-359</u>
Key warning lamp	SEC-358

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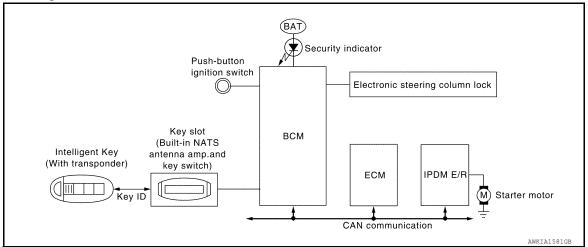
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[SEDAN]

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS)

System Diagram

INFOID:0000000007422527



System Description

INFOID:0000000007422528

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM function	Actuator		
Push-button ignition switch	Push switch	NVIS (NATS) Starter relay (IPDN Starter control relation Starter motor KEY warning lamp			
CVT shift selector (CVT models)	P range				
Transmission range switch (CVT models)	N, P range		Electronic decening column look		
Clutch interlock switch (M/T models)	Clutch ON/OFF		Starter relay (IFDM E/R) Starter control relay (IPDM E/R)		
Stop lamp switch	Brake ON/OFF				
Key slot	Key ID		KEY warning lamp Security indicator lamp		
Each door switch	Door open/close		,		
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 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 CONSULT Immobilizer mode and follow the on-screen instructions.

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS)

< SYSTEM DESCRIPTION >

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- 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 SEC-222, "Work Flow".
- If ECM other than Genuine NISSAN is installed, the engine cannot be started. For ECM replacement procedure, refer to SEC-227, "ECM RE-COMMUNICATING FUNCTION: Special Repair Requirement".

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.

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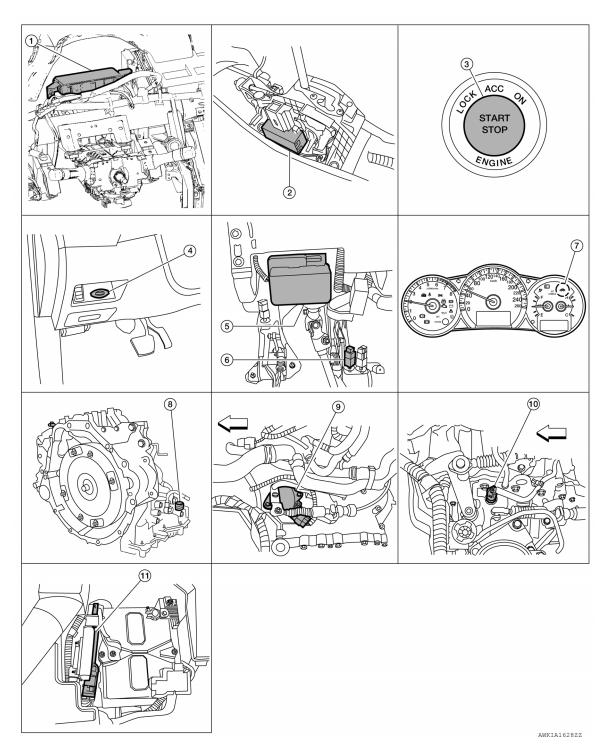
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Revision: February 2013 SEC-235 2012 Altima GCC

Component Parts Location

INFOID:0000000007422529



- Body control module M16, M17, M18, M19, M21 2. CVT shift selector (park position 3. (view with instrument panel removed)
- Key slot M40

- switch) M23 (with CVT)
- 5. Electronic steering column lock M32 (steering column)
- Push-button ignition switch M38
- Stop lamp switch E38 (view with lower LH instrument panel removed)

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS)

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Security indicator lamp

Transmission range switch con- 9. nector (TCM connector) F16 (with CVT/VQ)

Transmission range switch F25

(with CVT/QR)

10. Park neutral position switch F32 (with M/T)

11. ECM E10

 \Leftarrow : Front

Component Description

INFOID:0000000007422530

Component	Reference
BCM	<u>SEC-338</u>
Electronic steering column lock	<u>SEC-322</u>
Push-button ignition switch	<u>SEC-339</u>
Door switch	DLK-289
CVT shift selector (park position switch)	<u>SEC-298</u>
Inside key antenna	DLK-282
Remote keyless entry receiver	<u>DLK-349</u>
Stop lamp switch	<u>SEC-289</u>
Transmission range switch	<u>SEC-308</u>
Clutch switch	<u>SEC-269</u>
Steering lock relay	<u>SEC-255</u>
Starter relay	<u>SEC-315</u>
Starter control relay	<u>SEC-297</u>
Security indicator	<u>SEC-359</u>
Key warning lamp	<u>SEC-358</u>

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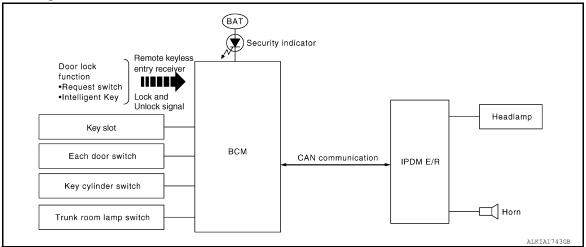
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VEHICLE SECURITY SYSTEM

System Diagram

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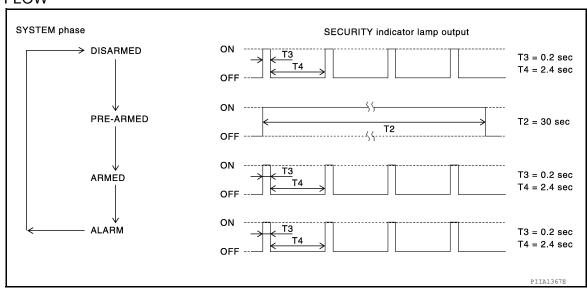
System Description

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INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM system	Actuator	
All door switch	Open or close			
Trunk room lamp switch	— Open of close			
Door key cylinder switch			• IPDM E/R	
Door lock and unlock switch	Lock or unlock	Vahiala aggurity avatam	Head lamp	
Door request switch		Vehicle security system	• Horn	
Intelligent Key	Lock or unlock		Security indicator lamp	
	Panic alarm			
Key Slot	Intelligent Key sensing			

OPERATION FLOW



SETTING THE VEHICLE SECURITY SYSTEM

Initial Condition

Ignition switch is in OFF position.

VEHICLE SECURITY SYSTEM

< SYSTEM DESCRIPTION > [SEDAN]

Disarmed Phase

- 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.
- 2. 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.
- 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. 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.

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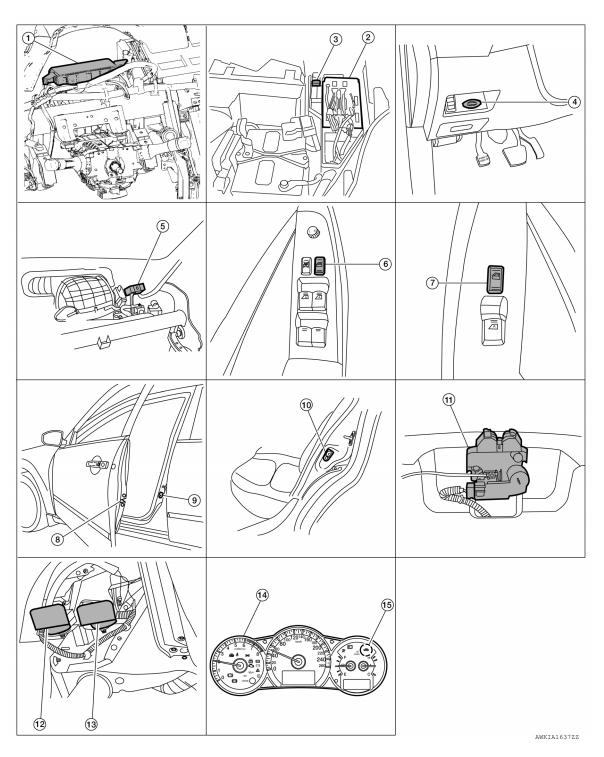
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Revision: February 2013 SEC-239 2012 Altima GCC

Component Parts Location

INFOID:0000000007422533



- Body control module M16, M17, M18, M19, M21 (view with instrument panel removed)
- 4. Key slot M40
- Power window and door lock/unlock switch RH D105
- 2. IPDM E/R E17, E18
- 5. Remote keyless entry receiver M27 (view with instrument panel removed)
- 8. Front door lock assembly LH (key cyl- 9. inder switch) D10
- Horn relay H-1
- Main power window and door lock/ unlock switch D7, D8
 - 9. Front door switch LH B8 RH B108

VEHICLE SECURITY SYSTEM

< SYSTEM DESCRIPTION > [SEDAN]

10. Rear door switch LH B18 RH B116

- 11. Trunk lamp switch and trunk release solenoid B28
- Horn (low) E215

 (view with front fender protector LH removed)

13. Horn (high) E216

14. Combination meter M24

15. Security indicator lamp

Component Description

Component	Reference
BCM	<u>SEC-238</u>
Horn relay	<u>SEC-355</u>
Security indicator	<u>SEC-359</u>
Door switch	DLK-289
Door lock actuator	DLK-333
Trunk lid lock assembly	DLK-339
Door key cylinder switch	DLK-306
Door lock and unlock switch	DLK-293

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[SEDAN]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM: Diagnosis Description

INFOID:0000000007630865

BCM CONSULT FUNCTION

CONSULT 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		
		WORK SUPPORT	DATA MONITOR	ACTIVE TEST
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP		×	×
Remote keyless entry system	MULTI REMOTE ENT		×	
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 Function (BCM - COMMON ITEM)

INFOID:0000000007630866

ECU IDENTIFICATION Displays the BCM part No.

SELF-DIAG RESULT

Refer to SEC-386, "DTC Index".

< SYSTEM DESCRIPTION > [SEDAN]

INTELLIGENT KEY

INTELLIGENT KEY: CONSULT Function (BCM - INTELLIGENT KEY)

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WORK SUPPORT

Monitor item	Description
CONFIRM KEY FOB ID	It can be checked whether Intelligent Key ID code is registered or not in this mode.
AUTO LOCK SET	Auto door lock time can be changed in this mode. • MODE1: 1 minute • MODE2: 5 minutes • MODE3: 30 seconds • MODE4: 2 minutes
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch 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 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. • MODE1: 0.5 sec. • MODE2: Non-operation • MODE3: 1.5 sec.
PW DOWN SET	Unlock button pressing time on Intelligent Key button can be selected from the following with this mode. • MODE1: 3 sec. • MODE2: Non-operation • MODE3: 5 sec.
TRUNK OPEN DELAY	Trunk button pressing time on Intelligent Key button can be selected from the following with this mode. • MODE1: 0.5 sec. • MODE2: 1.5 sec. • MODE3: OFF: No delay
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.
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/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.
SHORT CRANKING OUTPUT	Starter motor can be forcibly activated.
INSIDE ANT DIAGNOSIS	This function allows inside key antenna self-diagnosis.
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.

SELF-DIAG RESULT

Refer to SEC-386, "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.	
CLUTCH SW	Indicates [ON/OFF] condition of clutch switch.	
IGN RLY2 -F/B	Indicates [ON/OFF] condition of ignition relay 2.	
ACC RLY-F/B	Indicates [ON/OFF] condition of accessory relay-1.	
BRAKE SW 1	Indicates [ON/OFF] condition of brake switch.	
BRAKE SW 2	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/STALL/CRANK/RUN] condition of engine states.	
S/L LOCK-IPDM	Indicates [ON/OFF] condition of steering lock (LOCK) request.	
S/L UNLOCK-IPDM	Indicates [ON/OFF] condition of steering lock (UNLOCK) request.	
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.	
ID OK FLAG	Indicates [SET/RESET] condition of key ID.	
PRMT ENG STRT	Indicates [SET/RESET] condition of engine start possibility.	
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.	
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.	
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.	
PRMT RKE STRT	Indicates [ON/OFF] condition of ENGINE START signal from Intelligent Key.	

DIAGNOSIS SYSTEM (BCM)

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Monitor Item	Condition	
RKE OPE COUN2	When remote keyless entry receiver receives the signal transmitted while operating on Intelligent Key, the numerical value start changing.	
REVERSE SW	Indicates [ON/OFF] condition of R position.	

ACTIVE TEST

Test item	Description	
BATTERY SAVER	This test is able to check interior room lamp operation. The interior room lamp is activated after "ON" on CONSULT screen is touched.	
PW REMOTO DOWN SET	This test is able to check power window down operation. The power window down is activated after "ON" on CONSULT screen is touched.	
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation. The Intelligent Key warning buzzer is activated after "ON" on CONSULT 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 screen is touched. • Key warning chime sounds when "KEY" on CONSULT screen is touched. • OFF position warning chime sounds when "KNOB" on CONSULT screen is touched.	
INDICATOR	This test is able to check warning lamp operation. • "KEY" Warning lamp illuminates when "KEY ON" on CONSULT screen is touched. • "KEY" Warning lamp blinks when "KEY IND" on CONSULT screen is touched.	
INT LAMP	This test is able to check interior room lamp operation. The interior room lamp is activated after "ON" on CONSULT screen is touched.	
LCD	This test is able to check meter display information • Engine start information displays when "BP N" on CONSULT screen is touched. • Engine start information displays when "BP I" on CONSULT screen is touched. • Key ID warning displays when "ID NG" on CONSULT screen is touched. • P position warning displays when "SFT P" on CONSULT screen is touched. • Intelligent Key insert information displays when "INSRT" on CONSULT screen is touched. • Intelligent Key low battery warning displays when "BATT" on CONSULT screen is touched. • Take away through window warning displays when "NO KY" on CONSULT screen is touched. • Take away warning display when "OUTKEY" on CONSULT screen is touched. • OFF position warning display when "LK WN" on CONSULT screen is touched.	
FLASHER	This test is able to check hazard warning lamp operation. The hazard warning lamps are activated after "LH/RH/OFF" on CONSULT screen is touched.	
HORN	This test is able to check horn operation. The horn is activated after "ON" on CONSULT screen is touched.	
P RANGE	This test is able to check CVT shift selector power supply CVT shift selector power is supplied when "ON" on CONSULT 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 screen is touched.	
LOCK INDICATOR	This test is able to check LOCK indicator in push-ignition switch operation. LOCK indicator in push-ignition switch illuminates when "ON" on CONSULT screen is touch	
ACC INDICATOR	This test is able to check ACC indicator in push-ignition switch operation. ACC indicator in push-ignition switch illuminates when "ON" on CONSULT screen is touche	
IGNITION ON IND	This test is able to check ON indicator in push-ignition switch operation. ON indicator in push-ignition switch illuminates when "ON" on CONSULT screen is touched	
KEY SLOT ILLUMI	This test is able to check key slot illumination operation. Key slot illumination blinks when "ON" on CONSULT screen is touched.	
TRUNK/BACK DOOR	This test is able to check trunk opener actuator open operation. This actuator opens when "OPEN" on CONSULT screen is touched.	

THEFT ALM

Revision: February 2013 SEC-245 2012 Altima GCC

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THEFT ALM: CONSULT Function (BCM - THEFT ALM)

INFOID:0000000007630868

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 screen.	

DATA MONITOR

Monitored Item	Description	
REQ SW -DR	Indicates [ON/OFF] condition of front door request switch (driver side).	
REQ SW -AS	Indicates [ON/OFF] condition of front door request switch (passenger side).	
REQ SW -BD/TR	Indicates [ON/OFF] condition of trunk 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 front door switch LH.	
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.	
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 front door key cylinder switch.	
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from front door key cylinder switch.	
TR/BD OPEN SW	Indicates [ON/OFF] condition of trunk opener switch.	
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.	

ACTIVE TEST

Test item	Operation	Description	
THEFT IND		This test is able to check security indicator lamp operation. The lamp will be turned when "ON" on CONSULT screen is touched.	
VEHICLE SECURITY HORN		This test is able to check vehicle security horn operation. The horns will be activated for 0.5 seconds after "ON" on CONSULT screen is touched.	
HEAD LAMP(HI)		This test is able to check vehicle security lamp operation. The headlamps will be activated for 0.5 seconds after "ON" on CONSULT screen is touched.	
RH		Outputs the voltage to blink the right side turn signal lamps.	
FLASHER LH Off		Outputs the voltage to blink the left side turn signal lamps.	
		Stops the voltage to turn the turn signal lamps OFF.	

IMMU

IMMU: CONSULT Function (BCM - IMMU)

INFOID:0000000007630869

DATA MONITOR

DIAGNOSIS SYSTEM (BCM)

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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	Owner to [DONE] when a registered intelligent very is inserted into the key slot.	
CONFIRM ID1		
TP 4		
TP 3	Indicates the number of ID which has been registered	
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
THEFT IND	This test is able to check security indicator operation [ON/OFF].

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U1000 CAN COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

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DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description INFOID:000000007422540

Refer to LAN-6, "System Description".

DTC Logic

DTC DETECTION LOGIC

CONSULT 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 (IPDM E/R)

Diagnosis Procedure

INFOID:0000000007422542

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-7, "CAN Communication Control Circuit".

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

U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

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U1010 CONTROL UNIT (CAN)

DTC Logic

DTC DETECTION LOGIC

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

Diagnosis Procedure

INFOID:0000000007422544

1. REPLACE BCM

When DTC U1010 is detected, replace BCM.

>> Replace BCM. Refer to BCS-92, "Removal and Installation".

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B2013 ID DISCORD, IMMU-STRG

< DTC/CIRCUIT DIAGNOSIS >

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B2013 ID DISCORD, IMMU-STRG

Description INFOID:000000007422545

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

DTC Logic

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 steering control unit are NG. The registration is necessary.	Electronic steering column lock

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-250, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422547

1. PERFORM INITIALIZATION

Perform initialization with CONSULT. Re-register all Intelligent Keys.

For initialization and registration of Intelligent Key. Refer to CONSULT Immobilizer mode and follow the onscreen instructions.

Can the system be initialized and can steering lock be released with re-registered Intelligent Key?

YES >> Electronic steering column lock was unregistered.

NO >> Replace electronic steering column lock.

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INFOID:0000000007422550

B2014 CHAIN OF STRG-IMMU

Description INFOID:000000007422548

BCM performs the ID verification with the electronic steering column lock to release the steering. BCM starts the communication with the electronic steering column lock when Intelligent Key is carried into the passenger compartment and the push-button ignition switch is pressed.

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2014	CHAIN OF STRG- IMMU	Inactive communication between electronic steering column lock and BCM	Harness or connectors (electronic steering column lock circuit is open or shorted) Electronic steering column lock 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.

Is DTC detected?

YES >> Go to SEC-251, "Diagnosis Procedure".

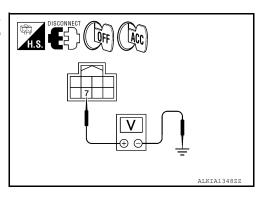
NO >> Inspection End.

Diagnosis Procedure

Regarding Wiring Diagram information, refer to <u>SEC-399</u>, "Wiring Diagram".

1. CHECK ELECTRONIC STEERING COLUMN LOCK POWER SUPPLY

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



Electronic steering column lock		Ground	Ignition switch position	Voltage [V]
Connector	Terminal	Giodila	ignition switch position	voltage [v]
M32	7	Ground	$OFF \to ACC$	Battery voltage
			OFF or ON	0

Is the inspection normal?

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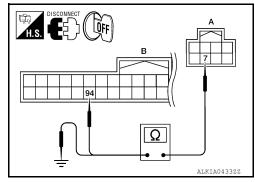
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< DTC/CIRCUIT DIAGNOSIS >

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

$2. \mathsf{CHECK}$ ELECTRONIC STEERING COLUMN LOCK POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM harness connector.
- 3. Check continuity between electronic steering column lock harness connector M32 (A) terminal 7 and BCM harness connector M19 (B) terminal 94.



Electronic steering column lock		BCM		Continuity
Connector	Terminal	connector	Terminal	Continuity
A: M32	7	B: M19	94	Yes

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

Electronic steering column lock		Ground	Continuity
Connector	Terminal	Ground	Continuity
A: M32	7	Ground	No

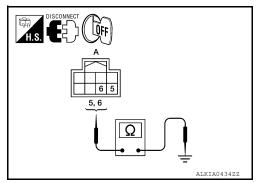
Is the inspection normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

3.check electronic steering column lock ground circuit

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



Electronic steering column lock		Ground	Continuity
Connector	Terminal	Giouna	Continuity
M32	5	Ground	Yes
	6	Giouna	165

Is the inspection normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

B2014 CHAIN OF STRG-IMMU

< DTC/CIRCUIT DIAGNOSIS >

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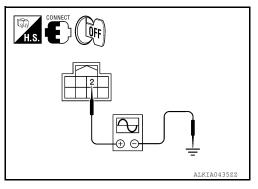
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4. CHECK ELECTRONIC STEERING COLUMN LOCK COMMUNICATION SIGNAL

- 1. Connect electronic steering column lock harness connector.
- 2. Using an oscilloscope, read voltage signal between electronic steering column lock harness connector and ground.



Electronic steering column lock		Ground	Electronic steering col-	Value	
Connector	Terminal	Ground	umn lock condition	value	
			Lock	Battery voltage	
M32	2	Ground	Lock or unlock	(V) 15 10 50 ms JMKIA0066GB	
		For 15 seconds after un- lock	Battery voltage		
			15 seconds or later after unlock.	0 V	

Steering is locked : Opening the door when ignition switch is ON to OFF.

Steering is unlocked : Ignition switch is OFF to ACC.

Is the inspection normal?

YES >> Replace electronic steering column lock.

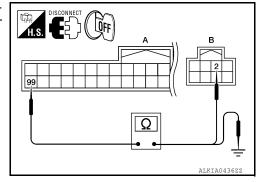
NO >> GO TO 5.

5. CHECK ELECTRONIC STEERING COLUMN LOCK COMMUNICATION CIRCUIT

1. Turn ignition switch OFF.

Disconnect BCM harness connector.

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



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B2014 CHAIN OF STRG-IMMU

< DTC/CIRCUIT DIAGNOSIS >

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В	CM	Electronic stee	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.

В	CM	Ground	Continuity
Connector	Terminal	Ground	Continuity
A: M19	99	Ground	No

Is the inspection normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

6. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

B2108 STEERING LOCK RELAY

< DTC/CIRCUIT DIAGNOSIS >

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B2108 STEERING LOCK RELAY

Description INFOID:000000007422551

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

DTC DETECTION LOGIC

NOTE:

- If DTC B2108 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-248, "DTC Logic".
- If DTC B2108 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-249, "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 position for about 1 second even if the IPDM E/R receives 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.

Is DTC detected?

YES >> Go to SEC-255, "Diagnosis Procedure".

NO >> Inspection End

Diagnosis Procedure

INFOID:0000000007422553

1.CHECK FUSE

- 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-45, "Removal and Installation".

NO >> Check the following.

- Harness for open or short between IPDM E/R and battery
- Fuse

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B2109 STEERING LOCK RELAY

< DTC/CIRCUIT DIAGNOSIS >

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B2109 STEERING LOCK RELAY

Description INFOID:000000007422554

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

DTC DETECTION LOGIC

NOTE:

- If DTC B2109 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-248, "DTC Logic".
- If DTC B2109 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-249, "DTC Logic"</u>.

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 position for about 1 second even if the IPDM E/R receives 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

- 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
- Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to SEC-256, "Diagnosis Procedure".

NO >> Inspection End

Diagnosis Procedure

INFOID:0000000007422556

1. CHECK POWER SUPPLY CIRCUIT

Check IPDM E/R power supply circuit. Refer to PCS-20, "Diagnosis Procedure".

Is the inspection normal?

YES >> GO TO 2.

NO >> Repair the malfunctioning parts

2.CHECK FUSE

- 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-45, "Removal and Installation".

NO >> Check the following.

- Harness for open or short between IPDM E/R and battery
- Fuse

< DTC/CIRCUIT DIAGNOSIS >

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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

DTC DETECTION LOGIC

NOTE:

- If DTC B210A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-248, "DTC Logic".
- If DTC B210A is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-249, "DTC Logic".

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 [electronic steering column lock circuit (BCM side) is open or short- ed] Harness or connectors [electronic steering column lock circuit (IPDM E/R side) is open or shorted.] Electronic steering column lock 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
- Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to <u>SEC-257</u>, "<u>Diagnosis Procedure</u>".

NO >> Inspection End.

Diagnosis Procedure

Regarding Wiring Diagram information, refer to SEC-399, "Wiring Diagram".

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 electronic steering column lock harness connector and IPDM E/R harness connector.

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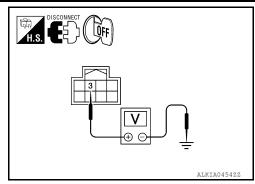
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< DTC/CIRCUIT DIAGNOSIS >

[SEDAN]

3. Check voltage between electronic steering column lock harness connector and ground.



Electronic stee	ring column lock	Ground	Voltage [V]
Connector	Connector Terminal		vollage [v]
M32	3	Ground	Battery voltage

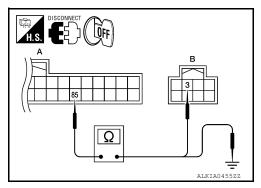
Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

3.check electronic steering column lock circuit-i

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



В	ВСМ		Electronic steering column lock		
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.

В	CM	Ground	Continuity	
Connector	Terminal	Oround	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

- Connect IPDM E/R harness connector.
- 2. Disconnect BCM harness connector.

< DTC/CIRCUIT DIAGNOSIS >

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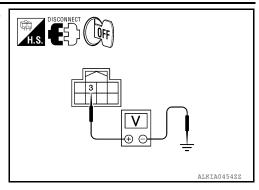
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Check voltage between electronic steering column lock harness connector and ground.



Electronic stee	ring column lock	Ground	Voltage [V]	
Connector	Connector Terminal		voltage [v]	
M32	3	Ground	Battery voltage	

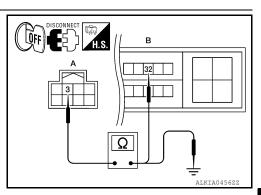
Is the inspection result normal?

YES >> Replace electronic steering column lock.

NO >> GO TO 5.

5. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-II

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



Electronic steel	ring column lock	IPDM E/R		Continuity
Connector	Terminal	Connector Terminal		Continuity
A: M32	3	B: E18	32	Yes

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

Electronic stee	ring column lock	Ground	Continuity
Connector	Connector Terminal		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 electronic steering column lock harness connector and IPDM E/R harness connector.

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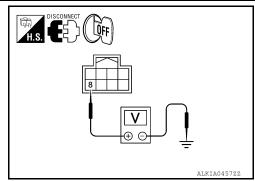
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< DTC/CIRCUIT DIAGNOSIS >

[SEDAN]

3. Check voltage between electronic steering column lock harness connector and ground.



Electronic stee	ring column lock	Ground	Voltage [V]	
Connector	Connector Terminal		voltage [v]	
M32	8	Ground	Battery voltage	

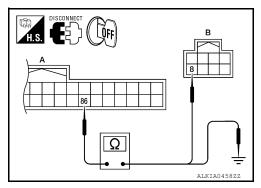
Is the inspection result normal?

YES >> GO TO 9.

NO >> GO TO 8.

8.CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-I

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



BCM		Electronic steering column lock		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.

В	CM	Ground	Continuity	
Connector Terminal		Oround	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.

< DTC/CIRCUIT DIAGNOSIS >

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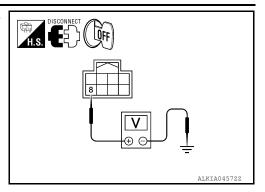
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 Check voltage between electronic steering column lock harness connector and ground.



Electronic steering column lock		Ground	Voltage [V]	
Connector Terminal		Orodila		
M32 8		Ground	Battery voltage	

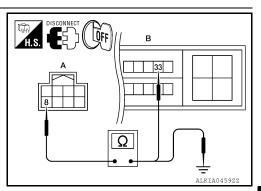
Is the inspection result normal?

YES >> Replace electronic steering column lock.

NO >> GO TO 10.

10. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-II

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



Electronic steering column lock		IPDM E/R		Continuity	
Connector	Terminal	Connector Terminal		Continuity	
A: M32	8	B: E18	33	Yes	

2. Check continuity between electronic steering column lock harness connector and ground.

Electronic steering column lock		Ground	Continuity	
Connector	Connector Terminal			
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.

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Revision: February 2013 SEC-261 2012 Altima GCC

B210B STARTER CONTROL RELAY

< DTC/CIRCUIT DIAGNOSIS >

[SEDAN]

B210B STARTER CONTROL RELAY

Description INFOID.000000007422560

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

DTC DETECTION LOGIC

NOTE:

- If DTC B210B is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-248, "DTC Logic".
- If DTC B210B is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-249, "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 transmission range 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
- Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to SEC-262, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422562

1. INSPECTION START

- 1. Turn ignition switch ON.
- Check "Self diagnostic result" with CONSULT.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure.

See PCS-29, "DTC Index".

Is the DTC B210B displayed again?

YES >> Replace IPDM E/R. Refer PCS-45, "Removal and Installation".

NO >> Inspection End.

B210C STARTER CONTROL RELAY

< DTC/CIRCUIT DIAGNOSIS >

[SEDAN]

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B210C STARTER CONTROL RELAY

Description INFOID:0000000007422563

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

DTC DETECTION LOGIC

NOTE:

- If DTC B210C is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-248, "DTC Logic".
- If DTC B210C is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-249, "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 transmission range 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
- Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to SEC-263, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

1.INSPECTION START

- 1. Turn ignition switch ON.
- Check "Self diagnostic result" with CONSULT.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure.

See PCS-29, "DTC Index".

Is the DTC B210C displayed again?

YES >> Replace IPDM E/R. Refer to PCS-45, "Removal and Installation".

NO >> Inspection End.

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INFOID:0000000007422568

B210D STARTER RELAY

Description INFOID:000000007422566

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

DTC DETECTION LOGIC

NOTE:

- If DTC B210D is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-248, "DTC Logic".
- If DTC B210D is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-249, "DTC Logic".
- If DTC B210D is displayed with DTC B2617, first perform the trouble diagnosis for DTC B2617. Refer to SEC-336, "DTC Logic".

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 transmission range 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.
- CVT selector lever is P or N position
- Do not depress the brake pedal
- Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to SEC-264, "Diagnosis Procedure".

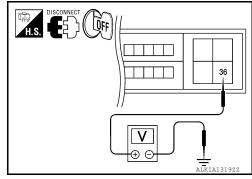
NO >> Inspection End.

Diagnosis Procedure

Regarding Wiring Diagram information, refer to PCS-128, "Wiring Diagram - Sedan".

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.



B210D STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

[SEDAN]

IPDI	M E/R	Ground	Voltage (V)	
Connector	Connector Terminal		voltage (v)	
E18 36		Ground	Battery voltage	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-45, "Removal and Installation".

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

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[SEDAN]

INFOID:0000000007422571

B210E STARTER RELAY

Description INFOID:000000007422569

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

DTC DETECTION LOGIC

NOTE:

- If DTC B210E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-248, "DTC Logic"</u>.
- If DTC B210E is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-249</u>, "DTC Logic".

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 transmission range switch input	• IPDM E/R

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- Turn ignition switch ON 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.

Is DTC detected?

YES >> Go to SEC-266, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

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Regarding Wiring Diagram information, refer to SEC-427, "Wiring Diagram".

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.
- Disconnect BCM harness connector.

B210E STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

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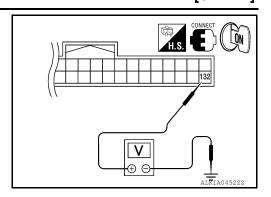
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3. Check voltage between BCM harness connector and ground.



BCM connector		Condition				
Connector	Terminal	Ground	Ignition switch	Brake pedal	CVT selector lever	Voltage (V)
					P or N	Battery voltage
M21	132	Ground	ON	Depressed	Other than above	0

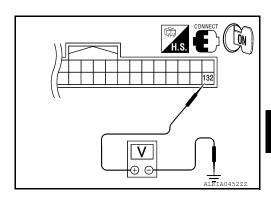
Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

$3.\mathsf{CHECK}$ 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	vollage (v)
M21	132	Ground	OFF	Not depressed	0
IVIZ I	132	Ground	OFF	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.

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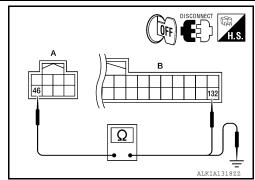
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2. Check continuity between IPDM E/R harness connector and BCM harness connector.



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

Check continuity between BCM harness connector and ground.

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

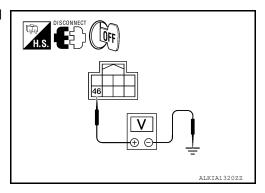
Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-45, "Removal and Installation".

NO >> Repair harness connector.

5. CHECK STARTER RELAY POWER SUPPLY CIRCUIT

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



IPDN	M E/R	Ground	Voltage (V)	
Connector	Terminal	Ordana	voltage (v)	
E17	46	Ground	Battery voltage	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-45, "Removal and Installation".

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

< DTC/CIRCUIT DIAGNOSIS >

B210F TRANSMISSION RANGE SWITCH/CLUTCH INTERLOCK SWITCH

Description INFOID:0000000007422572

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

- Transmission range switch (CVT models)
- Clutch interlock switch (M/T models)
- · Shift position signal from BCM (CAN)

DTC Logic INFOID:0000000007422573

DTC DETECTION LOGIC

NOTE:

- If DTC B210F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-248, "DTC Logic"
- If DTC B210F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-248, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210F	INTER LOCK/TRANS- MISSION RANGE 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 transmission range switch input signal (CVT models) • Shift position signal from BCM (CAN)	Harness or connectors [Transmission range switch circuit is open or shorted (CVT models)] or (Clutch interlock switch circuit is open or shorted.) Clutch interlock switch (M/T models) Transmission range switch (CVT models)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

>> Go to SEC-269, "Diagnosis Procedure". YES

NO >> Inspection End.

Diagnosis Procedure

Regarding Wiring Diagram information, refer to SEC-427, "Wiring Diagram".

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-67, "DTC Index".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

3.CHECK TRANSMISSION RANGE SWITCH INPUT SIGNAL

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< DTC/CIRCUIT DIAGNOSIS >

- Turn ignition switch OFF.
- Disconnect IPDM E/R harness connector.
- Turn ignition switch ON.
- 4. Check voltage between IPDM E/R harness connector and ground under following condition.

IPDM E/R		Ground	0	ondition	Voltage (V)	
Connector	Terminal	Giouna	Condition		voltage (v)	
E18	30	Ground	CVT selector lever	P or N	0	
E10	30	30 Ground CVT selector le	CVI selector level	Other than above	Battery voltage	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-45, "Removal and Installation".

NO >> GO TO 4 (VQ35DE). >> GO TO 10 (QR25DE). NO

4.CHECK TRANSMISSION RANGE SWITCH CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect TCM harness connector.
- Check continuity between IPDM E/R harness connector and TCM harness connector.

T	TCM		M E/R	Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
F16	20	E18	72	Yes	

Check continuity between TCM harness connector and ground.

T	СМ	Ground	Continuity	
Connector			Continuity	
F16	20	Ground	No	

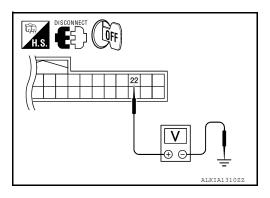
Is the inspection result normal?

YES >> GO TO 13.

NO >> Repair harness or connector.

5.check clutch interlock switch input signal (BCM)

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



BCM		Ground		Condition	Voltage (V)	
Connector	Terminal	Ground	Condition		voltage (v)	
M18	22	Ground	Clutch pedal	Not depressed	0	
W 16	22	Ground	Ciuton pedai	Depressed	Battery voltage	

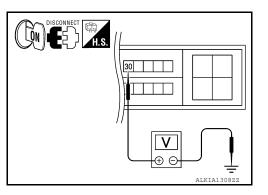
Is the inspection result normal?

< DTC/CIRCUIT DIAGNOSIS >

YES >> GO TO 6. NO >> GO TO 11.

6.CHECK CLUTCH INTERLOCK SWITCH INPUT SIGNAL

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



IPDM E/R		Ground		Condition	Voltage (V)	
Connector	Terminal	Ground	Condition		voltage (v)	
E18	30	Ground	Clutch nodal	Not depressed	0	
⊏10	30	Ground	Clutch pedal	Depressed	Battery voltage	

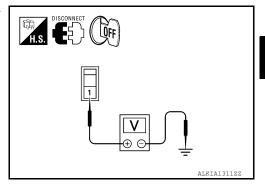
Is the inspection result normal?

YES >> Replace the IPDM E/R. Refer to PCS-45, "Removal and Installation".

NO >> GO TO 7.

7.check clutch interlock switch power supply

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



Clutch inte	rlock switch	Ground	Voltage (V)	
Connector	Connector Terminal		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

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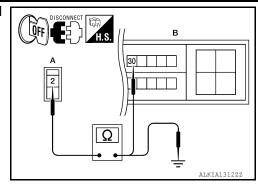
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< DTC/CIRCUIT DIAGNOSIS >

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	

Check continuity between clutch interlock switch harness connector and ground.

Clutch inte	Clutch interlock switch		Continuity	
Connector	Terminal	Ground	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-273, "Component Inspection".

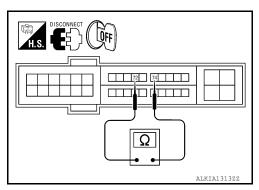
Is the inspection result normal?

>> Replace the IPDM E/R. Refer to PCS-45, "Removal and Installation".

NO >> Replace clutch interlock switch.

10. CHECK TRANSMISSION RANGE SWITCH CIRCUIT FOR CONTINUITY

- Turn ignition switch OFF.
- Check continuity between IPDM E/R harness connector terminals 72 and 74.



	IPDM E/R		Condition		Continuity
Connector	Terr	ninals	Condition		
F10	F10 72 74	Transmission range	P or N	Yes	
1 10	12	74 switch position	Other	No	

Is the inspection result normal?

YES >> GO TO 11. NO >> GO TO 12.

11. CHECK TRANSMISSION RANGE SWITCH CIRCUIT FOR SHORT

< DTC/CIRCUIT DIAGNOSIS >

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

IPDM E/R		Ground	Continuity
Connector	Terminal	Glound	Continuity
F10	72	Ground	No
F10 =	74	Glound	NO

72 74 72,74 Ω

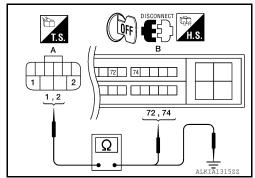
Is the inspection result normal?

YES >> Replace the IPDM E/R. Refer to PCS-45, "Removal and Installation".

NO >> Repair or replace harness.

12. CHECK TRANSMISSION RANGE SWITCH INPUT SIGNAL CIRCUIT

- Disconnect transmission range switch harness connector.
- Check continuity between transmission range switch and IPDM E/R harness connectors.



Transmission	n range switch	IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: F25	1	B: F10	74	Yes
A. F25	2	B. F10	72	165

Check continuity between transmission range switch harness connector and ground.

Transmission	Transmission range switch		Continuity
Connector	Terminal	Ground	Continuity
A: F25	1	Ground	No
A. F25	2	Giouna	NO

Is the inspection result normal?

YES >> Replace transmission range switch.

NO >> Repair harness or connector.

13. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

Component Inspection

1. CHECK CLUTCH INTERLOCK SWITCH

Turn ignition switch OFF.

Revision: February 2013

Disconnect clutch interlock switch harness connector.

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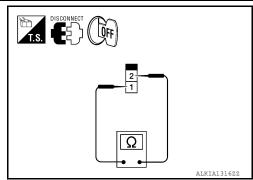
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SEC-273

< DTC/CIRCUIT DIAGNOSIS >

[SEDAN]

Check continuity between clutch interlock switch under the following conditions.



	interlock vitch	C	Condition Continuity	
Teri	minal			
1	2	Clutch pedal	Not depressed	No
'	1 2	Ciulcii pedai	Depressed	Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace clutch interlock switch.

< DTC/CIRCUIT DIAGNOSIS >

B2110 TRANSMISSION RANGE SWITCH/CLUTCH INTERLOCK SWITCH

Description INFOID:0000000007422576

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

- Transmission range switch (CVT models)
- Clutch inter lock switch (M/T models)
- · Shift position signal from BCM (CAN)

DTC Logic INFOID:0000000007422577

DTC DETECTION LOGIC

NOTE:

 If DTC B2110 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-248, "DTC Logic",

 If DTC B2110 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-249, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2110	INTER LOCK/ TRANSMISSION RANGE 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 (CVT models)	Harness or connectors [Transmission range switch circuit is open or shorted (CVT models)] or (Clutch interlock switch circuit is open or shorted.) Clutch inter lock switch (M/T models) Transmission range switch (CVT models)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- Turn the ignition switch ON 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
- Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YFS >> Go to SEC-275, "Diagnosis Procedure".

>> Inspection End. NO

Diagnosis Procedure

Regarding Wiring Diagram information, refer to SEC-427, "Wiring Diagram".

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-67, "DTC Index".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

 ${f 3.}$ CHECK TRANSMISSION RANGE SWITCH INPUT SIGNAL

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< DTC/CIRCUIT DIAGNOSIS >

- Turn ignition switch OFF.
- Disconnect IPDM E/R harness connector.
- Turn ignition switch ON.
- Check voltage between IPDM E/R harness connector and ground under following condition.

IPDI	M E/R	Ground	0	Condition	Voltage (V)	
Connector	Terminal	Giodila	Condition		vollage (v)	
E18	30	Ground	CVT selector lever	P or N	0	
E10	30	Ground	CVT Selector level	Other than above	Battery voltage	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-45, "Removal and Installation".

NO >> GO TO 4 (VQ35DE). >> GO TO 10 (QR25DE). NO

4.CHECK TRANSMISSION RANGE SWITCH CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect TCM harness connector.
- Check continuity between IPDM E/R harness connector and TCM harness connector.

T	CM	IPDM E/R		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
F16	20	E18	72	Yes	

Check continuity between TCM harness connector and ground.

T(CM	Ground	Continuity	
Connector	Terminal	Grodina	Continuity	
F16	20	Ground	No	

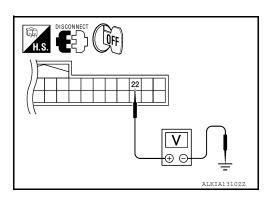
Is the inspection result normal?

YES >> GO TO 13.

NO >> Repair harness or connector.

5.check clutch interlock switch input signal (BCM)

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



В	СМ	Ground	Condition		Voltage (V)
Connector	Terminal	Ground			voltage (v)
M18	22	Ground	Clutch nodal	Not depressed	0
W 16	22	Ground	Clutch pedal	Depressed	Battery voltage

Is the inspection result normal?

< DTC/CIRCUIT DIAGNOSIS >

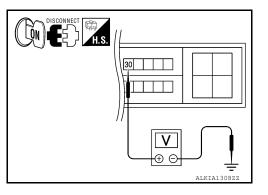
>> GO TO 6. >> GO TO 11.

YES

NO

6.CHECK CLUTCH INTERLOCK SWITCH INPUT SIGNAL

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



IPD	M E/R	Ground		Condition	Voltage (V)	
Connector	Terminal	Ground	Condition		voltage (v)	
E18	30	Ground	Clutch pedal	Not depressed	0	
E10	30	Ground	Ciulcii pedai	Depressed	Battery voltage	

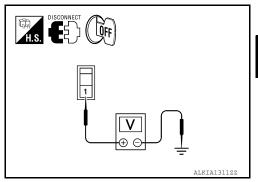
Is the inspection result normal?

YES >> Replace the IPDM E/R. Refer to PCS-45, "Removal and Installation".

NO >> GO TO 7.

7.check clutch interlock switch power supply

- Disconnect clutch interlock switch harness connector.
- 2. 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

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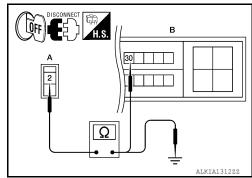
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< DTC/CIRCUIT DIAGNOSIS >

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



Clutch inte	rlock switch	IPDI	M E/R	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: E36	2	B: E18	30	Yes

Check continuity between clutch interlock switch harness connector and ground.

Clutch interlock 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-279, "Component Inspection".

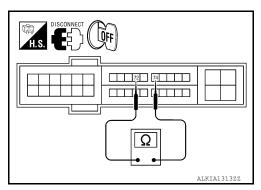
Is the inspection result normal?

>> Replace the IPDM E/R. Refer to PCS-45, "Removal and Installation".

NO >> Replace clutch interlock switch.

10. CHECK TRANSMISSION RANGE SWITCH CIRCUIT FOR CONTINUITY

- Turn ignition switch OFF.
- Check continuity between IPDM E/R harness connector terminals 72 and 74.



	IPDM E/R			Condition	Continuity	
Connector	Terr	ninals	Condition		Continuity	
F10	72	74	Transmission range	P or N	Yes	
1 10	12	74	switch position	Other	No	

Is the inspection result normal?

YES >> GO TO 11. NO >> GO TO 12.

11. CHECK TRANSMISSION RANGE SWITCH CIRCUIT FOR SHORT

< DTC/CIRCUIT DIAGNOSIS >

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

IPDM E/R		Ground	Continuity	
Connector	Terminal	Glound	Continuity	
F10	72	Ground	No	
1 10	74	Ground	Ground	INO

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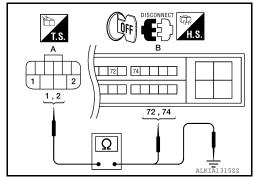
Is the inspection result normal?

YES >> Replace the IPDM E/R. Refer to <u>PCS-45, "Removal and Installation"</u>.

NO >> Repair or replace harness.

12. CHECK TRANSMISSION RANGE SWITCH INPUT SIGNAL CIRCUIT

- 1. Disconnect transmission range switch harness connector.
- Check continuity between transmission range switch and IPDM E/R harness connectors.



Transmission	n range switch	IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: F25	1	B: F10	74	Yes
A. F25	2	B. F10	72	165

3. Check continuity between transmission range switch harness connector and ground.

Transmissio	Transmission range switch		Continuity	
Connector	Terminal	Ground	Continuity	
A: F25	1	Cround	No	
A. F20	2	Ground	INO	

Is the inspection result normal?

YES >> Replace transmission range switch.

NO >> Repair harness or connector.

13. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

Component Inspection

1. CHECK CLUTCH INTERLOCK SWITCH

- Turn ignition switch OFF.
- Disconnect clutch interlock switch harness connector.

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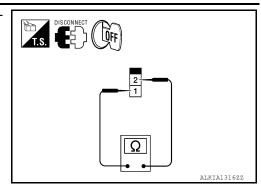
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INFOID:0000000007422579

< DTC/CIRCUIT DIAGNOSIS >

[SEDAN]

Check continuity between clutch interlock switch under the following conditions.



	interlock ritch	Condition		Continuity
Terr	minal			
1	2	Clutch pedal	Not depressed	No
	2	Clutch pedal	Depressed	Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace clutch interlock switch.

B2190, P1610 NATS ANTENNA AMP [SEDAN] < DTC/CIRCUIT DIAGNOSIS > B2190, P1610 NATS ANTENNA AMP Α Description INFOID:0000000007422580 Performs ID verification through BCM and Intelligent Key when push-button ignition switch is pressed. В Prohibits the release of steering lock or start of engine when an unregistered ID of Intelligent Key is used. DTC Logic INFOID:0000000007422581 DTC DETECTION LOGIC Trouble diagnosis D DTC No. DTC detecting condition Possible cause name B2190 · Harness or connectors (The key slot circuit is open or Е NATS ANTENNA Inactive communication between key slot and shorted) **AMP** BCM. P1610 · Key slot • BCM DTC CONFIRMATION PROCEDURE ${f 1}$.PERFORM DTC CONFIRMATION PROCEDURE Insert Intelligent Key into the key slot. Check "Self diagnostic result" with CONSULT. Is DTC detected? Н YES >> Go to SEC-281, "Diagnosis Procedure". NO >> GO TO 2. 2.perform dtc confirmation procedure Press the push-button ignition switch. Check "Self diagnostic result" with CONSULT. Is DTC detected? YES >> Go to SEC-281, "Diagnosis Procedure". >> Inspection End. NO **SEC** Diagnosis Procedure INFOID:0000000007422582 Regarding Wiring Diagram information, refer to SEC-427, "Wiring Diagram". 1. INSPECTION START M 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. Ν In which case is DTC detected? Case1. >> GO TO 2. Case2. >> GO TO 4. 2.CHECK KEY SLOT INPUT SIGNAL

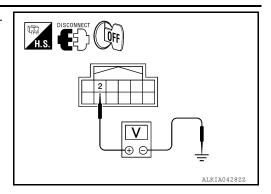
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Turn ignition switch OFF.

Disconnect key slot harness connector.

[SEDAN]

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



Key slot		Ground	Voltage [V]
Connector	Terminal	Oround	(approx.)
M40	2	Ground	Battery voltage

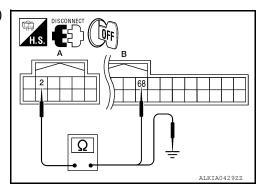
Is the inspection result normal?

YES >> Replace key slot. Refer to <u>SEC-443, "Removal and Installation"</u>.

NO >> GO TO 3.

3. CHECK KEY SLOT CIRCUIT

- 1. Disconnect BCM harness connector.
- 2. Check continuity between key slot harness connector M40 (A) terminal 2 and BCM harness connector M19 (B) terminal 68.



Key slot		ВСМ		Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M40	2	B: M19	68	Yes

3. Check continuity between key slot harness connector M40 (A) terminal 2 and ground.

Key slot		Ground	Continuity	
Connector	Terminal	Oround	Continuity	
A: M40	2	Ground	No	

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair harness or connector.

4. CHECK PUSH-BUTTON IGNITION SWITCH OPERATION

Press push-button ignition switch and check if it turns ON.

Does ignition switch turn to ON?

YES >> GO TO 5. NO >> GO TO 7.

5. CHECK KEY SLOT COMMUNICATION SIGNAL

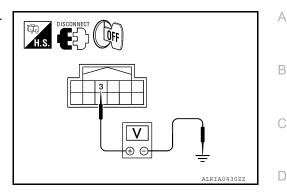
1. Turn ignition switch OFF.

B2190, P1610 NATS ANTENNA AMP

< DTC/CIRCUIT DIAGNOSIS >

[SEDAN]

- Disconnect key slot harness connector.
- 3. Check voltage between key slot harness connector and ground.



Key slot		Ground	Continuity
Connector	Terminal	Ordana	Continuity
M40	3	Ground	Yes

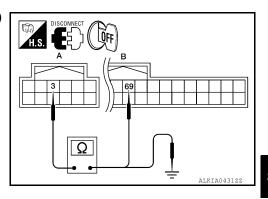
Is the inspection result normal?

YES >> Replace key slot. Refer to <u>SEC-443</u>, "Removal and Installation".

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	BCM		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	Oround	Continuity
A: M40	3	Ground	No

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair harness or connector.

.CHECK KEY SLOT GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect key slot harness connector.

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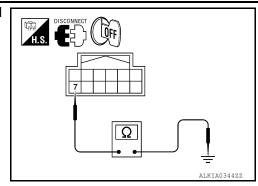
Revision: February 2013 SEC-283 2012 Altima GCC

B2190, P1610 NATS ANTENNA AMP

< DTC/CIRCUIT DIAGNOSIS >

[SEDAN]

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



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

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair harness or connector.

8.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

B2191, P1615 DIFFERENCE OF KEY

< DTC/CIRCUIT DIAGNOSIS >

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INFOID:0000000007422585

B2191, P1615 DIFFERENCE OF KEY

Description INFOID:0000000007422583

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:0000000007422584

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 ivey

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- Insert the Intelligent Key in the key slot. Press the push-button ignition switch.
- 2. Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to SEC-285, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

1. PERFORM INITIALIZATION

Perform initialization with CONSULT. Re-register all Intelligent Keys.

For initialization and registration of Intelligent Key. Refer to CONSULT Immobilizer mode and follow the onscreen instructions.

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

>> Intelligent Key was unregistered.

NO

- >> BCM is malfunctioning.
 - Replace BCM. Refer to BCS-92, "Removal and Installation".
 - · Perform initialization again

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SEC-285 Revision: February 2013 2012 Altima GCC SEC

B2192, P1611 ID DISCORD, IMMU-ECM

< DTC/CIRCUIT DIAGNOSIS >

[SEDAN]

B2192, P1611 ID DISCORD, IMMU-ECM

Description INFOID:000000007422588

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 SEC-248. "DTC Logic".
- If DTC B2192 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-249, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2192	ID DISCORD, IMMU-	The ID verification results between BCM and ECM	• BCM
P1611	ECM	are NG. The registration is necessary.	• 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
- Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to <u>SEC-286</u>, "<u>Diagnosis Procedure</u>".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422588

1.PERFORM INITIALIZATION

Perform initialization with CONSULT. Re-register all Intelligent Keys.

For initialization and registration of Intelligent Key. Refer to CONSULT Immobilizer mode and follow the onscreen instructions.

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

YES >> ID was unregistered.

NO

- >> BCM is malfunctioning.
 - Replace BCM. Refer to BCS-92, "Removal and Installation".
 - · Perform initialization again
 - Replace ECM

B2193, P1612 CHAIN OF ECM-IMMU

< DTC/CIRCUIT DIAGNOSIS >

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B2193, P1612 CHAIN OF ECM-IMMU

Description INFOID:0000000007422589

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:0000000007422590

DTC DETECTION LOGIC

NOTE:

 If DTC B2193 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-248, "DTC Logic".

 If DTC B2193 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-249, "DTC Logic".

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

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

Is DTC detected?

YES >> Go to SEC-287, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

1.REPLACE BCM

- Replace BCM.
- Perform initialization with CONSULT. For initialization, refer to CONSULT Immobilizer mode and follow the on-screen instructions.

Does the engine start?

YES >> BCM is malfunctioning.

- Replace BCM. Refer to BCS-92, "Removal and Installation".
- Perform initialization again.

NO >> ECM is malfunctioning.

- · Replace ECM.
- · Perform ECM re-communicating function.

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[SEDAN]

B2195 ANTI-SCANNING

Description INFOID.000000007422592

When ignition switch is turned ON, BCM performs ID verification with ECM. If ID verification that is out of the specified specification is detected, BCM prohibits further ID verification and engine cranking.

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2195	ANTI-SCANNING	ID verification between BCM and ECM that is out of the specified specification is detected	ID verification request out of the specified specification

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to <u>SEC-288</u>, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422594

1. CHECK SELF-DIAGNOSTIC RESULT-1

- 1. Perform "Self-diagnostic result" of BCM using CONSULT.
- Erase DTC.
- Perform DTC Confirmation Procedure. Refer to SEC-288, "DTC Logic".

Is DTC B2195 detected?

YES >> GO TO 2.

NO >> Inspection End

2. CHECK EQUIPMENT OF THE VEHICLE

Check that unspecified accessory part related to engine start is not installed.

Is unspecified accessory part related to engine start installed?

YES >> GO TO 3.

NO >> Replace BCM. Refer to BCS-92, "Removal and Installation".

3.CHECK SELF-DIAGNOSTIC RESULT-2

- 1. Obtain the customers approval to remove unspecified accessory part related to engine start, and then remove it.
- Perform "Self-diagnostic result" of BCM using CONSULT.
- 3. Erase DTC.
- 4. Perform DTC Confirmation Procedure. Refer to SEC-288, "DTC Logic".

Is DTC B2195 detected?

YES >> Replace BCM. Refer to <u>BCS-92</u>, "Removal and Installation".

NO >> Inspection End

B2555 STOP LAMP

< DTC/CIRCUIT DIAGNOSIS >

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INFOID:0000000007422597

B2555 STOP LAMP

Description INFOID:0000000007422595

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:0000000007422596

DTC DETECTION LOGIC

DTO		CONSULT	DTC detecting condition	Possible cause	
B255	55	STOP LAMP	BCM makes a comparison between the upper voltage and lower voltage of stop lamp switch. The BCM then judges from their values to detect the malfunctioning circuit.	FuseStop lamp switchStop lamp relay-1 (with CVT)Harness or connectors	-

DTC CONFIRMATION PROCEDURE

${f 1}$.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

>> Refer to SEC-289, "Diagnosis Procedure (With CVT)" or SEC-291, "Diagnosis Procedure (With YES

NO >> Inspection End.

Diagnosis Procedure (With CVT)

Regarding Wiring Diagram information, refer to SEC-399, "Wiring Diagram".

1.CHECK FUSE

Check 10A fuse [No.7, located in fuse block (J/B)].

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the blown fuse after repairing the shorted circuit.

2.CHECK STOP LAMP SWITCH INPUT SIGNAL

- Turn ignition switch OFF.
- 2. Disconnect BCM harness connector.
- Check voltage between BCM harness connector M18 terminal 26 and ground.

В	СМ	Ground	Stop lamp	Voltage [V]	
Connector	Terminal	Oround	switch position	voltage [v]	
M18	26	Ground	Depressed	Battery voltage	
IVITO	20	Giouna	Released	0	

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-92, "Removal and Installation".

NO >> GO TO 3.

3.CHECK STOP LAMP SWITCH POWER SUPPLY CIRCUIT

Check voltage between stop lamp harness connector E38 terminal 2 and ground.

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Stop lan	np switch	Ground	Stop lamp	\/oltaga [\/]	
Connector	Terminal	Giodila	switch position	Voltage [V]	
E38	2	Ground	Depressed	Battery volt- age	
			Released	0	

Is the inspection result normal?

YES >> GO TO 4. NO >> GO TO 9.

4. CHECK STOP LAMP RELAY-1 SIGNAL CIRCUIT

1. Check voltage between stop lamp relay-1 harness connector E57 terminal 1 and ground.

Stop lam	np relay-1	Ground	Stop lamp	Voltage [V]
Connector	Terminal	Giouna	switch position	voitage [v]
E57	1	Ground	Depressed	Battery voltage
LJI		Ground	Released	0

Is the inspection result normal?

YES >> GO TO 5.

NO >> Check harness for open or short between stop lamp relay-1 connector and stop lamp switch. Repair or replace necessary parts.

5. CHECK STOP LAMP RELAY-1 POWER SUPPLY

1. Check voltage between stop lamp relay-1 harness connector E57 terminal 5 and ground.

Stop lam	np relay-1	Ground	Voltage
Connector	Terminal	Giodila	voltage
E57	5	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 6.

NO >> Check pin terminals and connection of stop lamp relay-1 harness connector and harness for abnormal conditions. Repair or replace necessary parts.

6.CHECK STOP LAMP RELAY-1 GROUND CIRCUIT

- Disconnect stop lamp relay-1 E57 connector.
- 2. Check continuity between stop lamp relay-1 harness connector E57 terminal 2 and ground.

Stop lam	np relay-1	Ground	Continuity
Connector	Terminal	Ground	Continuity
E57	2	Ground	Yes

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair harness or connector.

7.CHECK STOP LAMP RELAY-1 OUTPUT CIRCUIT

- Connect stop lamp relay-1 E57 connector.
- 2. Check voltage between stop lamp relay-1 harness connector E57 terminal 3 and ground.

Stop lan	np relay-1	Ground	Stop lamp	Voltage [V]	
Connector	Terminal	Ground	switch position	voltage [v]	
F57	3	Ground	Depressed	Battery voltage	
	3	Giodila	Released	0	

B2555 STOP LAMP

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DTC/CIRCU	IT DIAGNO	SIS >				[SEDAN]
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	O TO 10.					
.CHECK STO	OP LAMP S	WITCH	CIRCU	IT		
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tor M18 ter	minal 26.					
		Ī			1	_
Stop lamp	•		BCM		Continuity	
Connector	Terminal	Conn		Terminal		_
E57	3	M		26	Yes	<u>-</u>
Check con	tinuity betwe	een sto	p lamp r	elay-1 harn	ness connecto	or E57 terminal 3 and ground.
						_
	amp relay-1	1	Gro	ound	Continuity	
Connector	Termin	naı				_
E57	3	_	Gro	ound	No	_
the inspectio	n result norr	mal?				
'ES >> GC	O TO 11.					
NO >> Re	pair harness	s or cor	nnector.			
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< DTC/CIRCUIT DIAGNOSIS >

3. Check voltage between BCM harness connector and ground.

В	CM	Ground	Stop lamp	\/oltaga [\/]
Connector	Connector Terminal		switch position	Voltage [V]
M18	26	Ground	Depressed	Battery volt- age
			Released	0

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Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-92, "Removal and Installation"</u>

NO >> GO TO 2

2.CHECK STOP LAMP SWITCH POWER SUPPLY CIRCUIT

- 1. Disconnect stop lamp switch harness connector.
- 2. Check voltage between stop lamp harness connector and ground.

Stop lan	np switch	Ground	Voltage [V]
Connector	Terminal	Ground	voitage [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 terminal 2 and BCM harness connector M18 terminal 26.

Stop lamp	switch	В	Continuity	
Connector	Connector Terminal		Connector Terminal	
E38	2	M18	26	Yes

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

Stop lan	np switch	Ground	Continuity
Connector	Terminal	Ground	Continuity
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-292, "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".

>> Inspection End.

Component Inspection

INFOID:0000000007422599

B2555 STOP LAMP

< DTC/CIRCUIT DIAGNOSIS >

[SEDAN]

1. CHECK STOP LAMP SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect stop lamp switch harness connector E38.
- Check continuity between stop lamp switch terminals 1 and 2 under the following conditions.

Stop lamp switch		Condition		Continuity
Terminal			Condition	
1	2	2 Brake pedal -	Released	No
'			Depressed	Yes

Is the inspection result normal?

>> Inspection End. YES

NO >> Replace stop lamp switch.

STOP LAMP RELAY-1

1. CHECK STOP LAMP RELAY-1

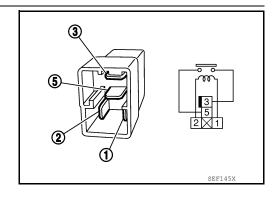
Check continuity between stop lamp relay-1 terminals 3 and 5.

Condition	Continuity
Apply battery voltage between terminals 1 and 2	Yes
No voltage supplied	No

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace stop lamp relay-1.



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SEC-293 Revision: February 2013 2012 Altima GCC

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INFOID:0000000007422602

B2556 PUSH-BUTTON IGNITION SWITCH

Description INFOID:000000007422600

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

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.

Is DTC detected?

YES >> Go to SEC-294, "Diagnosis Procedure".

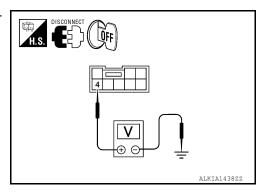
NO >> Inspection End.

Diagnosis Procedure

Regarding Wiring Diagram information, refer to <u>SEC-427, "Wiring Diagram"</u>.

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]	
Connector	Connector Terminal		voitage [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-339, "Diagnosis Procedure".

B2556 PUSH-BUTTON IGNITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

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Is the inspection normal?

YES >> GO TO 3.

NO >> Replace push-button ignition switch. Refer to <u>SEC-444, "Removal and Installation"</u>.

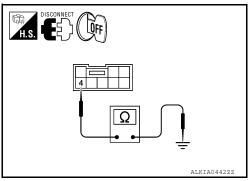
3. CHECK INTERMITTENT INCIDENT

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	
Connector Terminal		Ground	Continuity	
M38	4	Ground	No	

Is the inspection normal?

YES >> Replace BCM. Refer to BCS-92, "Removal and Installation".

NO >> Repair harness or connector.

Component Inspection

INFOID:0000000007422603

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	Condition	Continuity	
Terminal		Condition	Continuity	
1	4	Pressed	Yes	
ı	4	Not pressed	No	

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace push-button ignition switch. Refer to <u>SEC-444, "Removal and Installation"</u>.

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Revision: February 2013 SEC-295 2012 Altima GCC

B2557 VEHICLE SPEED

Description INFOID:000000007422604

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:

- If DTC B2557 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-248, "DTC Logic".
- If DTC B2557 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-249, "DTC Logic".

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.

Is DTC detected?

YES >> Go to <u>SEC-296</u>, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422606

${f 1}.$ CHECK DTC WITH "ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)"

Check "Self diagnostic result" with CONSULT. Refer to <u>BRC-45, "DTC No. Index"</u> (ABS), <u>BRC-115, "DTC No. Index"</u> (TCS/ABS) or <u>BRC-220, "DTC No. Index"</u> (VDC/TCS/ABS).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace.

2.CHECK COMBINATION METER.

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

>> Inspection End.

B2560 STARTER CONTROL RELAY

< DTC/CIRCUIT DIAGNOSIS >

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B2560 STARTER CONTROL RELAY

Description INFOID:000000007422607

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

DTC DETECTION LOGIC

NOTE:

- If DTC B2560 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-248, "DTC Logic".
- If DTC B2560 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-249, "DTC Logic".

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B2560	STARTER CONTROL RELAY	BCM detects a mismatch between the OFF request 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.
- CVT selector lever is in the P position
- Depress the brake pedal
- 2. Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to SEC-297, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422609

1. CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT. Refer to PCS-29, "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.

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< DTC/CIRCUIT DIAGNOSIS >

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B2601 SHIFT POSITION

Description INFOID:000000007422610

BCM confirms the shift position with the following 2 signals.

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

DTC Logic INFOID:000000007422611

DTC DETECTION LOGIC

NOTE

- If DTC B2601 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-248, "DTC Logic".
- If DTC B2601 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-249</u>, "DTC Logic".
- If DTC B2601 is displayed with DTC B2605, first perform the trouble diagnosis for DTC B2605. Refer to <u>SEC-310, "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 received from IPDM E/R via CAN communication continues for 2 seconds or more	Harness or connectors (CVT shift selector circuit is open or shorted.) CVT shift selector (park position 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.
- Check "Self diagnostic result" with CONSULT.
- 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.
- Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to SEC-298, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422612

Regarding Wiring Diagram information, refer to <a>SEC-427, "Wiring Diagram".

1. CHECK CVT SHIFT SELECTOR POWER SUPPLY

- Turn ignition switch to ACC.
- Disconnect CVT shift selector (park position switch) harness connector.

B2601 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

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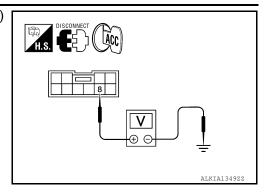
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3. Check voltage between CVT shift selector (park position switch) harness connector and ground.



CVT shift selector (park position switch)	Ground	Voltage [V]	
Connector Terminal		Ground	voltage [v]	
M23	8	Ground	Battery voltage	

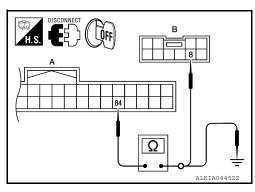
Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK CVT SHIFT SELECTOR POWER SUPPLY CIRCUIT

- 1. Disconnect BCM harness connector.
- Check continuity between BCM harness connector M19 (A) terminal 84 and CVT shift selector (park position switch) harness connector M23 (B) terminal 8.



ВСМ		CVT shift selector (park position 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.

В	CM	Ground	Continuity	
Connector	Terminal			
A: M19	84	Ground	No	

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-92, "Removal and Installation".

NO >> Repair harness or connector.

3.CHECK CVT SHIFT SELECTOR CIRCUIT (BCM)

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

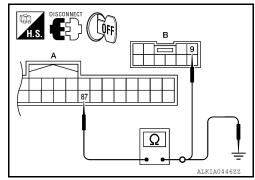
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Revision: February 2013 SEC-299 2012 Altima GCC

Check continuity between BCM harness connector M19 (A) terminal 87 and CVT shift selector (park position switch) harness connector M23 (B) terminal 9.



В	СМ		ft selector tion 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.

В	ВСМ		Continuity
Connector	Terminal	Ground	Continuity
A: M19	87	Ground	No

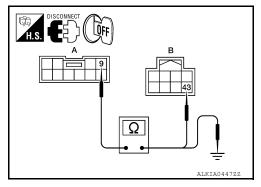
Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

4. CHECK CVT SHIFT SELECTOR CIRCUIT (IPDM E/R)

- 1. Disconnect BCM harness connector.
- 2. Check continuity between CVT shift selector (park position switch) harness connector M23 (A) terminal 9 and IPDM E/R harness connector E17 (B) terminal 43.



	ft selector tion switch)	IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
A: M23	9	B: E17	43	Yes

3. Check continuity between CVT shift selector (park position switch) harness connector M23 (A) terminal 9 and ground.

CVT shift selector (park position switch)		Ground	Continuity
Connector	Terminal		
A: M23	9	Ground	No

Is the inspection result normal?

YES >> GO TO 5.

B2601 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

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INFOID:0000000007422613

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NO >> Repair harness or connector.

5. CHECK CVT SHIFT SELECTOR

Refer to SEC-301, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace CVT shift selector. Refer to <u>TM-239</u>, "Removal and Installation" (RE0F09B), or <u>TM-404</u>, "Removal and Installation" (RE0F10A).

6.CHECK INTERMITTENT INCIDENT

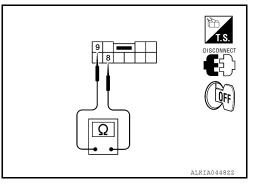
Refer to GI-42, "Intermittent Incident".

>> Inspection End.

Component Inspection

1. CHECK CVT SHIFT SELECTOR (DETENTION SWITCH)

- Turn ignition switch OFF.
- 2. Disconnect CVT shift selector (park position switch) harness connector.
- 3. Check continuity between CVT shift selector (park position switch) terminals as follows.



CVT shift selector (park position switch)		Condition		Continuity
Terr	minal	1		
8	9	CVT selector lever	P position	No
	9	OVI SCIECIOI IEVEI	Other than above	Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace CVT shift selector. Refer to <u>TM-239</u>, "Removal and Installation" (RE0F09B), or <u>TM-404</u>. "Removal and Installation" (RE0F10A).

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INFOID:0000000007422616

B2602 SHIFT POSITION

Description INFOID:000000007422614

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-248, "DTC Logic".
- If DTC B2602 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-249, "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 shorted) CVT shift selector (park position 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.

Is DTC detected?

YES >> Go to SEC-302, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

Regarding Wiring Diagram information, refer to SEC-427, "Wiring Diagram".

1. CHECK DTC WITH "COMBINATION METER"

Check "Self diagnostic result" with CONSULT. Refer to MWI-47, "DTC Index".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace.

2.CHECK CVT SHIFT SELECTOR POWER SUPPLY

- Turn ignition switch to ACC.
- 2. Disconnect CVT shift selector (park position switch) harness connector.

B2602 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

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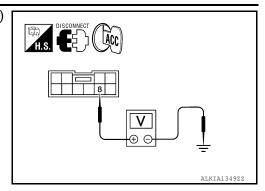
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3. Check voltage between CVT shift selector (park position switch) harness connector and ground.



CVT shift selector (CVT shift selector (park position switch)		Voltage [V]
Connector	Terminal	- Ground	voltage [v]
M23	8	Ground	Battery voltage

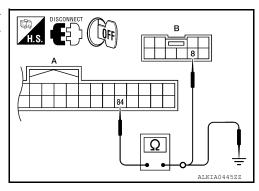
Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

3.check cvt shift selector power supply circuit

- 1. Disconnect BCM harness connector.
- 2. Check continuity between BCM harness connector M19 (A) terminal 84 and CVT shift selector (park position switch) harness connector M23 (B) terminal 8.



В	BCM CVT shift selector (park position switch) Continuit		CVT shift selector (park position 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.

В	ВСМ		Continuity
Connector	Terminal	- Ground	Continuity
A: M19	84	Ground	No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-92, "Removal and Installation".

NO >> Repair harness or connector.

4. CHECK CVT SHIFT SELECTOR CIRCUIT

1. Disconnect BCM harness connector.

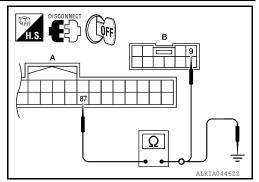
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2. Check continuity between CVT shift selector (park position switch) harness connector and BCM harness connector.



В	CM	CVT shift selector (park position switch)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M19	87	B: M23	9	Yes

3. Check continuity between CVT shift selector (park position switch) harness connector and ground.

В	ВСМ		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 SHIFT SELECTOR

Refer to SEC-301, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace CVT shift selector. Refer to <u>TM-239</u>, "Removal and Installation" (RE0F09B), or <u>TM-404</u>, "Removal and Installation" (RE0F10A).

6. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

B2603 SHIFT POSITION STATUS

< DTC/CIRCUIT DIAGNOSIS >

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B2603 SHIFT POSITION STATUS

Description INFOID:0000000007422617

BCM confirms the shift position with the following 2 signals.

- CVT selector lever
- P/N position switch

DTC Logic INFOID:0000000007422618

DTC DETECTION LOGIC

NOTE:

 If DTC B2603 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-248, "DTC Logic"

 If DTC B2603 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-249, "DTC Logic".

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. • Transmission range switch: approx. 0V • CVT shift selector (park position switch): approx 0V	Harness or connector (CVT shift selector circuit is open or shorted.) Harness or connectors [Transmission range switch circuit is open or shorted.] CVT shift selector (park position switch) Transmission range switch

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

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.
- Shift to N and wait for at least 1 second.
- Shift to any gear other than P or N and wait for at least 1 second.
- Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to SEC-305, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

Regarding Wiring Diagram information, refer to SEC-399, "Wiring Diagram".

1. CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT. Refer to PCS-29, "DTC Index".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK TRANSMISSION RANGE SWITCH CIRCUIT

- Turn ignition switch OFF.
- Disconnect TCM harness connector and BCM harness connector. 2.
- 3. Check continuity between TCM harness connector terminal and BCM harness connector M18 terminal

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SEC-305 Revision: February 2013 2012 Altima GCC

< DTC/CIRCUIT DIAGNOSIS >

T	CM	ВСМ		Continuity
Connector	Terminal	Connector	Terminal	Continuity
F16 (VQ35DE)	20	M18	48	Yes
F25 (QR25DE)	2	IVITO	+0	165

4. Check continuity between TCM harness connector terminal and ground.

To	CM	Ground	Continuity	
Connector	Terminal	Giodila	Continuity	
F16 (VQ35DE)	20	Ground	No	
F25 (QR25DE)	2	Giouna	INU	

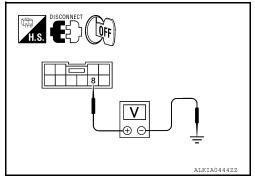
Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3.CHECK CVT SHIFT SELECTOR POWER SUPPLY

- Turn ignition switch OFF.
- Disconnect CVT shift selector (park position switch) harness connector.
- 3. Check voltage between CVT shift selector (park position switch) harness connector and ground.



CVT shift selector (park position switch)	Ground	Voltage [V]	
Connector	Terminal	Ground	vollage [v]	
M23	8	Ground	Battery voltage	

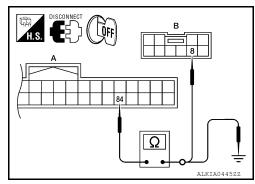
Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4. CHECK CVT SHIFT SELECTOR POWER SUPPLY CIRCUIT

- 1. Disconnect BCM harness connector.
- 2. Check continuity between BCM harness connector M19 (A) terminal 84 and CVT shift selector (park position switch) harness connector M23 (B) terminal 8.



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В	BCM CVT shift selector (park position switch)		CVT shift selector (park position 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	Oround	Continuity	
A: M19	84	Ground	No	

Is the inspection result normal?

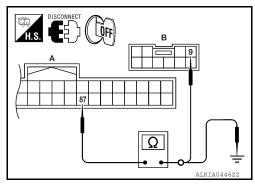
YES >> Replace BCM. Refer to BCS-92, "Removal and Installation".

NO >> Repair harness or connector.

5. CHECK CVT SHIFT SELECTOR CIRCUIT

1. Disconnect BCM harness connector.

Check continuity between BCM harness connector M19 (A) terminal 87 and CVT shift selector (park position switch) harness connector M23 (B) terminal 9.



В	СМ	CVT shift selector (park position switch)		(manta mantia manusitata)		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.

ВСМ		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: M19	87	Ground	No	

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

6.CHECK CVT SHIFT SELECTOR

Refer to SEC-301, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 7.

NO >> Replace CVT shift selector. Refer to <u>TM-239</u>, "Removal and Installation" (RE0F09B), or <u>TM-404</u>, "Removal and Installation" (RE0F10A).

7.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

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B2604 PNP SWITCH

Description INFOID:000000007422620

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 SEC-248, "DTC Logic".
- If DTC B2604 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-249</u>, "DTC Logic".

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 transmission range switch circuit is open or shorted.] Transmission range switch TCM

DTC CONFIRMATION PROCEDURE

1. 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
- 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.

Is DTC detected?

YES >> Go to SEC-308, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422622

Regarding Wiring Diagram information, refer to <a>SEC-399, "Wiring Diagram".

1. CHECK DTC WITH TCM

Check "Self diagnostic result" with CONSULT. Refer to <u>TM-196, "DTC Index"</u> (RE0F09B) or <u>TM-359, "DTC Index"</u> (RE0F10A).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace.

2. CHECK TRANSMISSION RANGE SWITCH CIRCUIT

- Turn ignition switch OFF.
- Disconnect TCM harness connector and BCM harness connector.
- 3. Check continuity between TCM harness connector and BCM harness connector.

B2604 PNP SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[SEDAN]

TC	CM	ВСМ		Continuity
Connector	Terminal	Connector	Terminal	Continuity
F16 (VQ35DE)	20	M18	48	Yes
F25 (QR25DE)	2	- WHO	IVI 10 48	

4. Check continuity between TCM harness connector and ground.

TCM		Ground	Continuity	
Connector	Terminal	Giodila	Continuity	
F16 (VQ35DE)	20	Ground	No	
F25 (QR25DE)	2	Giouna	INU	

Is the inspection result normal?

>> GO TO 3. YES

NO >> Repair harness or connector.

3.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

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B2605 PNP SWITCH

Description INFOID:000000007422623

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 B2605 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-248, "DTC Logic".
- If DTC B2605 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-249</u>, "DTC Logic".

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 position signal from IPDM E/R exists. 	Harness or connectors [The transmission range switch circuit is open or shorted.] Transmission range 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.

Is DTC detected?

YES >> Go to SEC-310, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422625

Regarding Wiring Diagram information, refer to SEC-399, "Wiring Diagram".

1. CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT. Refer to PCS-29, "DTC Index".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace.

2.CHECK TRANSMISSION RANGE SWITCH CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect TCM harness connector and BCM harness connector.
- Check continuity between TCM connector and BCM harness connector.

B2605 PNP SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[SEDAN]

TC	CM	ВСМ		Continuity
Connector	Terminal	Connector	Terminal	Continuity
F16 (VQ35DE)	20	M18	48	Yes
F25 (QR25DE)	2	- WHO	IVI 18 48	

4. Check continuity between TCM harness connector and ground.

TCM		Ground	Continuity
Connector	Terminal	Giodila	Continuity
F16 (VQ35DE)	20	Ground	No
F25 (QR25DE)	2	Giouna	INO

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.

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B2606 STEERING LOCK RELAY

Description INFOID:000000007422626

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

DTC DETECTION LOGIC

NOTE:

- If DTC B2606 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-248, "DTC Logic"</u>.
- If DTC B2606 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-249</u>, "DTC Logic".

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. Electronic steering column lock ON signal transmitted by IPDM E/R The electronic steering column lock 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.

Is DTC detected?

YES >> Go to SEC-312, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422628

1.CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT. Refer to PCS-29, "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.

B2607 STEERING LOCK RELAY

< DTC/CIRCUIT DIAGNOSIS >

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B2607 STEERING LOCK RELAY

Description INFOID:0000000007422629

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

DTC Logic INFOID:0000000007422630

DTC DETECTION LOGIC

NOTE:

- If DTC B2607 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-248, "DTC Logic".
- If DTC B2607 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-249, "DTC Logic".

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 electronic steering column lock power supply (ON/OFF) IPDM E/R status of electronic steering column lock power supply (ON/OFF)	Harness or connectors (electronic steering column lock power supply circuit is open or shorted) Steering lock relay (in IPDM E/R)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-313, "Diagnosis Procedure".

>> Inspection End. NO

Diagnosis Procedure

Regarding Wiring Diagram information, refer to SEC-399, "Wiring Diagram".

1. CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT. Refer to PCS-29, "DTC_Index".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK ELECTRONIC STEERING COLUMN LOCK POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- Disconnect electronic steering column lock harness connector.

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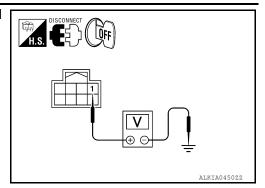
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3. Check voltage between electronic steering column lock and ground under the following conditions.



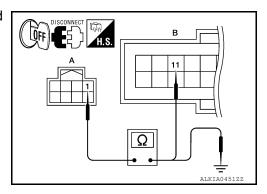
Electronic stee	Electronic steering column lock		Condition	Voltage (V)	
Connector	Terminal	Ground	Condition	vollage (v)	
M32	1	Ground	Press push-button ignition switch when steering lock is in lock condition.	Battery voltage	

Is the inspection result normal?

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

${f 3.}$ CHECK ELECTRONIC STEERING COLUMN LOCK POWER SUPPLY CIRCUIT

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



Electronic stee	ring column lock	IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M32	1	B: E18	11	Yes

4. Check continuity between electronic steering column lock and ground.

Electronic steering column lock		Ground	Continuity
Connector	Terminal	Oround	Continuity
A: M32	1	Ground	No

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-45, "Removal and Installation".

NO >> Repair harness or connector.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

B2608 STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

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B2608 STARTER RELAY

Description INFOID:000000007422632

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

DTC DETECTION LOGIC

NOTE:

- If DTC B2608 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-248, "DTC Logic".
- If DTC B2608 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-249, "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.
- Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to SEC-315, "Diagnosis Procedure".

NO >> Inspection End.

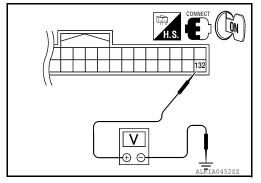
Diagnosis Procedure

INFOID:0000000007422634

Regarding Wiring Diagram information, refer to SEC-399, "Wiring Diagram".

1. CHECK STARTER RELAY

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



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BCM		Ground		Condition	Voltage (V)
Connector	Terminal	Giodila	Condition		voltage (v)
M21 132	CVT selector lever	N or P position	Battery voltage		
	122	Ground	OV 1 SCIECTO ICVCI	Other than above	0
	132		Clutch pedal	Not depressed	0
				Depressed	Battery voltage

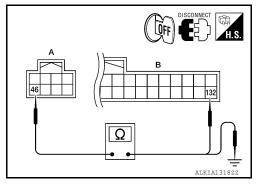
Is the measurement value within the specification?

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.



IPDN	/I E/R	В	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.

IPDI	M 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-45, "Removal and Installation".

NO >> Repair harness or connector.

3. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

< DTC/CIRCUIT DIAGNOSIS >

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B2609 STEERING STATUS

Description INFOID:0000000007422635

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

DTC Logic INFOID:0000000007422636

DTC DETECTION LOGIC

NOTE:

- If DTC B2609 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-248, "DTC Logic".
- If DTC B2609 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-249, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2609	STEERING STATUS	BCM detects the malfunction of electronic steering column lock switches for 1 second.	Harness or connectors [electronic steering column lock circuit (BCM side) is open or short- ed] Harness or connectors [electronic steering column lock circuit (IPDM E/R side) is open or shorted.] Electronic steering column lock 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 brake pedal
- Steering is locked
- Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to SEC-317, "Diagnosis Procedure".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE 2

- Turn ignition switch ON.
- Turn ignition switch OFF.
- Press door switch.
- Check "Self diagnostic result" with CONSULT.

Is DTC detected?

>> Go to SEC-317, "Diagnosis Procedure". YES

NO >> Inspection End.

Diagnosis Procedure

Regarding Wiring Diagram information, refer to <a>SEC-399, "Wiring Diagram".

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

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INFOID:0000000007422637

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< DTC/CIRCUIT DIAGNOSIS >

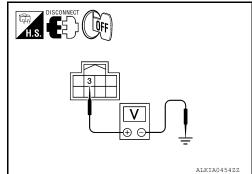
In which case is DTC detected?

Case1 >> GO TO 2.

Case2 >> GO TO 7.

2. CHECK BCM OUTPUT SIGNAL

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



Electronic steering column lock		Ground	Voltage [V]
Connector	Terminal	Giodila	vollage [v]
M32	3	Ground	Battery voltage

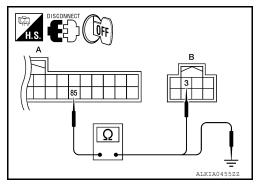
Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

3.check electronic steering column lock circuit-i

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



В	CM	Electronic steering column lock		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.

ВСМ		Ground	Continuity
Connector	Terminal	Ground	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

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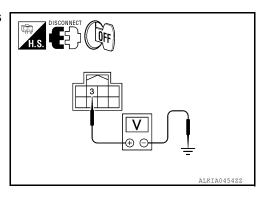
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- 1. Connect IPDM E/R harness connector.
- 2. Disconnect BCM harness connector.
- 3. Check voltage between electronic steering column lock harness connector and ground.



Electronic stee	Electronic steering column lock		Voltage [V]
Connector	Terminal	- Ground	voltage [v]
M32	3	Ground	Battery voltage

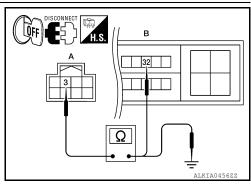
Is the inspection result normal?

YES >> Replace electronic steering column lock.

NO >> GO TO 5.

5. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-II

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



Electronic steel	ring column lock	IPDI	M E/R	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M32	3	B: E18	32	Yes

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

Electronic steering column lock		Ground	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.

7. CHECK BCM OUTPUT SIGNAL

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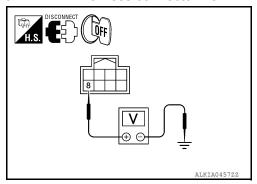
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< DTC/CIRCUIT DIAGNOSIS >

- Turn ignition switch OFF.
- 2. Disconnect electronic steering column lock harness connector and IPDM E/R harness connector E5.
- 3. Check voltage between electronic steering column lock harness connector and ground.



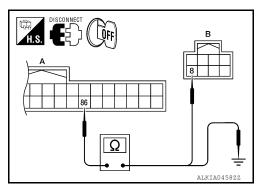
Electronic steering column lock		Ground	Voltage [V]
Connector	Terminal	Ground	voltage [v]
M32	8	Ground	Battery voltage

Is the inspection result normal?

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

8. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-I

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



В	CM	Electronic stee	ring column lock	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	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.

B2609 STEERING STATUS

< DTC/CIRCUIT DIAGNOSIS >

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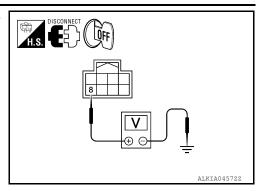
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Check voltage between electronic steering column lock harness connector and ground.



Electronic steering column lock		Ground	Voltage [V]
Connector	Terminal	Ground	voitage [v]
M32	8	Ground	Battery voltage

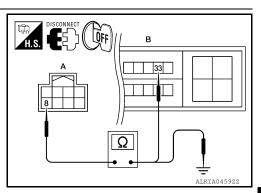
Is the inspection result normal?

YES >> Replace electronic steering column lock.

NO >> GO TO 10.

10. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-II

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



Electronic stee	ring column lock	IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M32	8	B: E18	33	Yes

2. Check continuity between electronic steering column lock harness connector and ground.

Electronic steering column lock		Ground	Continuity
Connector	Terminal	Giodila	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.

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B260B ELECTRONIC STEERING COLUMN LOCK

< DTC/CIRCUIT DIAGNOSIS >

[SEDAN]

B260B ELECTRONIC STEERING COLUMN LOCK

Description INFOID:000000007422638

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

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260B	ELECTRONIC STEERING COLUMN LOCK	BCM detects malfunctioning of electronic steering column lock before steering unlocking.	Electronic steering column lock

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press the push-button ignition switch, when steering is locked.
- Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to SEC-322, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422640

1. INSPECTION START

- 1. Turn ignition switch ON.
- Check "Self diagnostic result" with CONSULT.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure.

See SEC-322, "DTC Logic".

Is the DTC B260B displayed again?

YES >> Replace electronic steering column lock.

NO >> Inspection End.

B260C ELECTRONIC STEERING COLUMN LOCK

< DTC/CIRCUIT DIAGNOSIS >

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INFOID:0000000007422643

B260C ELECTRONIC STEERING COLUMN LOCK

Description INFOID:000000007422641

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

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260C	ELECTRONIC STEERING COLUMN LOCK	BCM detects malfunctioning of electronic steering column lock before steering locking.	Electronic steering column lock

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-323, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

1.INSPECTION START

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure.

See SEC-323, "DTC Logic".

Is the DTC B260C displayed again?

YES >> Replace electronic steering column lock.

NO >> Inspection End.

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B260D ELECTRONIC STEERING COLUMN LOCK

< DTC/CIRCUIT DIAGNOSIS >

[SEDAN]

B260D ELECTRONIC STEERING COLUMN LOCK

Description INFOID:000000007422644

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

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260D	ELECTRONIC STEERING COLUMN LOCK	BCM detects malfunctioning of electronic steering column lock after steering locking.	Electronic steering column lock

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to <u>SEC-324</u>, "<u>Diagnosis Procedure</u>".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422646

1.INSPECTION START

- Turn ignition switch ON.
- Check "Self diagnostic result" with CONSULT.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure.

See SEC-324, "DTC Logic".

Is the DTC B260D displayed again?

YES >> Replace electronic steering column lock.

NO >> Inspection End.

B260F ENGINE STATUS

		BZ001 ENGINE STATOS	
< DTC/CIRC	:UIT DIAGNOSIS >		[SEDAN]
B260F EI	NGINE STATU	JS	
Descriptio	n		INFOID:000000007422647
BCM receive	s the engine status	signal from ECM via CAN communication.	
DTC Logic			INFOID:000000007422648
DTC DETEC	CTION LOGIC		
NOTE:	SOE is displayed wit	th DTC U1000, first perform the trouble di	iganosis for DTC 111000. Pofor to
SEC-248, "	'DTC Logic".	·	_
	60F is displayed wit <u>'DTC Logic"</u> .	th DTC U1010, first perform the trouble di	iagnosis for DTC U1010. Refer to
	Trouble diagnosis		
DTC No.	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
OTC CONF	IRMATION PROC	EDURE	_
1.perfori	M DTC CONFIRMA	TION PROCEDURE	
	tion switch ON unde	er the following conditions.	
 Do not d 	epress the brake pe	edal.	
2. Check "S <u>Is DTC detec</u>	Self diagnostic resulted?	t with CONSULT.	
YES >> 0	Go to <u>SEC-325, "Dia</u>	agnosis Procedure".	
	nspection End. Procedure		
4			INFOID:000000007422649
	ION START		
2. Check "S	tion switch ON. Self diagnostic resul	t" with CONSULT.	
 Touch "E Perform 	:RASE". □ DTC Confirmatio r	Procedure.	
· · · · · · · · · · · · · · · · · · ·	C-325, "DTC Logic".	in?	
	<u>260F displayed aga</u> GO TO 2.	<u>III17.</u>	
_	nspection End.		
2.REPLACE			
2. Go to <u>EC</u>	C-330, "BASIC INSP	PECTION: Special Repair Requirement" (V	Q35DE), <u>EC-15, "BASIC INSPEC-</u>
<u> 110N : S</u>	pecial Repair Requi	rement" (QR25DE).	
>>	nspection End.		

B26E1 NO RECEPTION OF ENGINE STATUS SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

[SEDAN]

B26E1 NO RECEPTION OF ENGINE STATUS SIGNAL

Description INFOID:000000007422650

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

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B26E1 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-248. "DTC Logic".
- If DTC B26E1 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-249, "DTC Logic".

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.

Is DTC detected?

YES >> Go to SEC-326, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422652

1.INSPECTION START

- 1. Turn ignition switch ON.
- Check "Self diagnostic result" with CONSULT.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure.

See SEC-326, "DTC Logic".

Is the DTC B26E1 displayed again?

YES >> GO TO 2.

NO >> Inspection End.

2.REPLACE ECM

- Replace ECM.
- Go to <u>EC-330</u>, "BASIC INSPECTION: Special Repair Requirement" (VQ35DE), <u>EC-15</u>, "BASIC INSPECTION: Special Repair Requirement" (QR25DE).

>> Inspection End.

B26E8 CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

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B26E8 CLUTCH INTERLOCK SWITCH

Description INFOID:0000000007422653

When clutch interlock switch turns ON, BCM detects that clutch pedal is being depressed and permits to start the engine.

DTC Logic INFOID:0000000007422654

NOTE:

If DTC B26E8 is displayed with DTC B210F, first perform the trouble diagnosis for DTC B210F. Refer to SEC-327, "DTC Logic".

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detection condition	Possible cause
B26E8	CLUTCH INTERLOCK SWITCH	Detects that ASCD cancel switch is in the ON position for 2 seconds or more while ignition switch and clutch interlock switch are ON.	Clutch interlock switch Harness or connector (Clutch interlock switch circuit open or shorted)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- Turn ignition switch ON under the following condition.
- Shift lever is in the neutral position.
- Depress clutch pedal.
- Check "Self-diagnostic result" using CONSULT.

Is DTC detected?

>> Go to SEC-327, "Diagnosis Procedure". YES

NO >> Inspection End

Diagnosis Procedure

Regarding Wiring Diagram information, refer to <a>SEC-399, "Wiring Diagram".

${f 1}.$ check clutch interlock switch power supply

- Turn ignition switch OFF.
- 2. Disconnect clutch interlock switch connector.
- Check voltage between clutch interlock switch harness connector and ground.

(Clutch inte	+) rlock switch	(-)	Voltage (V) (Approx.)	
Connector Terminal			(, , , , , , , , , , , , , , , , , , ,	
E36	1	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 2.

NO-1 >> Check 10 A fuse [No. 31, located in the fuse and fusible link box]

NO-2 >> Check harness for open or short between clutch interlock switch and fuse.

2.CHECK CLUTCH INTERLOCK SWITCH SIGNAL

- Connect clutch interlock switch connector.
- 2. Disconnect BCM connector.
- Check voltage between BCM harness connector and ground.

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B26E8 CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[SEDAN]

INFOID:0000000007422656

	(+) BCM		Condition		Voltage (V) (Approx.)
Connector	Terminal				, , ,
M18	22	Ground	Clutch pedal	Depressed	Battery voltage
IVI IO		Ground	Ciuton pedai	Released	0

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-92, "Removal and Installation".

NO >> GO TO 3.

${f 3.}$ CHECK CLUTCH INTERLOCK SWITCH SIGNAL CIRCUIT

- 1. Disconnect clutch interlock switch connector.
- Check continuity between clutch interlock switch harness connector and BCM harness connector.

Clutch inte	rlock switch	В	Continuity	
Connector	Terminal	Connector Terminal		
E36	2	M18	22	Yes

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

Clutch inte	rlock switch		Continuity
Connector Terminal		Ground	Continuity
E36	2		No

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK CLUTCH INTERLOCK SWITCH

Refer to SEC-328, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace clutch interlock switch. Refer to <u>CL-9</u>, "<u>Exploded View</u>".

5. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End

Component Inspection

1. CHECK CLUTCH INTERLOCK SWITCH

- 1. Turn ignition switch OFF.
- Disconnect clutch interlock switch connector.
- 3. Check continuity between clutch interlock switch terminals.

Clutch inte	rlock switch	Condition		Continuity
Terminal		Condition		Continuity
1	2	Clutch pedal	Depressed	Yes
ı	2	Clutch pedal	Released	No

Is the inspection result normal?

YES >> Inspection End

NO >> Replace clutch interlock switch. Refer to CL-9, "Exploded View".

B26E9 STEERING STATUS [SEDAN] < DTC/CIRCUIT DIAGNOSIS > **B26E9 STEERING STATUS** Α Description INFOID:0000000007422657 There are 2 switches in the electronic steering column lock (steering lock/unlock switch 1 and 2). BCM com-В pares the 2 switch conditions to judge the present steering status. DTC Logic INFOID:0000000007422658 DTC DETECTION LOGIC NOTE: If DTC B26E9 is displayed with DTC B2609, first perform the trouble diagnosis for DTC B2609. Refer to SEC-D 329, "DTC Logic". Trouble diagnosis Е DTC No. DTC detecting condition Possible cause name BCM requests lock to Electronic steering column lock, then electronic steering column lock transmits B26E9 S/L STATUS Electronic steering column lock F a recognition signal to BCM, but electronic steering column lock remains unlocked. DTC CONFIRMATION PROCEDURE ${f 1}$.PERFORM DTC CONFIRMATION PROCEDURE Turn ignition switch ON. Н 2. Turn ignition switch OFF. 3. Press driver side door switch and wait 1 second or more. Turn ignition switch ON. Check "Self-diagnostic result" using CONSULT. Is DTC detected? >> Refer to SEC-329, "Diagnosis Procedure". YES NO >> Inspection End Diagnosis Procedure INFOID:0000000007422659 1.INSPECTION START **SEC** Turn ignition switch ON. Check "Self-diagnostic result" using CONSULT. 2. Touch "ERASE". Perform DTC Confirmation Procedure. Refer to SEC-329, "DTC Logic". Is the DTC B26E9 displayed again? YES >> GO TO 2. NO >> GO TO 3. 2.REPLACE ELECTRONIC STEERING COLUMN LOCK Ν

- Replace electronic steering column lock.
- Perform DTC confirmation procedure. Refer to <a>SEC-329, "DTC Logic".

Is the DTC B26E9 displayed again?

YES >> GO TO 3.

NO >> Inspection End

3.check intermittent incident

Refer to GI-42, "Intermittent Incident".

>> Inspection End

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B26EA KEY REGISTRATION

< DTC/CIRCUIT DIAGNOSIS >

[SEDAN]

B26EA KEY REGISTRATION

Description INFOID:000000007422660

When the registered Intelligent Key is carried, the door lock/unlock operation and the push-button ignition switch operation become possible.

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26EA	KEY REGISTRA- TION	Intelligent Key is not registered successfully.	Improper registration operation Intelligent Key BCM

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- Perform initialization using CONSULT. Reregister all Intelligent Keys.
 For initialization and registration of Intelligent Key, refer to CONSULT Immobilizer mode and follow the onscreen instructions.
- 2. Check "Self-diagnostic result" using CONSULT.

Is DTC detected?

YES >> Go to SEC-330, "Diagnosis Procedure".

NO >> Inspection End

Diagnosis Procedure

INFOID:0000000007422662

1.PERFORM INITIALIZATION

- Perform initialization using CONSULT. Reregister all Intelligent Keys.
 For initialization and registration of Intelligent Key, refer to CONSULT Immobilizer mode and follow the onscreen instructions.
- Check "Self-diagnostic result" using CONSULT.

Is DTC detected?

YES >> GO TO 2.

NO >> Inspection End

2.REPLACE INTELLIGENT KEY

- 1. Replace Intelligent Key. Reregister all Intelligent Keys.
- 2. Perform initialization using CONSULT. For initialization, refer to CONSULT Immobilizer mode and follow the on-screen instructions.
- 3. Check "Self-diagnostic result" using CONSULT.

Is DTC detected?

YES >> Replace BCM. Refer to BCS-92, "Removal and Installation".

NO >> Inspection End

< DTC/CIRCUIT DIAGNOSIS >

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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

DTC DETECTION LOGIC

NOTE:

- If DTC B2612 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-248, "DTC Logic".
- If DTC B2612 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-249, "DTC Logic".

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 [electronic steering column lock circuit (BCM side) is open or shorted] Harness or connectors [electronic steering column lock circuit (IP-DM E/R side) is open or shorted.] Electronic steering column lock 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.

Is DTC detected?

YES >> Go to SEC-331, "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.

Is DTC detected?

YES >> Go to SEC-331, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

Regarding Wiring Diagram information, refer to <a>SEC-399, "Wiring Diagram".

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?

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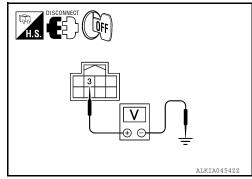
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< DTC/CIRCUIT DIAGNOSIS >

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

2. CHECK BCM OUTPUT SIGNAL

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



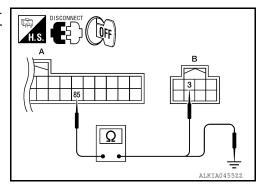
Electronic steel	ring column lock	Ground	Voltage [V]
Connector Terminal		Ground	volage [v]
M32	3	Ground	Battery voltage

Is the inspection result normal?

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

${f 3}.$ check electronic steering column lock circuit-i

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



В	CM	Electronic stee	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	Oround	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

- Connect IPDM E/R harness connector.
- 2. Disconnect BCM harness connector.

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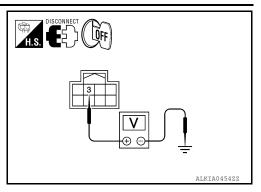
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3. Check voltage between electronic steering column lock harness connector and ground.



Electronic steering column lock		Ground	Voltage [V]	
Connector	Terminal	Ground	voitage [v]	
M32	3	Ground	Battery voltage	

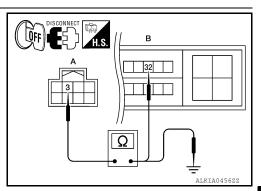
Is the inspection result normal?

YES >> Replace electronic steering column lock.

NO >> GO TO 5.

5. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-II

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



Electronic steering column lock		IPDM E/R		Continuity
Connector	Terminal	Connector Terminal		Continuity
A: M32	3	B: E18	32	Yes

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

Electronic steering column lock		Ground	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.

7. CHECK BCM OUTPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect electronic steering column lock harness connector and IPDM E/R harness connector.

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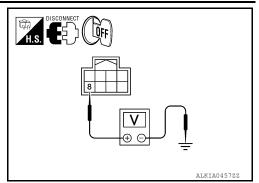
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3. Check voltage between electronic steering column lock harness connector and ground.



Electronic steering column lock		Ground	Voltage [V]	
Connector	Terminal	Oround	voltage [v]	
M32	8	Ground	Battery voltage	

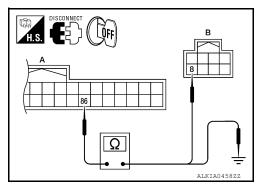
Is the inspection result normal?

YES >> GO TO 9.

NO >> GO TO 8.

8.CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-I

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



BCM		Electronic steering column lock		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	Oround	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.

B2612 STEERING STATUS

< DTC/CIRCUIT DIAGNOSIS >

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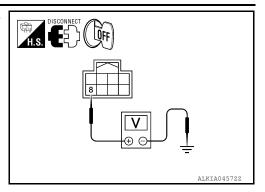
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Check voltage between electronic steering column lock harness connector and ground.



Electronic steering column lock		Ground	Voltage [V]	
Connector	Terminal	Ground	voltage [v]	
M32	8	Ground	Battery voltage	

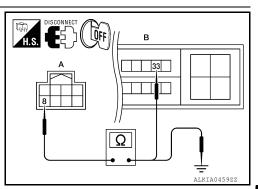
Is the inspection result normal?

YES >> Replace electronic steering column lock.

NO >> GO TO 10.

10. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-II

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



Electronic steering column lock		IPDM E/R		Continuity
Connector	Terminal	Connector Terminal		Continuity
A: M32	8	B: E18	33	Yes

2. Check continuity between electronic steering column lock harness connector and ground.

Electronic steering column lock		Ground	Continuity	
Connector	Terminal	Giodila	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.

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Revision: February 2013 SEC-335 2012 Altima GCC

B2617 STARTER RELAY CIRCUIT

Description INFOID:000000007422666

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

DTC DETECTION LOGIC

NOTE:

- If DTC B2617 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-248, "DTC Logic".
- If DTC B2617 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-249, "DTC Logic".
- If DTC B2617 is displayed with DTC B2611, first perform the trouble diagnosis for DTC B2611. Refer to <u>PCS-62, "DTC Logic"</u>.
- If DTC B2617 is displayed with DTC B210E, first perform the trouble diagnosis for DTC B210E. Refer to SEC-336, "DTC Logic".

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 shorted.) IPDM E/R

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- 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.

Is DTC detected?

YES >> Go to SEC-336, "Diagnosis Procedure".

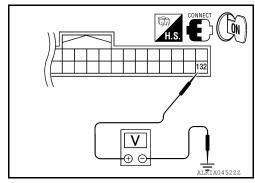
NO >> Inspection End

Diagnosis Procedure

Regarding Wiring Diagram information, refer to SEC-399, "Wiring Diagram".

1. CHECK STARTER RELAY

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



INFOID:0000000007422668

B2617 STARTER RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

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ВСМ		Ground	Transmission type	Condition	Voltage (V)
Connector	Terminal	Giodila	Transmission type	Condition	voltage (v)
		Park		Ignition switch cranking or request to start	Battery voltage
M21	132			raik	Other than above
IVIZ I	M21 132 Ground	Giouna	M/T: Clutch pedal	Ignition switch cranking or request to start	Battery voltage
			depressed	Other than above	0

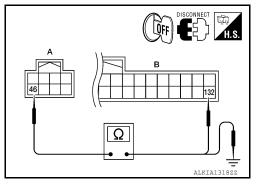
Is the measurement value within the specification.

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK STARTER RELAY CIRCUIT

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



IPDI	M E/R	В	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.

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

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-92, "Removal and Installation".

NO >> Repair harness or connector.

3. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

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B2619 BCM

Description INFOID:000000007422669

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

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2619	BCM detects a mismatch between the power supplied to the electronic steering column lock 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.

Is DTC detected?

YES >> Go to SEC-338, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000007422671

1. INSPECTION START

- 1. Turn ignition switch ON.
- Check "Self diagnostic result" with CONSULT.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure.

See SEC-338, "DTC Logic".

Is the DTC B2619 displayed again?

YES >> Replace BCM. Refer to BCS-92, "Removal and Installation".

NO >> Inspection End

B261A PUSH-BUTTON IGNITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

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B261A PUSH-BUTTON IGNITION SWITCH

Description INFOID:0000000007422672

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:0000000007422673

DTC DETECTION LOGIC

NOTE:

- If DTC B261A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-248, "DTC Logic".
- If DTC B261A is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-249, "DTC Logic".

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 ignition switch Between IPDM E/R and push-button ignition switch

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.
- Check "Self diagnostic result" with CONSULT.

Is DTC detected?

YES >> Go to SEC-339, "Diagnosis Procedure".

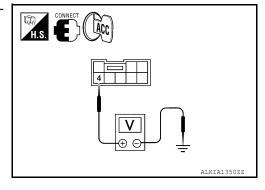
NO >> Inspection End

Diagnosis Procedure

Regarding Wiring Diagram information, refer to SEC-427, "Wiring Diagram".

1. CHECK PUSH-BUTTON IGNITION SWITCH OUTPUT SIGNAL 1

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



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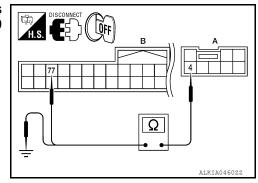
Push-button ignition switch		Ground	Voltage (V)
Connector	Terminal	Ground	voltage (v)
M38	4	Ground	Battery voltage

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	Push-button ignition switch		ВСМ	
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 3.

NO >> Repair harness or connector.

3.check push-button ignition switch circuit for short

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

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

Is the inspection result normal?

YES >> Replace BCM.

NO >> Repair harness or connector.

4. CHECK PUSH-BUTTON IGNITION SWITCH

Refer to SEC-340, "Component Inspection".

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace push-button ignition switch.

Component Inspection

1. CHECK PUSH-BUTTON IGNITION SWITCH

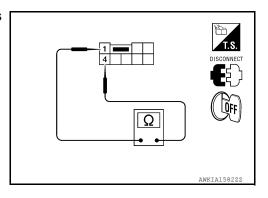
INFOID:0000000007630895

B261A PUSH-BUTTON IGNITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[SEDAN]

- 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		Condition	Continuity
Terminal		Condition	Continuity
1	1	Pressed	Yes
1	4	Not pressed	No

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace push-button ignition switch. Refer to <u>SEC-444, "Removal and Installation"</u>.

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< DTC/CIRCUIT DIAGNOSIS >

[SEDAN]

B261E VEHICLE TYPE

Description INFOID:000000007422675

There are two types of vehicles.

- 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-248, "DTC Logic".
- If DTC B261E is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-249</u>, "DTC Logic".

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

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-342, "Diagnosis Procedure".

NO >> Inspection End

Diagnosis Procedure

INFOID:0000000007422677

1. INSPECTION START

- Turn ignition switch ON.
- 2. Check "Self-diagnostic result" using CONSULT.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure. See SEC-342, "DTC Logic".

Is the 1st trip DTC B261E displayed again?

YES >> Replace BCM. Refer to BCS-92, "Removal and Installation".

NO >> Inspection End

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POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM: Diagnosis Procedure

INFOID:0000000007630907

Regarding Wiring Diagram information, refer to BCS-70, "Wiring Diagram - Coupe" or BCS-79, "Wiring Dia gram - Sedan".

1. CHECK FUSE AND FUSIBLE LINK

Check if the following BCM fuse or fusible link are blown.

Terminal No.	Signal name	Fuse and fusible link No.	
1	Battery power supply	Н	
11	battery power supply	10	

Is the fuse or fusible link blown?

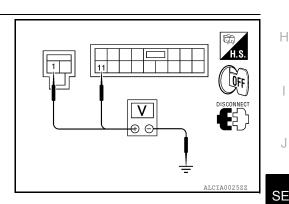
YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

NO >> GO TO 2

$2.\,$ CHECK POWER SUPPLY CIRCUIT

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

	Terminals			
(-	(+) (-)			
ВС	ВСМ		(Approx.)	
Connector	Terminal	One word		
M16	1	Ground	Pottony voltage	
M17	11		Battery voltage	



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Is the measurement normal?

YES >> GO TO 3

NO >> Repair or replace harness.

$oldsymbol{3}$. CHECK GROUND CIRCUIT

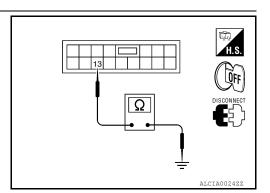
Check continuity between BCM harness connector and ground.

В	ВСМ		Continuity
Connector	Terminal	Ground	Continuity
M17	13		Yes

Does continuity exist?

YES >> Inspection End.

NO >> Repair or replace harness.



INFOID:0000000007630908

BCM: Special Repair Requirement

1. REQUIRED WORK WHEN REPLACING BCM

Initialize control unit. Refer to BCS-3, "ADDITIONAL SERVICE WHEN REPLACING CONTROL Work Procedure".

SEC-343 Revision: February 2013 2012 Altima GCC M

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>> Work End.

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) : Diagnosis Procedure

Regarding Wiring Diagram information, refer to <u>PCS-31, "Wiring Diagram - Coupe"</u> or <u>PCS-37, "Wiring Diagram - Sedan"</u>.

1. CHECK FUSES AND FUSIBLE LINK

Check that the following IPDM E/R fuses or fusible link are not blown.

Terminal No.	Signal name	Fuses and fusible link No.
1, 2		B, D
	Battery power supply	42
<u> </u>		43

Is the fuse blown?

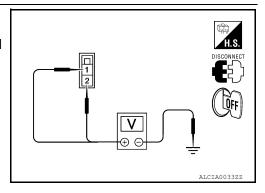
YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

NO >> GO TO 2

2. CHECK POWER SUPPLY CIRCUIT

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

	Terminals			
(+)		(-)	Voltage (V) (Approx.)	
IPDI	IPDM E/R			
Connector	Terminal			
E16	1	Ground	Rattery voltage	
	2		Battery voltage	



Is the measurement value normal?

YES >> GO TO 3

NO >> Repair harness or connector.

3. CHECK GROUND CIRCUIT

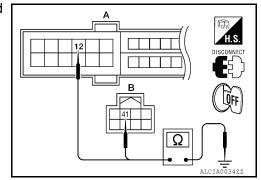
Check continuity between IPDM E/R harness connectors and ground.

IPDM E	E/R		Continuity
Connector	Terminal	Ground	Continuity
A: E18	12	Giodila	Yes
B: E17	41		ies

Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.



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KEY SLOT

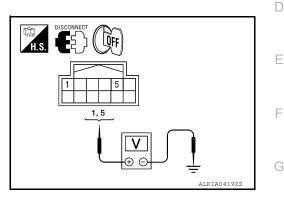
Diagnosis Procedure

INFOID:0000000007422681

Regarding Wiring Diagram information, refer to <a>SEC-427, "Wiring Diagram".

1. CHECK KEY SLOT POWER SUPPLY CIRCUIT

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



Key slot		Ground	Voltage (V)	
Connector	Terminal	Giodila	(Approx.)	
M40	1 Ground		Battery voltage	
IVITO	5	Giodila	Dattery Voltage	

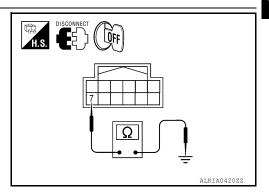
Is the inspection result normal?

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.



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

Is the inspection result normal?

YES >> GO TO 3.

Revision: February 2013

NO >> Repair or replace key slot ground circuit.

3. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

SEC-345 2012 Altima GCC

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>> Inspection End

KEY SLOT ILLUMINATION

< DTC/CIRCUIT DIAGNOSIS >

[SEDAN]

KEY SLOT ILLUMINATION

Description INFOID:000000007422682

Blinks when Intelligent Key insertion is required.

Component Function Check

INFOID:000000007422683

1. CHECK FUNCTION

(P)With CONSULT

Check key slot illumination ("KEY SLOT ILLUMI") Active Test mode.

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Is the inspection result normal?

YES >> Key slot function is OK.

NO >> Refer to <u>SEC-347</u>, "<u>Diagnosis Procedure</u>".

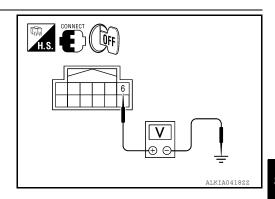
INFOID:0000000007422684

Diagnosis Procedure

Regarding Wiring Diagram information, refer to SEC-413, "Wiring Diagram".

1. CHECK KEY SLOT ILLUMINATION OUTPUT SIGNAL

Check voltage between key slot connector and ground.



	Terminals					
((+)		Condition	Key slot	Voltage (V)	
Key slot connector	Terminal	(-)		illumination	(Approx.)	
M40	6	Ground	Intelligent Key inserted	OFF	Battery voltage	
10140	0	Ground	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.
- Disconnect key slot connector.

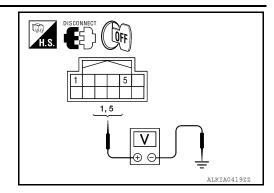
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3. Check voltage between slot connector and ground.



	Terminals			
(+)	()	Voltage (V) (Approx.)	
Key slot connector	Terminal	(–)	(44.5)	
M40	1	Ground	Pattory voltago	
WHO	5	Ground	Battery voltage	

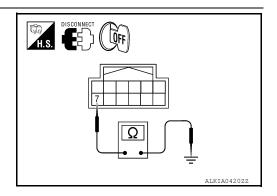
Is the inspection result normal?

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	Key slot connector Terminal		Continuity
M40	7	Ground	Yes

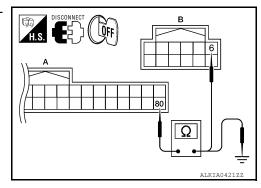
Is the inspection result normal?

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.



KEY SLOT ILLUMINATION

< DTC/CIRCUIT DIAGNOSIS >

[SEDAN]

	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	Termi	nal	Cround	Continuity	
	A: M19	80	1	Ground	No	
the	e inspection result n	ormal?				
YES	S >> GO TO 5.					
NO	>> Repair or re	place harness betwee	en BCM and key slo	ot.		
.Cl	HECK KEY SLOT					

Refer to SEC-347, "Description".

Is the inspection result normal?

YES >> GO TO 6.

>> Replace key slot. Refer to SEC-443, "Removal and Installation". NO

6. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

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KEY CYLINDER SWITCH

Description INFOID:000000007422685

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:0000000007422686

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. Refer to <u>BCS-17</u>, "DOOR LOCK : CONSULT Function (BCM - DOOR LOCK)".

Monitor item	Condition		
KEY CYL LK-SW	Lock	: ON	
RET GTE LR-SW	Neutral / Unlock	: OFF	
KEY CYL UN-SW	Unlock	: ON	
RET OIL ON-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-350</u>. "<u>Diagnosis Procedure (With LH and RH Anti-Pinch)</u>".

NO >> With LH anti-pinch only, refer to SEC-352, "Diagnosis Procedure (With LH Anti-Pinch Only)".

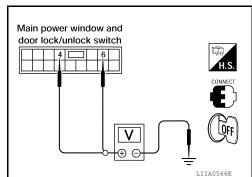
Diagnosis Procedure (With LH and RH Anti-Pinch)

INFOID:0000000007422687

Regarding Wiring Diagram information, refer to SEC-413, "Wiring Diagram".

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.



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Terminals					
(+)				Voltage (V)	
Main power window and door lock/unlock switch connector	Terminal	(–)	Key position	(Approx.)	
	4		Lock	0	
D7	4	Ground	Neutral / Unlock	5	
DI .	6	Giound	Unlock	0	
		ļ	Neutral / Lock	5	

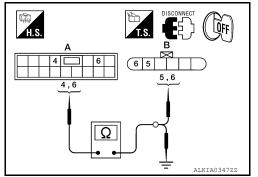
Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-298, "Removal and <a href="Installation". After that, Refer to PWC-197, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

NO >> GO TO 2

2.CHECK DOOR KEY CYLINDER SIGNAL CIRCUIT

- Turn ignition switch OFF.
- 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
A. Di	6	B. 510	5	103

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

Power window main switch connector	Terminal		
A: D7	4	Ground	No
Λ. ΟΙ	6		INO

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3.check door key cylinder switch ground circuit

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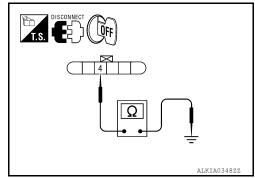
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KEY CYLINDER SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[SEDAN]

Check continuity between front door lock assembly LH connector and ground.



Front door lock assembly LH connector	Terminal	Ground	Continuity
D10	4	Ground	Yes

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-354, "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-461</u>, "FRONT DOOR <u>LOCK</u>: Removal and Installation". After that, Refer to <u>DLK-232</u>, "ADDITIONAL SERVICE WHEN <u>REPLACING CONTROL UNIT</u>: Special Repair Requirement".

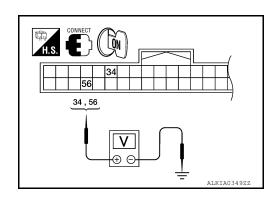
Diagnosis Procedure (With LH Anti-Pinch Only)

INFOID:0000000007422688

Regarding Wiring Diagram information, refer to <a>SEC-413, "Wiring Diagram".

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

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



	Terminals			V II A A	
(+)	(+)		Key position	Voltage (V) (Approx.)	
BCM connector	Terminal	(-)		,	
	56		Lock	0	
M1Ω	M18 34	30	Ground	Neutral / Unlock	5
IVITO		Glound	Unlock	0	
	34		Neutral / Lock	5	

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to <u>DLK-461</u>, "FRONT DOOR LOCK: Removal and Installation". After that, Refer to DLK-232, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

NO >> GO TO 2

2.check door key cylinder switch ground circuit

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

Front door lock assembly LH connector	Terminal	Ground	Continuity
D10	4	Ground	Yes

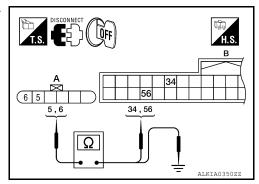
Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3.CHECK DOOR KEY CYLINDER SIGNAL CIRCUIT

- Disconnect BCM connector M18.
- 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. D10	6	B. W10	56	res

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	
	6		NO	

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

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4.CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch.

Refer to SEC-354, "Component Inspection".

Is the inspection result normal?

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

>> Replace front door lock assembly LH (key cylinder switch). Refer to DLK-461, "FRONT DOOR LOCK: Removal and Installation". After that, Refer to DLK-232, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Component Inspection

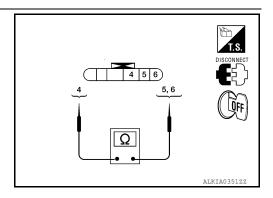
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INFOID:0000000007422689

COMPONENT INSPECTION

1. CHECK DOOR KEY CYLINDER SWITCH

Check front door lock assembly LH (key cylinder switch).



Terminal Front door lock assembly LH (key cylinder switch) connector			
		Key position	Continuity
5		Unlock	Yes
5	4	Neutral / Lock	No
e		Lock	Yes
6		Neutral / Unlock	No

Is the inspection result normal?

YES >> Key cylinder switch is OK.

NO >> Replace front door lock assembly LH (key cylinder switch). Refer to <u>DLK-461, "FRONT DOOR LOCK: Removal and Installation"</u>. After that, refer to <u>SEC-354, "Special Repair Requirement"</u>.

Special Repair Requirement

INFOID:0000000007422690

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>DLK-232</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

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

[SEDAN]

INFOID:0000000007422692

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HORN

Description INFOID:000000007422691

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.
- 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-355</u>, "Diagnosis Procedure".

Diagnosis Procedure

Regarding Wiring Diagram information, refer to SEC-413, "Wiring Diagram".

1. CHECK HORN FUNCTION

Check horn function with horn switch

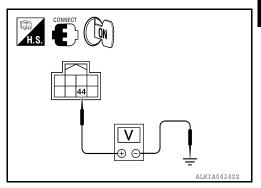
Do the horns sound?

YES >> GO TO 2.

NO >> Refer to <u>HRN-4, "Wiring Diagram"</u>.

2.CHECK HORN RELAY POWER SUPPLY

- Turn ignition switch ON.
- 2. Perform "ACTIVE TEST" ("HORN") with CONSULT.
- 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		Voltage (V)
Connector	Terminal	Ground		(Approx.)	
E17	44	Ground	HORN	ON	Battery voltage →0 → Battery voltage
L17	74	Ground	HOIN	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.

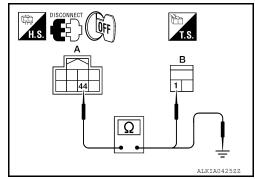
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- 2. Disconnect IPDM E/R and horn relay connector.
- 3. Check continuity between IPDM E/R harness connector and horn relay harness connector.



IPDM E/R		Horn relay		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.

IPD	M E/R	Ground	Continuity	
Connector	Terminal	Giouna		
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-45. "Removal and Installation".

NO >> Repair or replace the malfunctioning part.

HEADLAMP		
< DTC/CIRCUIT DIAGNOSIS >	[SEDAN]	
HEADLAMP		Α
Description	INFOID:000000007422694	
Headlamp lighting when theft warning system is alarm phase.		В
Component Function Check	INFOID:000000007422695	
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. NO >> Check headlamp system. Refer to SEC-357, "Diagnosis Procedure".		D
Diagnosis Procedure	INFOID:000000007422696	Е
1. CHECK HEADLAMP OPERATION		
Refer to EXL-4, "Work Flow". Is the inspection result normal? YES >> GO TO 2.		F
NO >> Repair or replace.		G
2.CHECK INTERMITTENT INCIDENT		
Refer to GI-42, "Intermittent Incident". Is the inspection result normal? >> Inspection End.		Н
>> Inspection End.		
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WARNING LAMP

< DTC/CIRCUIT DIAGNOSIS >

[SEDAN]

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

INFOID:0000000007422698

1. CHECK FUNCTION

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

Test	item	Descr	ription
INDICATOR	ON	- Warning lamp	ON
	OFF		OFF

Is the inspection result normal?

YES >> Inspection End.

NO >> Go to SEC-358, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000007422699

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.

VEHICLE SECURITY INDICATOR

< DTC/CIRCUIT DIAGNOSIS >

[SEDAN]

VEHICLE SECURITY INDICATOR

Description

INFOID:0000000007422700

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INFOID:0000000007422702

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- 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.
- 2. Check vehicle security indicator operation.

Test it	em	Descript	ion
THEFT IND	ON	Vehicle security indicator	ON
	OFF		OFF

Is the inspection result normal?

YES >> Inspection End.

NO >> Go to SEC-359, "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.

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ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
FR WIPER HI	Other than front wiper switch HI	OFF
	Front wiper switch HI	ON
FR WIPER LOW	Other than front wiper switch LO	OFF
	Front wiper switch LO	ON
FR WASHER SW	Front washer switch OFF	OFF
	Front washer switch ON	ON
FR WIPER INT	Other than front wiper switch INT	OFF
	Front wiper switch INT	ON
FR WIPER STOP	Front wiper is not in STOP position	OFF
	Front wiper is in STOP position	ON
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 6	Wiper intermittent dial position
TUDNI CIONAL D	Other than turn signal switch RH	OFF
TURN SIGNAL R	Turn signal switch RH	ON
TURN SIGNAL L	Other than turn signal switch LH	OFF
TURN SIGNAL L	Turn signal switch LH	ON
TAIL LAMD CVV	Other than lighting switch 1ST and 2ND	OFF
TAIL LAMP SW	Lighting switch 1ST or 2ND	ON
HI BEAM SW	Other than lighting switch HI	OFF
HI BEAIN SW	Lighting switch HI	ON
HEAD LAMP SW 1	Other than lighting switch 2ND	OFF
HEAD LAIVIP SVV I	Lighting switch 2ND	ON
HEAD LAMP SW 2	Other than lighting switch 2ND	OFF
	Lighting switch 2ND	ON
PASSING SW	Other than lighting switch PASS	OFF
	Lighting switch PASS	ON
ALITO LICLIT CW	Other than lighting switch AUTO	OFF
AUTO LIGHT SW	Lighting switch AUTO	ON
FR FOG SW	Front fog lamp switch OFF	OFF
FR FOG SW	Front fog lamp switch ON	ON
DOOD SW DD	Driver door closed	OFF
DOOR SW-DR	Driver door opened	ON
DOOR SW-AS	Passenger door closed	OFF
	Passenger door opened	ON
DOOR SW-RR	Rear RH door closed	OFF
	Rear RH door opened	ON
DOOR SW-RL	Rear LH door closed	OFF
	Rear LH door opened	ON

< ECU DIAGNOSIS INFORMATION >

[SEDAN]

Monitor Item	Condition	Value/Status
SDL LOCK SW	Other than power door lock switch LOCK	OFF
ODE LOCK SW	Power door lock switch LOCK	ON
CDL LINI OCK CW	Other than power door lock switch UNLOCK	OFF
ODE UNLOCK SW	Power door lock switch UNLOCK	ON
KEN ON TR OM	Other than driver door key cylinder LOCK position	OFF
KET CTL LK-SW	Driver door key cylinder LOCK position	ON
KEN ON THE OW	Other than driver door key cylinder UNLOCK position	OFF
KEY CYL UN-SW	Driver door key cylinder UNLOCK position	ON
114.74.DD CW/	When hazard switch is not pressed	OFF
HAZARD SW	When hazard switch is pressed	ON
REAR DEF SW	When rear window defogger switch is pressed	ON
FAN ON SIG	When AUTO switch or fan switch is pressed	ON
AIR COND SW	When A/C switch is pressed	ON
TD CANOTI O'A'	Trunk lid opener cancel switch OFF	OFF
TR CANCEL SW	Trunk lid opener cancel switch ON	ON
TD/DD ODEN OW	Trunk lid opener switch OFF	OFF
IK/BU OPEN SW	While the trunk lid opener switch is turned ON	ON
CDL LOCK SW PC CDL UNLOCK SW PC CD	Trunk lid closed	OFF
IKNK/HAI MNIK	Trunk lid opened	ON
REPORT OF THE PROPERTY OF THE	When LOCK button of Intelligent Key is not pressed	OFF
	When LOCK button of Intelligent Key is pressed	ON
Trunk lid	When UNLOCK button of Intelligent Key is not pressed	OFF
RKE-UNLOCK	When UNLOCK button of Intelligent Key is pressed	ON
	When TRUNK OPEN button of Intelligent Key is not pressed	OFF
KKE-1K/BD	When TRUNK OPEN button of Intelligent Key is pressed	ON
DICE DANIO	When PANIC button of Intelligent Key is not pressed	OFF
RKE-PANIC	When PANIC button of Intelligent Key is pressed	ON
2/5 24/ 225/	When UNLOCK button of Intelligent Key is not pressed and held	OFF
RKE-P/W OPEN	When UNLOCK button of Intelligent Key is pressed and held	ON
DVE MODE CHO	When LOCK/UNLOCK button of Intelligent Key is not pressed and held simultaneously	OFF
RRE-MODE ONG	When LOCK/UNLOCK button of Intelligent Key is pressed and held simultaneously	ON
OPTICAL SENSOR	When outside of the vehicle is bright	Close to 5 V
Driver doo Other than Driver doo Other than Driver doo Other than Driver doo Other than Driver doo When haze When haze When haze When rear When AUT R COND SW When A/C R CANCEL SW Trunk lid o Trunk lid o Trunk lid o When LOC When LOC When UNL When UNL When TRU When TRU When PAN KE-PANIC When UNL KE-PANIC When UNL KE-PANIC When UNL KE-PANIC When UNL When DO When UNL When Outs When outs When driver EQ SW-BD/TR When trun USH SW USH SW When eng	When outside of the vehicle is dark	Close to 0 V
REU SWYDD	When driver door request switch is not pressed	OFF
IVER OAA-DIV	When driver door request switch is pressed	ON
REO SW AS	When passenger door request switch is not pressed	OFF
NEW SW-HS	When passenger door request switch is pressed	ON
DEO SW DD/TD	When trunk request switch is not pressed	OFF
ZEM OM-RDI I K	When trunk request switch is pressed	ON
DUOLI OM	When engine switch (push switch) is not pressed	OFF
PUSH SW	When engine switch (push switch) is pressed	ON
ION DIV 5'D	Ignition switch OFF or ACC	OFF
IGN RLY -F/B	Ignition switch ON	ON

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< ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
ACC RLY -F/B	Ignition switch OFF	OFF
ACCINET -17B	Ignition switch ACC or ON	ON
CLUTCH SW	When the clutch pedal is not depressed	OFF
OLOTOTTOW	When the clutch pedal is depressed	ON
RDAKE SW 1	When the brake pedal is not depressed	ON
DIVARE OW I	When the brake pedal is depressed	OFF
DETE/CANCL SW	When selector lever is in P position	OFF
DETE/CANCE OW	When selector lever is in any position other than P	ON
SET DN/N SW	When selector lever is in any position other than P or N	OFF
OF TENANTOW	When selector lever is in P or N position	ON
SILLOCK	Electronic steering column lock LOCK status	OFF
3/L -LOOK	Electronic steering column lock UNLOCK status	ON
S/I LINILOCK	Electronic steering column lock UNLOCK status	OFF
3/L -UNLOUR	Electronic steering column lock LOCK status	ON
S/I DELAVE/B	Ignition switch OFF or ACC	OFF
S/L INCLAT-1/B	Ignition switch ON	ON
IINI K SEN DD	Driver door UNLOCK status	OFF
ONLK SLIV-DIX	Driver door LOCK status	ON
ETE/CANCL SW ET PN/N SW L -LOCK L -UNLOCK L -UNLOCK L RELAY-F/B NLK SEN-DR JSH SW -IPDM TO PN -IPDM TO PN -IPDM TO PN -IPDM TO PN -IPDM TO N-MET NGINE STATE L LOCK-IPDM L UNLCK-IPDM	When engine switch (push switch) is not pressed	OFF
FOSITOW -IFDIVI	When engine switch (push switch) is pressed	ON
ICN DI V1 E/R	Ignition switch OFF or ACC	OFF
IGN KLT I F/B	Ignition switch ON	ON
DETE SW. IDDM	When selector lever is in P position	OFF
DETE SW -IF DIVI	When selector lever is in any position other than P	ON
SET DN. IDDM	When selector lever is in any position other than P or N	OFF
SEL EN -IEDINI	When selector lever is in P or N position	ON
SET D MET	When selector lever is in any position other than P	OFF
SFI F-WEI	When selector lever is in P position	ON
SET N MET	When selector lever is in any position other than N	OFF
ETE/CANCL SW FT PN/N SW /L -LOCK /L -UNLOCK /L RELAY-F/B NLK SEN-DR USH SW -IPDM GN RLY1 F/B ETE SW -IPDM FT PN -IPDM FT P -MET FT N -MET NGINE STATE /L LOCK-IPDM /L UNLCK-IPDM /L UNLCK-IPDM /L RELAY-REQ EH SPEED 1	When selector lever is in N position	ON
	Engine stopped	STOP
ENICINE STATE	While the engine stalls	STALL
ENGINE STATE	At engine cranking	CRANK
	Engine running	RUN
C/L L OCK IDDM	Electronic steering column lock LOCK status	OFF
S/L LOCK-IPDIVI	Electronic steering column lock UNLOCK status	ON
S/L LINILOV IDDM	Electronic steering column lock UNLOCK status	OFF
S/L UNLOK-IPDIVI	Electronic steering column lock LOCK status	ON
S/L DELAY DEO	Ignition switch OFF or ACC	OFF
OIL KELAY-KEQ	Ignition switch ON	ON
VEH SPEED 1	While driving	Equivalent to speedometer reading
VEH SPEED 2	While driving	Equivalent to speedometer reading

< ECU DIAGNOSIS INFORMATION >

[SEDAN]

Monitor Item	Condition	Value/Status
	Driver door LOCK status	LOCK
DR DOOR STATE	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door UNLOCK status	UNLK
	Passenger door LOCK status	LOCK
AS DOOR STATE	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door UNLOCK status	UNLK
ID OK ELAC	Ignition switch ACC or ON	RESET
ID OK FLAG	Ignition switch OFF	SET
DDMT ENG STAT	When the engine start is prohibited	RESET
PRMT ENG STAT	When the engine start is permitted	SET
KEN OM CLOT	When Intelligent Key is not inserted into key slot	OFF
KEY SW -SLOT	When Intelligent Key is inserted into key slot	ON
RKE OPE COUN1	During the operation of Intelligent Key	Operation frequency of Intelligent Key
AIR PRESS FL	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of rear LH tire
ID DECCT EL 4	When ID of front LH tire transmitter is registered	DONE
ID KEGOT FLT	When ID of front LH tire transmitter is not registered	YET
AIR PRESS RR	When ID of front RH tire transmitter is registered	DONE
וט אבטטו דאיז	When ID of front RH tire transmitter is not registered	YET
ID DECCE DD4	When ID of rear RH tire transmitter is registered	DONE
ID REGST RR1	When ID of rear RH tire transmitter is not registered	YET
ID DECCT DL1	When ID of rear LH tire transmitter is registered	DONE
ID REGST RL1	When ID of rear LH tire transmitter is not registered	YET
MAYA DAHING LAMB	Tire pressure indicator OFF	OFF
WARNING LAMP	Tire pressure indicator ON	ON

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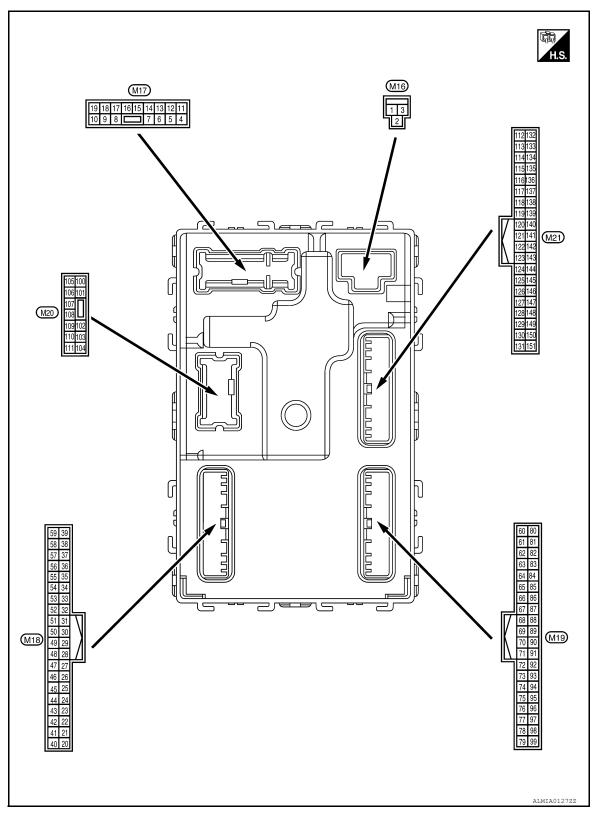
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[SEDAN]

Terminal Layout

INFOID:0000000007630871



Physical Values

< ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value						
(+)	e color)	Signal name	Input/ Output	Condition		(Approx.)						
1 (W/B)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage						
2 (R/Y)	Ground	Battery power supply output	Output	Ignition switch OF	F	Battery voltage						
3 (L/W)	Ground	Ignition power supply output	Output	Ignition switch ON	1	Battery voltage						
4	Craund	Interior room lamp	Output	After passing the in er operation time	nterior room lamp battery sav-	0V						
(P/W)	Ground	power supply	Output	Any other time after lamp battery save	er passing the interior room roperation time	Battery voltage						
5	0	Front door RH UN-	0	Freet deep DU	UNLOCK (actuator is activated)	Battery voltage						
(G/Y)	Ground	Output	Front door RH	Other than UNLOCK (actuator is not activated)	0V							
7	0	01	0 1: 1	Ota a la casa	ON	OV						
(R/W)	Ground	Step lamp	Output	Step lamp	OFF	Battery voltage						
8	8 Cround All doors I CCI	nd All doors LOCK	All doors LOCK	All doors LOCK	All deers LOCK	All doors I OCK	round All doors LOCK	All doors I OCK	Output	All de co	LOCK (actuator is activated)	Battery voltage
(V) Ground	All GOOIS LOOK				Output	All doors	Other than LOCK (actuator is not activated)	0V				
9	9 1	Front door LH UN-	Front door LH UN-	Front door LH UN-	Front door LH UN-	Front door LH UN-	nd I	d	0		UNLOCK (actuator is activated)	Battery voltage
(G)	Ground	LOCK	Output	Output	Front door LH	Other than UNLOCK (actuator is not activated)	0V					
10 ¹	Craund	Rear door RH and	Output	Rear door RH	UNLOCK (actuator is activated)	Battery voltage						
(G/Y)	Ground	rear door LH UN- LOCK	Output	and rear door LH	Other than UNLOCK (actuator is not activated)	0V						
11 (Y/R)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage						
13 (B)	Ground	Ground		Ignition switch ON	1	0V						
					OFF	0V						
14 ¹ (O/W)	Ground	Engine switch (push switch) illumination ground	Input	Tail lamp	ON	NOTE: When the illumination brightening/dimming level is in the neutral position (V) 10 0 2 ms						

	inal No. e color)	Description			Condition	Value
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)
14 ⁸ (R/Y)	Ground	Engine switch (push switch) illumination ground	Input	Tail lamp	OFF	NOTE: When the illumination brightening/dimming level is in the neutral position (V) 10 0 2 ms
15		400: 1: 4	0.1.1		OFF	JSNIA0010GB Battery voltage
(Y/L)	Ground	ACC indicator lamp	Output	Ignition switch	ACC	0V
					Turn signal switch OFF	0V
17 (G/B)	Ground	Turn signal (RH)	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 1 s PKID0926E 6.5 V
					Turn signal switch OFF	0V
18 (G/Y)	Ground	Turn signal (LH)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s PKID0926E 6.5 V
		D 1 "			OFF	Battery voltage
19 (Y)	Ground	Room lamp timer control	Output	Interior room lamp	ON	0V
21	Ground	Optical sensor signal	Input	Ignition switch	When outside of the vehi- cle is bright	Close to 5V
(P/B)				ON	When outside of the vehi- cle is dark	Close to 0V
22 ²	Ground	Clutch interlock	Input	Clutch interlock	OFF (clutch pedal is not depressed)	0V
(R/Y)	Ground	switch	Input	switch	ON (clutch pedal is depressed)	Battery voltage
24 (R/W)	Ground	Stop lamp switch 1	Input		-	Battery voltage
26	Ground	Stop lamp switch 2	Input	Stop lamp switch	OFF (brake pedal is not depressed)	0V
(O/L)		, , ,	1, 3,	, , , , , , , , , , , , , , , , , , , ,	ON (brake pedal is depressed)	Battery voltage

< ECU DIAGNOSIS INFORMATION >

Terminal No. Description (Wire color)					Value	
(Wire (+)	e color)	Signal name	Input/ Output		Condition	(Approx.)
27 (G/W)	Ground	Front door lock assembly LH (unlock sensor)	Input	Front door LH	LOCK status	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8V
					UNLOCK status	0V
29				When Intelligent K	Ley is inserted into key slot	Battery voltage
(Y)	Ground	Key slot switch	Input	When Intelligent K	ey is not inserted into key slot	0V
30	C=====================================	ACC foodbast size -	lmm:-4	lanition assistati	OFF	0
(V/Y)	Ground	ACC feedback signal	Input	Ignition switch	ACC or ON	Battery voltage
31	Ground	Rear window defog-	Innut	Rear window de-	OFF	0V
(G)	Giound	ger feedback signal	Input	fogger switch	ON	Battery voltage
32 (R/B)	Ground	Front door RH switch	Input	Front door RH switch	OFF (when front door RH closes)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V
					ON (when front door RH opens)	ov
33	Ground	Compressor ON sig-	Input	A/C switch	OFF	9V - 12V
(SB)		nal			ON	0V
34 ³	Ground	Front door lock as- sembly LH (key cylin-	Input	Front door lock assembly LH (key	OFF (neutral)	Battery voltage
(L/R)	2.00110	der switch) (unlock)		cylinder switch)	ON (unlock)	0V
36 ³	Ground	Lock switch signal	Input	Door lock/unlock	Lock	Battery voltage
(GR)	Ciound	LOCK SWITCH SIGNAL	mput	switch	Unlock	0V
37 (O)	Ground	Trunk lid opener can- cel switch	Input	Trunk lid opener cancel switch	CANCEL	(V) 15 10 5 10 ms JPMIA0012GB 1.1V
					ON	0V
38		Rear window defog-		Rear window de-	OFF	Battery voltage
(GR/ W)	Ground	ger ON signal	Input	fogger switch	ON	0V
39 ³				Door lock/unlock	Unlock	Battery voltage
(GR/	Ground	Unlock switch signal	Input	switch	Lock	0V

	Terminal No. Description				Val.		
(Wire	e color) (-)	Signal name	Input/ Output		Condition	Value (Approx.)	
40 ⁴ (Y/G)	Ground	Power window serial link	Input/ Output	Ignition switch ON		(V) 15 10 5 0 10 ms JPMIA0013GB	
				Ignition switch OFF	F or ACC	0V	
41 (W)	Ground	Engine switch (push switch) illumination	Output	Engine switch (push switch) illu- mination	OFF	5.5V 0V	
42				LOCK indicator	ON	0V	
(R)	Ground	LOCK indicator lamp	Output	lamp	OFF	Battery voltage	
45 (P)	Ground	Receiver & sensor ground	Input	Ignition switch ON		0V	
46	Ground	Receiver & sensor	Output	Ignition switch	OFF	0V	
(V/W)	0.000	power supply output	Catpat		ACC or ON	5.0V	
47	Ground		Tire pressure receiv- Input/ Ignition switch	e pressure receiv- Input/	Ignition switch	Standby state	(V) 6 4 2 0 ••• 0.2s
(G/O)		er signal	Output	ON	When receiving the signal from the transmitter	(V) 6 4 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
48	Ground	Selector lever P/N	Input	Selector lever	P or N position	12.0V	
(R/G)		position signal			Except P and N positions	0V	
					ON	0V	
49 (L/O)	Ground	Security indicator sig- nal Output	Security indicator	Blinking	(V) 15 10 1		
					OFF	11.3V Battery voltage	
					011	Dallery vollage	

< ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value
(Wire	(-)	Signal name	Input/ Output		Condition	(Approx.)
50 (LG/ B)	Ground	Combination switch OUTPUT 5	Input	Combination switch (Wiper intermit- tent dial 4)	All switch OFF Lighting switch 1ST Lighting switch high-beam Lighting switch 2ND Turn signal switch RH	0V (V) 15 10 2 ms JPMIA0031GB
51 (L/W)	Ground	Combination switch OUTPUT 1	Input	Combination switch	All switch OFF (Wiper intermittent dial 4) Front wiper switch HI (Wiper intermittent dial 4) Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3 • Wiper intermittent dial 6 • Wiper intermittent dial 7	10.7V 0V (V) 15 10 2 ms JPMIA0032GB
52 (G/B)	Ground	Combination switch OUTPUT 2	Input	Combination switch	All switch OFF (Wiper intermittent dial 4) Front washer switch ON (Wiper intermittent dial 4) Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	0V (V) 15 10 2 ms JPMIA0033GB 10.7V
53 (LG/ R)	Ground	Combination switch OUTPUT 3	Input	Combination switch (Wiper intermit- tent dial 4)	All switch OFF Front wiper switch INT Front wiper switch LO Lighting switch AUTO	0V (V) 15 10 5 0 2 ms JPMIA0034GB 10.7V
54 (G/Y)	Ground	Combination switch OUTPUT 4	Input	Combination switch (Wiper intermit- tent dial 4)	All switch OFF Front fog lamp switch ON Lighting switch 2ND Lighting switch flash-to- pass Turn signal switch LH	0V (V) 15 10 5 0 2 ms JPMIA0035GB 10.7V
55 (BR/ W)	Ground	Front blower monitor	Input	Front blower mo- tor switch	ON OFF	Battery voltage 0V

< ECU DIAGNOSIS INFORMATION >

Ground Ground Ground	der switch) (lock) Tire pressure warning check switch Front door LH switch	Input/ Output Input Input	Front door lock assembly LH (key cylinder switch) Front door LH switch	OFF (neutral) ON (lock) OFF (front door LH CLOSE)	(Approx.) Battery voltage 0V Battery voltage (V) 15 10 5 0 JPMIA0011GB 11.8V
Ground	sembly LH (key cylinder switch) (lock) Tire pressure warning check switch Front door LH switch	Input	assembly LH (key cylinder switch) Front door LH	ON (lock) — OFF (front door LH CLOSE)	OV Battery voltage (V) 15 10 5 0 JPMIA0011GB
Ground	der switch) (lock) Tire pressure warning check switch Front door LH switch Rear window defog-	Input	cylinder switch) Front door LH	OFF (front door LH CLOSE)	Battery voltage (V) 15 10 5 0 JPMIA0011GB
Ground	ing check switch Front door LH switch Rear window defog-	Input		CLOSE)	(V) 15 10 5 0 10 ms JPMIA0011GB
	Rear window defog-			CLOSE)	15 10 5 0 10 ms JPMIA0011GB
Ground		0.1.		ON (for all 1 1/1 CEE)	0)/
Ground		0 1 1		ON (front door LH OPEN)	ΟV
Ground		()! !t^! !*	Rear window de-	Active	Battery voltage
		Output	fogger	Not activated	0V
Ground	Front console antenna 2 (-)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment When Intelligent Key is not	(V) 15 10 5 0 1 s JMKIA0062GB
				in the passenger compartment When Intelligent Key is in	(V) 15 10 15 10
Ground	Center console antenna 2 (+)		Ignition switch OFF	when Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1
		na 2 (-) Center console an-	Ground na 2 (-) Output Center console an-	Ground Center console an-	Ground Front console antenna 2 (-) Ground Center console antenna 2 (+) Center console antenna 2 (+) Cutput Ignition switch OFF When Intelligent Key is not in the passenger compartment When Intelligent Key is in the passenger compartment Unique Ignition switch OFF When Intelligent Key is in the passenger compartment When Intelligent Key is not in the passenger compartment

< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description				Value	
(Wire (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)	
62	0	Front outside handle	0.4.4	When the front door RH request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	
(B/Y) Ground	RH antenna (-)	Output	switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB		
63 (LG) Ground	Front outside handle	Front outside bondle	When the front door RH request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s		
	Ground	RH antenna (+)	RH antenna (+) Output		switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB
64 (V) Groun	Ground	Front outside handle	Output	When the front door LH request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB	
	Signit	LH antenna (-)		switch is operat- ed with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	

< ECU DIAGNOSIS INFORMATION >

	Terminal No. Description (Wire color)					Value
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)
65		Front outside handle LH antenna (+)	lle Output	When the front door LH request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 S MKIA0062GB
(P)				switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB
68 (G/O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
69 (O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
70 (R/B)	Ground	Ignition relay-2 control	Output	Ignition switch	OFF or ACC	0V Battery voltage
71	Ground	Remote keyless entry	Input/	During waiting		(V) 15 10 5 0 1 ms JMKIA0064GB
71 (L/O)	Ground	receiver signal	Input/ Output	When operating e	ither button on Intelligent Key	(V) 15 10 5 0 1 ms JMKIA0065GB

< ECU DIAGNOSIS INFORMATION >

[SEDAN]

	inal No.	Description				Value	
(Wir	e color)	Signal name	Input/ Output		Condition	(Approx.)	1
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 JPMIA0041GB 1.4V)
75 (R/Y)	Ground	Combination switch INPUT 5	Output	Combination switch	Front fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB	F
						1.50	(
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	(V) 15 10 5 0 2 ms JPMIA0040GB	ŀ

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	inal No.	Description				Value
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB
76 (R/G)	76 (R/G) Ground Combination switch INPUT 3 Output Switch	Combination switch	Lighting switch high-beam (Wiper intermittent dial 4)	(V) 15 10 2 ms Jemia0036GB		
` ,			Lighting switch 2ND (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB		
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	(V) 15 10 5 0 2 ms JPMIA0040GB 1.3V
77 (BR)	Ground	Engine switch (push switch)	Input	Engine switch (push switch)	Pressed Not pressed	0V Battery voltage
78 (P)	Ground	CAN-L	Input/ Output		<u> </u>	_
79 (L)	Ground	CAN-H	Input/ Output		_	_
					OFF	0V
80 (R/L)	Ground	d Key slot illumination Output	Key slot illumina- tion	Blinking	(V) 15 10 5 0 1 s JPMIA0015GB	
					ON	6.5V Battery voltage
					OIN	Ballery Vollage

< ECU DIAGNOSIS INFORMATION >

[SEDAN]

	inal No.	Description				Value	
(+)	e color)	Signal name	Input/ Output	Condition		(Approx.)	
81	Ground	ON indicator lamp	Output	Ignition switch	OFF or ACC	Battery voltage	
(LG)	Ground	ON indicator famp	Output	ignition switch	ON	0V	
83	Ground	ACC relay-1 control	Output		OFF	0V	
(L)	Cround	7.00 Tolay Toolilloi	Output	igrittori owitori	ACC or ON	Battery voltage	
84 ⁵ (Y/R)	Ground	CVT shift selector	Output		_	Battery voltage	
85	Craund	Electronic steering	lanut	Electronic steer-	Lock status	0V	
(L/O)	Ground	column lock condition No. 1	Input	ing column lock	Unlock status	Battery voltage	
86	0-1	Electronic steering	lant 1	Electronic steer-	Lock status	Battery voltage	
(G/R)	Ground	column lock condition No. 2	Input	ing column lock	Unlock status	0V	
87 ⁵	One	Selector lever P posi-	المستنبط	Coloaton	P position	0V	
(G/B)	Ground	tion switch	Input	Selector lever	Any position other than P	Battery voltage	
					ON (pressed)	0V	
88 (P/L)	Ground	Front door RH request switch	Input	Front door RH request switch	Innut	OFF (not pressed)	(V) 15 10 10 ms 10 ms JPMIA0016GB
					ON (pressed)	0V	
89 (B/W)	Ground	Front door LH request switch	Input	Front door LH request switch	OFF (not pressed)	(V) 15 10 5 0 JPMIA0016GB 1.0V	
90	Ground	Blower fan motor re-	Output	Ignition switch	OFF or ACC	0V	
(Y)		lay control			ON	Battery voltage	
91 (L/R)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OF	F	Battery voltage	
94		Electronic steering			OFF or ACC	Battery voltage	
(C/X) Ground column lock power	column lock power supply	Output	Ignition switch	ON	0V		

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< ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value	
(Wire (+)	e color)	Signal name	Input/ Output		Condition	Value (Approx.)	
					All switch OFF	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4V	
			Turn signal switch LH	(V) 15 10 5 0 2 ms JPMIA0037GB			
95 (R/W)	Ground	Combination switch INPUT 1	Output	Combination switch (Wiper intermit- tent dial 4)	tput switch (Wiper intermit-	Turn signal switch RH	(V) 15 10 5 0 2 ms JPMIA0036GB
					Front wiper switch LO	(V) 15 10 5 0 2 ms JPMIA0038GB	
					Front washer switch ON	(V) 15 10 5 0 2 ms JPMIA0039GB 1.3V	

< ECU DIAGNOSIS INFORMATION >

[SEDAN]

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	inal No.	Description				Value
(+)	e color)	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4V
96	Ground	Combination switch	Output	t Combination	Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0038GB
(P/B)		INPUT 4		switch	Lighting switch 1ST (Wiper intermittent dial 4)	(V) 15 10 5 2 ms JPMIA0036GB 1.3V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	(V) 15 10 5 0 2 ms JPMIA0039GB 1.3V

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	inal No.	Description				Value
(Wire	e color)	Signal name	Input/ Output			(Approx.)
					All switch OFF	(V) 15 10 5 0 JPMIA0041GB 1.4V
					Lighting switch flash-to- pass	(V) 15 10 5 0 2 ms JPMIA0037GB
97 (R/B)	Ground	Combination switch INPUT 2	Output	Combination switch (Wiper intermit- tent dial 4)	Lighting switch 2ND	(V) 15 10 5 2 ms JPMIA0036GB 1.3V
					Front wiper switch INT	(V) 15 10 5 0 2 ms JPMIA0038GB 1.3V
					Front wiper switch HI	(V) 15 10 5 0 2 ms JPMIA0040GB
					Pressed	0 V
98 (G/O)	Ground	Hazard switch	Input	Hazard switch	Not pressed	(V) 15 10 10 10 ms JPMIA0012GB 1.1V

< ECU DIAGNOSIS INFORMATION >

[SEDAN]

	inal No. e color)	Description			Can dition	Value	А
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)	
					LOCK status	Battery voltage	Е
99 (L/Y)	Ground	Electronic steering column lock unit communication	Input/ Output		LOCK or UNLOCK	(V) 15 10 50 50 ms JMKIA0066GB	C
					For 15 seconds after UN- LOCK	Battery voltage	Е
					15 seconds or later after UNLOCK	0V	_
103	Ground	Trunk lid opening		Output Trunk lid	Open (trunk lid opener actuator is activated)	Battery voltage	F
(V)	Giodila	Trunk iid opening	Output		Close (trunk lid opener actuator is not activated)	0V	G
110	Ground	Trunk room lamp	Output	Township and a second a second	ON	0V	
(V/W)	Ground	Trunk room lamp	Output	Trunk room lamp	OFF	Battery voltage	H
114		Trunk room antenna			When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB	J
(B)	Ground	1 (-)	Output	Ignition switch OFF		(V)[SE
					When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0	L
						JMKIA0063GB	N

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	ninal No. e color)	Description	Input/		Condition	Value
(+)	(-)	Signal name	Output		Condition	(Approx.)
115	Ground	Trunk room antenna	Output	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 11 1 s JMKIA0062GB
(W)	Sidding	1 (+)	Guipui	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB
118	Ground	Rear bumper anten-	Output	When the trunk	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB
(L/O)	(L/O) Ground Rear bumper anten- na (-)	Cutput	is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB	
119 (BR/	Rear bumper anten- na (+) Output Iid request sw is operated wi	When the trunk lid request switch	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB		
(BR/ W)			Capat	is operated with ignition switch	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB

< ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value					
(Wire	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)					
127 (BR/ W)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	Battery voltage 0V					
130 (Y/G)	Ground	Trunk room lamp switch	Input	Trunk room lamp switch	OFF (trunk is closed)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8V					
					ON (trunk is open)	OV					
				Ignition switch	When the clutch pedal is depressed	Battery voltage					
				OFF (M/T vehi- cle)	When the clutch pedal is not depressed	0V					
132 (R)	Ground	Starter motor relay control	Output	Output	Output	Output	Output	Output	Ignition switch ON (other than M/	When selector lever is in P or N position and the brake is depressed	Battery voltage
			T vehicle)	When selector lever is in P or N position and the brake is not depressed	ov						
					ON (pressed)	0V					
141 (G/R)	Ground	Trunk request switch	Input	Trunk request switch	OFF (not pressed)	(V) 15 10 5 0 JPMIA0016GB 1.0V					
144	Ground	Request switch buzz-	Output	Request switch	Sounding	0V					
(GR)	2.34.14	er	Carpat	buzzer	Not sounding	Battery voltage					
147	Ground	Trunk lid opener	Input	Trunk lid opener	Pressed	0V					
(L/R)		switch	r	switch	Not pressed	Battery voltage					
148 ¹ (R/W)	Ground	Rear door RH switch	Input	Rear door RH switch	OFF (when rear door RH closes)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8V					
				ON (when rear door RH opens)	0V						

< ECU DIAGNOSIS INFORMATION >

[SEDAN]

	inal No.	Description				Value
	e color)	Signal name Input/			Condition	(Approx.)
(+)	(-)		Output			
149 ¹ (R/B)	Ground	Rear door LH switch	Input	Rear door LH switch	OFF (when rear door LH closes)	(V) 15 10 5 0 JPMIA0011GB 11.8V
					ON (when rear door LH opens)	0V

- 1: Sedan only
- 2: M/T only
- 3: With LH front window anti-pinch
- 4: With LH and RH front window anti-pinch.
- 5: CVT only
- 6: With auto lights
- 7: With low tire pressure warning system
- 8: Coupe only

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 ANTENNA AMP	Inhibit engine cranking	Erase DTC
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
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
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

< ECU DIAGNOSIS INFORMATION >

[SEDAN]

Display contents of CONSULT	Fail-safe	Cancellation
32603: 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)
32604: 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
32605: PNP SW	Inhibit electronic steering column lock	500 ms after any of the following BCM recognition conditions is ful- filled • Ignition switch is in the ON position - Power position: IGN - Selector lever P/N position signal: Except P and N positions (0 V) - Interlock/transmission 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) - transmission switch signal (CAN): ON
32606: 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)
32607: 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)
2608: 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)
2609: 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
3260A: 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)
3260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions is fulfilled • Power position changes to ACC • Receives engine status signal (CAN)
32612: 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

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[SEDAN]

Display contents of CONSULT	Fail-safe	Cancellation
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM becomes normal
B2619: BCM	Inhibit engine cranking	1 second after the electronic steering column lock unit power supply 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 fulfilled • Power position changes to ACC • Receives engine status signal (CAN)
B26E8: CLUTCH SW Inhibit engine cranking		When any of the following BCM recognition conditions are fulfilled • Status 1 - Clutch switch signal (CAN from ECM): ON - Clutch interlock switch signal: OFF (0 V) • Status 2 - Clutch switch signal (CAN from ECM): OFF - Clutch interlock switch signal: OFF (Battery voltage)
B26E9: S/L STATUS	Inhibit engine cranking Inhibit electronic steering column lock	When BCM transmits the LOCK request signal to the steering lock unit and receives LOCK response signal from steering lock unit, the following conditions are fulfilled • Steering condition No 1 signal: LOCK (0V) • Steering condition No 2 signal: LOCK (Battery voltage)

DTC Inspection Priority Chart

INFOID:0000000007630874

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

Priority	DTC
1	B2562: LOW VOLTAGE
2	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)
3	B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM B2195: ANTI SCANNING

< ECU DIAGNOSIS INFORMATION >

Priority	DTC	
	B2013: ID DISCORD BCM-S/L	
	B2014: CHAIN OF S/L-BCM B2553: ICAUTION DELAY	
	B2553: IGNITION RELAY B2555: STOP LAMP	
	B2556: PUSH-BTN IGN SW	
	B2557: VEHICLE SPEED	
	B2560: STARTER CONT RELAY	
	B2601: SHIFT POSITION B2602: SHIFT POSITION	
	B2602: SHIFT POSITION 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	
	B260A: IGNITION RELAY	
	B260B: STEERING LOCK UNIT	
4	B260C: STEERING LOCK UNIT	
	B260D: STEERING LOCK UNIT P260F: FNG STATE SIG LOCK	
	B260F: ENG STATE SIG LOST B2611: ACC RELAY	
	• B2612: S/L STATUS	
	B2614: ACC RELAY CIRC	
	B2615: BLOWER RELAY CIRC B2615: BLOWER	
	B2616: IGN RELAY CIRC B2617: STARTER RELAY CIRC	
	B2618: BCM	
	• B2619: BCM	
	B261A: PUSH-BTN IGN SW	
	B261E: VEHICLE TYPE B261 FNO STATE NO BEON	
	B26E1: ENG STATE NO RECIV B26E8: CLUTCH SW	
	• B26E9: S/L STATUS	
	B26EA: KEY REGISTRATION	
	C1729: VHCL SPEED SIG ERR	
	U0415: VEHICLE SPEED SIG	
	C1704: LOW PRESSURE FL C1705: LOW PRESSURE FR	S
	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] RL	
	C1711: [NO DATA] RE C1712: [CHECKSUM ERR] FL	
	C1713: [CHECKSUM ERR] FR	
	C1714: [CHECKSUM ERR] RR	
_	C1715: [CHECKSUM ERR] RL	
5	C1716: [PRESSDATA ERR] FL C1717: [PRESSDATA ERR] FR Output Output Description:	
	C1717. [PRESSDATA ERR] PR C1718: [PRESSDATA ERR] RR	
	C1719: [PRESSDATA ERR] RL	
	C1720: [CODE ERR] FL	
	C1721: [CODE ERR] FR	
	• C1722: [CODE ERR] RR	
	C1723: [CODE ERR] RL C1724: [BATT VOLT LOW] FL	
	C1724: [BATT VOLT LOW] TE C1725: [BATT VOLT LOW] FR	
	C1726: [BATT VOLT LOW] RR	
	C1727: [BATT VOLT LOW] RL	
	C1734: CONTROL UNIT	
6	B2622: INSIDE ANTENNA B2600 INSIDE ANT	
-	B2623: INSIDE ANTENNA	

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[SEDAN]

DTC Index

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	_	_	_	BCS-32
U1010: CONTROL UNIT (CAN)	_	_	_	BCS-33
U0415: VEHICLE SPEED SIG	_	_	_	BCS-34
B2013: ID DISCORD BCM-S/L	×	_	_	SEC-36 (Coupe), SEC-250 (Sedan)
B2014: CHAIN OF S/L-BCM	×	_	_	SEC-37 (Coupe), SEC-251 (Sedan)
B2190: NATS ANTENNA AMP	×	_	_	SEC-65 (Coupe), SEC-281 (Sedan)
B2191: DIFFERENCE OF KEY	×	_	_	SEC-69 (Coupe), SEC-285 (Sedan)
B2192: ID DISCORD BCM-ECM	×	_	_	SEC-70 (Coupe), SEC-286 (Sedan)
B2193: CHAIN OF BCM-ECM	×	_	_	SEC-71 (Coupe), SEC-287 (Sedan)
B2195: ANTI-SCANNING	_	_	_	<u>SEC-72</u>
B2553: IGNITION RELAY	_	_	_	PCS-59
B2555: STOP LAMP	_	_	_	SEC-73 (Coupe), SEC-289 (Sedan)
B2556: PUSH-BTN IGN SW	_	×	_	SEC-78 (Coupe), SEC-294 (Sedan)
B2557: VEHICLE SPEED	×	×	_	SEC-80 (Coupe), SEC-296 (Sedan)
B2560: STARTER CONT RELAY	×	×	_	SEC-81 (Coupe), SEC-297 (Sedan)
B2562: LOW VOLTAGE	_	_	_	BCS-35
B2601: SHIFT POSITION	×	×	_	SEC-82 (Coupe), SEC-298 (Sedan)
B2602: SHIFT POSITION	×	×	_	SEC-86 (Coupe), SEC-302 (Sedan)
B2603: SHIFT POSI STATUS	×	×	_	SEC-89 (Coupe), SEC-305 (Sedan)
B2604: PNP SW	×	×	_	SEC-92 (Coupe), SEC-308 (Sedan)
B2605: PNP SW	×	×	_	SEC-94 (Coupe), SEC-310 (Sedan)
B2606: S/L RELAY	×	×	_	SEC-96 (Coupe), SEC-312 (Sedan)

< ECU DIAGNOSIS INFORMATION >

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CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2607: S/L RELAY	×	×	-	SEC-97 (Coupe), SEC-313 (Sedan)
B2608: STARTER RELAY	×	×	_	SEC-99 (Coupe), SEC-315 (Sedan)
B2609: S/L STATUS	×	×	_	SEC-101 (Coupe), SEC-317 (Sedan)
B260A: IGNITION RELAY	×	×	_	PCS-61
B260B: STEERING LOCK UNIT	_	×	_	SEC-106 (Coupe) SEC-322 (Sedan)
B260C: STEERING LOCK UNIT	_	×	_	SEC-107 (Coupe) SEC-323 (Sedan)
B260D: STEERING LOCK UNIT	_	×	_	SEC-108 (Coupe) SEC-324 (Sedan)
B260F: ENG STATE SIG LOST	×	×	_	SEC-109 (Coupe) SEC-325 (Sedan)
B2611: ACC RELAY	_	_		PCS-62
B2612: S/L STATUS	×	×	_	SEC-110 (Coupe) SEC-331 (Sedan)
B2614: ACC RELAY CIRC	_	×	_	PCS-64
B2615: BLOWER RELAY CIRC	_	×	_	PCS-67
B2616: IGN RELAY CIRC	_	×		PCS-70
B2617: STARTER RELAY CIRC	×	×	_	SEC-115 (Coupe) SEC-336 (Sedan
B2618: BCM	×	×	_	PCS-73
B2619: BCM	×	×	_	SEC-117 (Coupe) SEC-338 (Sedan
B261A: PUSH-BTN IGN SW	_	×	_	SEC-118 (Coupe) SEC-339 (Sedan
B261E: VEHICLE TYPE	×	× (Turn ON for 15 seconds)	_	SEC-121
B2622: INSIDE ANTENNA	_	_		DLK-282
B2623: INSIDE ANTENNA	_	_		DLK-285
B26E1: ENG STATE NO RES	×	×	<u> </u>	<u>SEC-326</u>
B26E8: CLUTCH SW	×	×	_	<u>SEC-123</u>
B26E9: S/L STATUS	×	× (Turn ON for 15 seconds)	_	<u>SEC-125</u>
B26EA: KEY REGISTRATION	×	× (Turn ON for 15 seconds)	_	<u>SEC-126</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	_	_	×	WT-13
C1710: [NO DATA] RR	_	_	×	<u>WT-13</u>
C1711: [NO DATA] RL	_	-	×	<u>WT-13</u>

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CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
C1713: [CHECKSUM ERR] FR	_	_	×	<u>WT-15</u>
C1714: [CHECKSUM ERR] RR	_	_	×	<u>WT-15</u>
C1715: [CHECKSUM ERR] RL	_	_	×	<u>WT-15</u>
C1716: [PRESSDATA ERR] FL	_	_	×	<u>WT-17</u>
C1717: [PRESSDATA ERR] FR	_	_	×	<u>WT-17</u>
C1718: [PRESSDATA ERR] RR	_	_	×	<u>WT-17</u>
C1719: [PRESSDATA ERR] RL	_	_	×	<u>WT-17</u>
C1720: [CODE ERR] FL	_	_	×	<u>WT-15</u>
C1721: [CODE ERR] FR	_	_	×	<u>WT-15</u>
C1722: [CODE ERR] RR	_	_	×	<u>WT-15</u>
C1723: [CODE ERR] RL	_	_	×	<u>WT-15</u>
C1724: [BATT VOLT LOW] FL	_	_	×	<u>WT-15</u>
C1725: [BATT VOLT LOW] FR	_	_	×	<u>WT-15</u>
C1726: [BATT VOLT LOW] RR	_	_	×	<u>WT-15</u>
C1727: [BATT VOLT LOW] RL	_	_	×	<u>WT-15</u>
C1729: VHCL SPEED SIG ERR	_	_	×	<u>WT-18</u>
C1734: CONTROL UNIT	_	_	×	<u>WT-19</u>

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

< ECU DIAGNOSIS INFORMATION >

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

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Reference Value INFOID:0000000007630876

VALUES ON THE DIAGNOSIS TOOL

Monitor Item		Condition	Value/Status			
RADFAN REQ	Engine idle speed	Changes depending on engine coolant temperature, air conditioner operation status, vehicle speed, etc.	0 - 100 %			
		A/C switch OFF	Off			
AC COMP REQ	Engine running	Engine running A/C switch ON (Compressor is operating)				
TAIL GOLD DEO	Lighting switch OFF	,	Off			
TAIL&CLR REQ	Lighting switch 1ST, 2ND, HI or	On				
III I O DEO	Lighting switch OFF		Off			
HL LO REQ	Lighting switch 2ND HI or AUTC	(Light is illuminated)	On			
DEO	Lighting switch OFF		Off			
HL HI REQ	Lighting switch HI		On			
ED 500 D50	Lighting switch 2ND or	Front fog lamp switch OFF	Off			
FR FOG REQ	AUTO (Light is illuminated)	Front fog lamp switch ON	On			
		Front wiper switch OFF	STOP			
ED WID DEO	Ignition switch ON	Front wiper switch INT	1LOW			
FR WIP REQ		Front wiper switch LO	Low			
		Front wiper switch HI	Hi			
	Ignition switch ON	Front wiper stop position	STOP P			
WIP AUTO STOP		Any position other than front wiper stop position	ACT P			
		Front wiper operates normally	Off			
WIP PROT	Ignition switch ON	Front wiper stops at fail-safe operation	BLOCK			
ION BLV4 BEO	Ignition switch OFF or ACC	Off				
IGN RLY1 -REQ	Ignition switch ON	On				
	Ignition switch OFF or ACC	Off				
IGN RLY	Ignition switch ON					
DUOU OW	Release the push-button ignition	switch	Off			
PUSH SW	Press the push-button ignition s	On				
	Ignition switch ON	CVT selector lever in any position other than P or N (CVT models)	Off			
INTED/ND OW		Release clutch pedal (M/T models)				
INTER/NP SW	Ignition switch ON	CVT selector lever in P or N position (CVT models)	On			
		Depress clutch pedal (M/T models)				
ST DLV CONT	Ignition switch ON					
ST RLY CONT	At engine cranking		On			
IUDT DLV DEO	Ignition switch ON		Off			
IHBT RLY -REQ	At engine cranking		On			

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

Monitor Item	Cor	ndition	Value/Status
	Ignition switch ON	Off	
	At engine cranking		ST →INHI
ST/INHI RLY		control relay cannot be recognized by . when the starter relay is ON and the	UNKWN
DETENT SW	Ignition switch ON	 Press the selector button with CVT selector lever in P position CVT selector lever in any position other than P 	Off
	Release the CVT selector button w NOTE: The lever is fixed ON for M/T	On	
	None of the conditions below are p	Off	
S/L RLY -REQ	 Open the driver door after the ign seconds) Press the push-button ignition swed Depress the clutch pedal when the 	On	
	Steering lock is activated	LOCK	
S/L STATE	Steering lock is deactivated	UNLK	
	[DTC B210A] is detected	UNKWN	
OIL P SW	Ignition switch OFF, ACC or engine	Open	
OIL F 3W	Ignition switch ON	Close	
	Not operated		Off
THFT HRN REQ	Panic alarm is activated Horn is activated with VEHICLE S TEM	On	
HODN CHIED	Not operated		Off
HORN CHIRP	Door locking with Intelligent Key (he	orn chirp mode)	On

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

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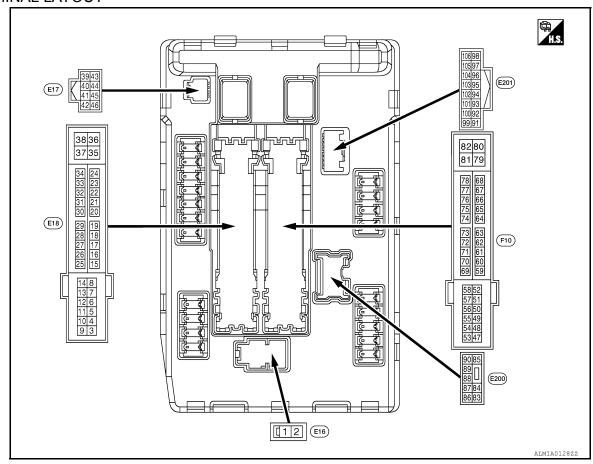
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TERMINAL LAYOUT



PHYSICAL VALUES

Termina		Description				Value	
(Wire co	olor) _	Signal name	Input/ Output		Condition	(Approx.)	SE
1 (R)	Ground	Battery power supply	Input	Ignition swi	tch OFF	Battery voltage	
2 (L)	Ground	Battery power supply	Input	Ignition swi	tch OFF	Battery voltage	L
4	Cround	Frant winer I O	Outnut	Ignition	Front wiper switch OFF	0 V	_
(LG)	Ground	Front wiper LO	Output	switch ON	Front wiper switch LO	Battery voltage	M
5	Cround	Front win or III	Outnut	Ignition	Front wiper switch OFF	0 V	
(Y)	Ground	Front wiper HI	Output	switch ON	Front wiper switch HI	Battery voltage	N
7	Ground	Tail, license plate lamps &	Output	Ignition	Lighting switch OFF	0 V	
(GR)	Ground	interior lamps	Output	switch ON	Lighting switch 1ST	Battery voltage	
10				Ignition swi (For a few s switch OFF	seconds after turning ignition	0 V	0
10 (BR)	Ground	ECM relay power supply	Output	(More that	witch ON witch OFF an a few seconds after turn- on switch OFF)	Battery voltage	Р

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

Terminal		Description				Value
(Wire co	— — — — — — — — — — — — — — — — — — —	Signal name	Input/ Output		Condition	(Approx.)
44				Ignition switch OFF	A few seconds after opening the driver door	Battery voltage
11 (O)	Ground	Electronic steering column lock power supply	Output	Ignition switch LOCK	Press the push-button ig- nition switch	Battery voltage
				Ignition sw	itch ACC or ON	0 V
12 (B)	Ground	Ground	_	Ignition sw	itch ON	0 V
10					tely 1 second or more after ignition switch ON	0 V
13 (SB)	Ground	Fuel pump power supply	Output		nately 1 second after turning on switch ON unning	Battery voltage
15	Ground	Ignition relay-1 power sup-	Output	Ignition sw	itch OFF	0 V
(W)	Ground	ply	Output	Ignition sw	itch ON	Battery voltage
16				Ignition	Front wiper stop position	0 V
(R)	Ground	Front wiper auto stop	Input	switch ON	Any position other than front wiper stop position	Battery voltage
19	Cround	Ignition relay-1 power sup-	Output	Ignition sw	itch OFF	0 V
(Y)	Ground	ply	Output	Ignition sw	itch ON	Battery voltage
20 (L)	Ground	Ambient sensor ground	_	Ignition switch ON		0V
21 (LG)	Ground	Ambient sensor	_	Ignition switch ON		5V
22 (W/R)	Ground	Refrigerant pressure sensor ground	_	Ignition sw	itch ON	0V
23 (B/R)	Ground	Refrigerant pressure sensor	_	Both A/C	switch ON (READY) C switch and blower motor N (electric compressor oper-	1.0 - 4.0V
24 (BR/W)	Ground	Refrigerant pressure sensor power supply	_	Ignition sw	itch ON	5V
25	Cround	Ignition relay-1 power sup-	Output	Ignition sw	itch OFF	0 V
(GR)	Ground	ply	Output	Ignition sw	itch ON	Battery voltage
27	Ground	Ignition relay monitor	Innut	Ignition sw	itch OFF or ACC	Battery voltage
(W)	Ground	ignition relay monitor	Input	Ignition switch ON		0 V
28	Ground	Push-button ignition	Input	Press the push-button ignition switch		0 V
(SB)	Ground	switch	input	Release th	e push-button ignition switch	Battery voltage
30 (R)				CVT mod-	CVT selector lever in any position other than P or N (ignition switch ON)	0 V
(with M/T) 30 (BR)	Ground	Starter relay control	Input	CIO	CVT selector lever P or N (ignition switch ON)	Battery voltage
with CVT)				M/T mod-	Release the clutch pedal	0 V
				els	Depress the clutch pedal	Battery voltage

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

< ECU DIAGNOSIS INFORMATION >

Termina (Wire co		Description			Condition	Value	
+	-	Signal name	Input/ Output		Condition	(Approx.)	
32	Ground	Electronic steering column	Input	Electronic s	steering column lock is acti-	0 V	
(P)	0.000	lock unit condition-1		Electronic s tivated	steering column lock is deac-	Battery voltage	
33	Ground	Electronic steering column	lanut	Electronic s	steering column lock is acti-	Battery voltage	
(G)	Ground	lock unit condition-2	Input	Electronic s	steering column lock is deac-	0 V	
34	Cround	Cooling for roley 2 control	Innut	Ignition swi	itch OFF or ACC	0 V	
(O)	Ground	Cooling fan relay-3 control	Input	Ignition swi	itch ON	0.7 V	
35	Cround	Cooling for motor control	Output	Ignition swi	itch OFF or ACC	0 V	
(P)	Ground	Cooling fan motor control	Output	Ignition swi	itch ON	0.7 V	
36 (G)	Ground	Battery power supply	Input	Ignition swi	itch OFF	Battery voltage	
38	Ground	Cooling fan motor control	Output	Ignition swi	itch OFF or ACC	0 V	
(GR)	Ground	Cooming fair motor control	- Juipui	Ignition swi	itch ON	0.7 V	
39 (P)	_	CAN - L	Input/ Output		_	_	
40 (L)	_	CAN - H	Input/ Output		_	_	
41 (B)	Ground	Ground	_	Ignition swi	itch ON	0 V	
42	Ground	nd Cooling fan relay-2 control Ir	Cooling fan relay-2 control	Input	Ignition swi	tch OFF or ACC	0 V
(SB)	Giouria			Tooling lan relay-2 control	Input	Ignition swi	itch ON
					Press the CVT selector button (CVT selector lever P)	Battery voltage	
43 (Y)	Ground	CVT shift selector (Detention switch)	Input	Ignition switch ON	CVT selector lever in any position other than P Release the CVT selector button (CVT selector lever P)	0 V	
44	Ground	Horn relay control	Input		deactivated	Battery voltage	
(W)		-		The horn is		0 V	
45 (GR)	Ground	Anti theft horn relay control	Input		deactivated	Battery voltage	
(GIV)				The horn is		0 V	
				CVT mod-	CVT selector lever in any position other than P or N (ignition switch ON)	0 V	
46 (BR)	Ground	Starter relay control	Input	els	CVT selector lever P or N (ignition switch ON)	Battery voltage	
				M/T mod-	Release the clutch pedal	0 V	
				els	Depress the clutch pedal	Battery voltage	
					A/C switch OFF	0 V	
48 (W)	Ground	A/C relay power supply	Output	Engine running	A/C switch ON (A/C compressor is operating)	Battery voltage	

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

Terminal N	-	Description				Value
(Wire cold	- -	Signal name	Input/ Output		Condition	(Approx.)
				Ignition swi (For a few s switch OFF	seconds after turning ignition	0 V
49 (V) Gr	Ground	ECM relay power supply	Output	`		Battery voltage
51	Cround	lanition relevance avantu	Output	Ignition swi	tch OFF	0 V
(SB)	Ground	Ignition relay power supply	Output	Ignition swi	tch ON	Battery voltage
52	Cround	lanition roley newer cumply	Output	Ignition swi	tch OFF	0 V
(Y)	Ground	Ignition relay power supply	Output	Ignition swi	tch ON	Battery voltage
53 (V)				Ignition swi (For a few s switch OFF	seconds after turning ignition	0 V
(with QR25DE) 53 (G) (with VQ35DE)	Ground ECM relay po	ECM relay power supply	Output	`		Battery voltage
54 (GR) Gro	(iround			Ignition swi (For a few s switch OFF	seconds after turning ignition	0 V
		Throttle control motor re- lay power supply	Output			Battery voltage
55 (LG)	Ground	ECM power supply	Output	Ignition switch OFF		Battery voltage
56	Ground	Ignition relay power supply	Output	Ignition swi	tch OFF	0 V
(R)	Giodila	ignition relay power supply	Output	Ignition swi	tch ON	Battery voltage
57	Ground	Ignition relay power supply	Output	Ignition swi	tch OFF	0 V
(O)	Giodila	ignition relay power supply	Output	Ignition swi	tch ON	Battery voltage
58			0	Ignition swi	tch OFF	0 V
(BR) (with CVT)	Ground	Ignition relay power supply	Output	Ignition swi	tch ON	Battery voltage
60				Ignition swi (For a few s switch OFF	seconds after turning ignition	Battery voltage
(SB)	(SB) Ground ECM relay control		Output			0 - 1.5 V
						0 -1.0 V
70		Throttle central mater ra		Ignition swi	tch ON → OFF	↓ Battery voltage
70 (G)	Ground	Throttle control motor re- lay control	Output	191111011 0	511	Dattery voltage ↓ 0 V
				Ignition swi	tch ON	0 - 1.0 V
					CVT selector lever in P or N position	Battery voltage
72 (W)	Ground	Transmission range switch signal	Input	Ignition switch ON	CVT selector lever in any position other than P or N position	0 V

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

Termina (Wire c		Description				Value					
+ (vvire c	olor)	Signal name	Input/ Output		Condition	(Approx.)					
74	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V					
(L)	Ground	ignition relay power supply	Output	Ignition swi	tch ON	Battery voltage					
75	Cround	Oil procesure quitab	lanut	Ignition	Engine stopped	0 V					
(LG)	Ground	Oil pressure switch	Input	switch ON	Engine running	Battery voltage					
				Ignition swi	tch ON	(V) 6 4 2 0 					
						6.3 V					
						(V)					
76 (Y)	Ground	Power generation command signal			Output	40% is set on "Active test", "ALTERNA- TOR DUTY" of "ENGINE"		6 4 2 4 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			
						3.8 V					
											on "Active test", "ALTERNA- " of "ENGINE"
						JPMIA0003G					
77	Ground	Fuel pump relay control	Output		nately 1 second after turning on switch ON unning	0 - 1.0 V					
(B/R)		r der pump relay control	'		tely 1 second or more after ignition switch ON	Battery voltage					
80 (R)	Ground	Starter motor	Output	At engine of	eranking	Battery voltage					
83	Ground	Headlamp LO (RH)	Output	Ignition	Lighting switch OFF	0 V					
(R/Y)	Giodila	ricadianip LO (INTI)	Output	switch ON	Lighting switch 2ND	Battery voltage					
84	Ground	Headlamp LO (LH)	Output	Ignition	Lighting switch OFF	0 V					
(L)	Giouna	Headianip LO (LH)	Output	switch ON	Lighting switch 2ND	Battery voltage					
86		Front fog lamp (RH)		Lighting switch ON switch 2ND Front fog lamp switch OFF		Battery voltage					
(W/R)	Ground	(If equipped)	Output			0 V					
87		Front fog lamp (LLL)		Lighting Front fog lamp switch ON		Battery voltage					
67 (L/Y)	Ground	Front fog lamp (LH) (If equipped)	Output	switch 2ND	Front fog lamp switch OFF	0 V					
88 (R/W)	Ground	Washer pump power supply	Output	Ignition swi	tch ON	Battery voltage					

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

< ECU DIAGNOSIS INFORMATION >

Terminal No.		Description				Value
(Wire col	or) 	Signal name	Input/ Output	Condition		(Approx.)
89 (L/W)	Ground	Headlamp HI (RH)	Output	Ignition switch ON	Lighting switch HI lighting switch PASS	Battery voltage
(L/VV)					Lighting switch OFF	0 V
90	Ground	Headlamp HI (LH)	Output	Ignition switch ON	Lighting switch HI Lighting switch PASS	Battery voltage
(G)					Lighting switch OFF	0 V
91	Ground	Parking lamp (RH)	Output	Ignition switch ON	Lighting switch 1ST	Battery voltage
(LG/R)					Lighting switch OFF	0 V
92	Ground	Parking lamp (LH)	Output	Ignition switch ON	Lighting switch 1ST	Battery voltage
(LG/B)					Lighting switch OFF	0 V
99 (BR/W)	Ground	Ambient sensor ground	_	Ignition switch ON		0V
100 (SB)	Ground	Ambient sensor	_	Ignition switch ON		5V
101 (O/L)	Ground	Refrigerant pressure sensor ground	_	Ignition switch ON		0V
102 (R/B)	Ground	Refrigerant pressure sensor	_	Ignition switch ON (READY) Both A/C switch and blower motor switch ON (electric compressor operates)		1.0 - 4.0V
103 (P)	Ground	Refrigerant pressure sensor power supply	_	Ignition switch ON		5V

Fail Safe

CAN COMMUNICATION CONTROL

When CAN communication with ECM and BCM is impossible, IPDM E/R performs fail-safe control. After CAN communication recovers normally, it also returns to normal control.

If No CAN Communication Is Available With ECM

Control part	Fail-safe in operation		
Cooling fan	Signals cooling fans ON when the ignition switch is turned ONSignals cooling fans OFF when the ignition switch is turned OFF		
A/C compressor	A/C relay OFF		
Generator	Outputs the power generation command signal (PWM signal) 0%		

If No CAN Communication Is Available With BCM

Control part	Fail-safe in operation			
Headlamp	Turns ON the headlamp low relay when the ignition switch is turned ON Turns OFF the headlamp low relay when the ignition switch is turned OFF Headlamp high relay OFF			
Parking lampsLicense plate lampsIlluminationTail lamps	Turns ON the tail lamp relay when the ignition switch is turned ON Turns OFF the tail lamp relay when the ignition switch is turned OFF			
Front wiper	 The status just before activation of fail-safe control is maintained until the ignition switch is turned OFF while the front wiper is operating at LO or HI speed. The wiper is operated at LO speed until the ignition switch is turned OFF if the fail-safe control is activated while the front wiper is set in the INT mode and the front wiper motor is operating. 			

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) **ISEDANI**

< ECU DIAGNOSIS INFORMATION >

Control part	Fail-safe in operation
Front fog lamps (if equipped)	Front fog lamp relay OFF
Horn	Horn OFF
Ignition relay	The status just before activation of fail-safe is maintained.
Starter motor	Starter control relay OFF
Electronic steering column lock unit	Steering lock relay OFF

IGNITION RELAY MALFUNCTION DETECTION FUNCTION

- IPDM E/R monitors the voltage at the contact circuit and excitation coil circuit of the ignition relay inside it.
- IPDM E/R judges the ignition relay error if the voltage differs between the contact circuit and the excitation coil circuit.
- · If the ignition relay cannot turn OFF due to contact seizure, it activates the tail lamp relay for 10 minutes to alert the user to the ignition relay malfunction when the ignition switch is turned OFF.

DTC	Ignition switch	Ignition relay	Tail lamp relay
_	ON	ON	_
_	OFF	OFF	_
B2098: IGN RELAY ON	OFF	ON	ON (10 minutes)
B2099: IGN RELAY OFF	ON	OFF	_

NOTE:

The tail lamp turns OFF when the ignition switch is turned ON.

FRONT WIPER CONTROL

IPDM E/R detects front wiper stop position by a front wiper auto stop signal.

When a front wiper auto stop signal is in the conditions listed below, IPDM E/R stops power supply to wiper after repeating a front wiper 10 second activation and 20 second stop five times.

Ignition switch	Front wiper switch	Auto stop signal
ON	OFF	Front wiper stop position signal cannot be input 10 seconds.
	ON	The signal does not change for 10 seconds.

NOTE:

This operation status can be confirmed on the IPDM E/R "Data Monitor" that displays "BLOCK" for the item "WIP PROT" while the wiper is stopped.

STARTER MOTOR PROTECTION FUNCTION

IPDM E/R turns OFF the starter control relay to protect the starter motor when the starter control relay remains active for 90 seconds.

DTC Index INFOID:0000000007630878

CONSULT display	Fail-safe	TIME	NOTE	Refer to
No DTC is detected. further testing may be required.	_	_	_	_
U1000: CAN COMM CIRCUIT	×	CRNT	1 – 39	PCS-17
B2098: IGN RELAY ON	×	CRNT	1 – 39	PCS-18
B2099: IGN RELAY OFF	_	CRNT	1 – 39	PCS-19
B2108: STRG LCK RELAY ON	_	CRNT	1 – 39	<u>SEC-255</u>
B2109: STRG LCK RELAY OFF	_	CRNT	1 – 39	<u>SEC-256</u>
B210A: STRG LCK STATE SW	_	CRNT	1 – 39	<u>SEC-257</u>
B210B: START CONT RLY ON	_	CRNT	1 – 39	<u>SEC-262</u>
B210C: START CONT RLY OFF	_	CRNT	1 – 39	<u>SEC-263</u>

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

Fail-safe

< ECU DIAGNOSIS INFORMATION >

B210D: STARTER RELAY ON

B210E: STARTER RELAY OFF

CONSULT display

B210F: INTRLCK/TRANSMISSION RANGE SW ON

B2110: INTRLCK/TRANSMISSION RANGE SW OFF

[OLDAN	_
Refer to	
<u>SEC-264</u>	
SEC-266	
	Refer to SEC-264

SEC-269

SEC-275

 $\mathsf{TIME}^\mathsf{NOTE}$

1 - 39

1 - 39

1 - 39

1 - 39

CRNT

CRNT

CRNT

CRNT

NOTE:

The details of TIME display are as follows.

- CRNT: The malfunctions that are detected now
- 1 39: The number is indicated when it is normal at present and a malfunction was detected in the past. It increases like 0 → 1 → 2 ··· 38 → 39 after returning to the normal condition whenever IGN OFF → ON. It is fixed to 39 until the self-diagnosis results are erased if it is over 39. It returns to 0 when a malfunction is detected again in the process.

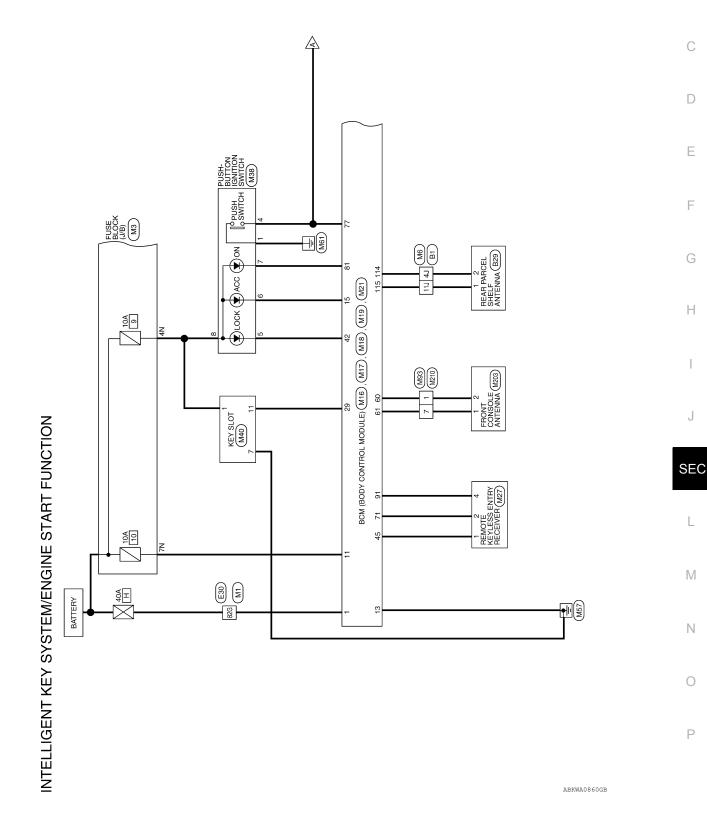
< WIRING DIAGRAM > [SEDAN]

WIRING DIAGRAM

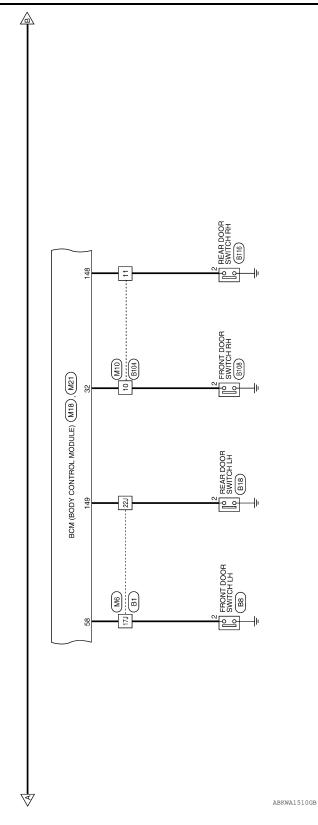
INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

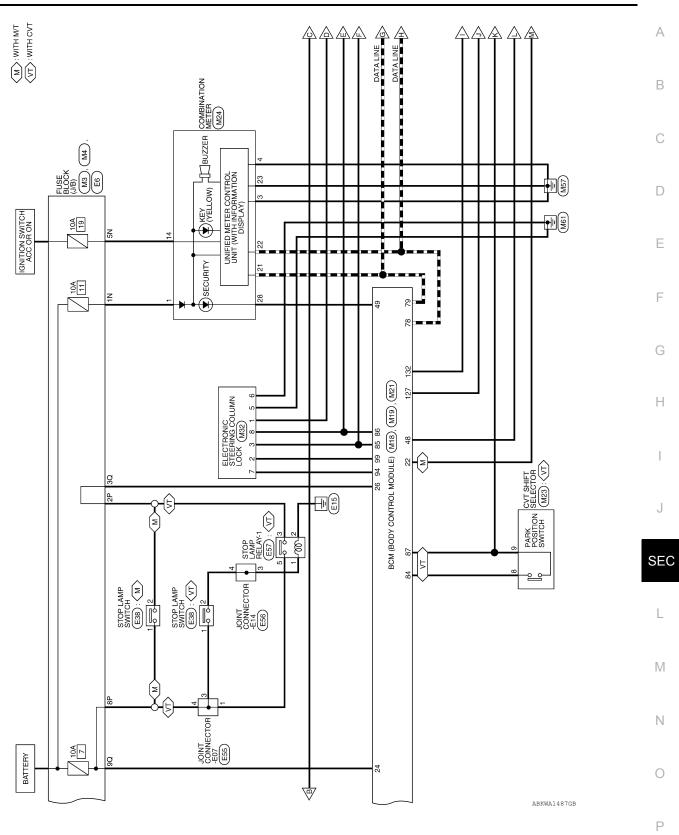
Wiring Diagram

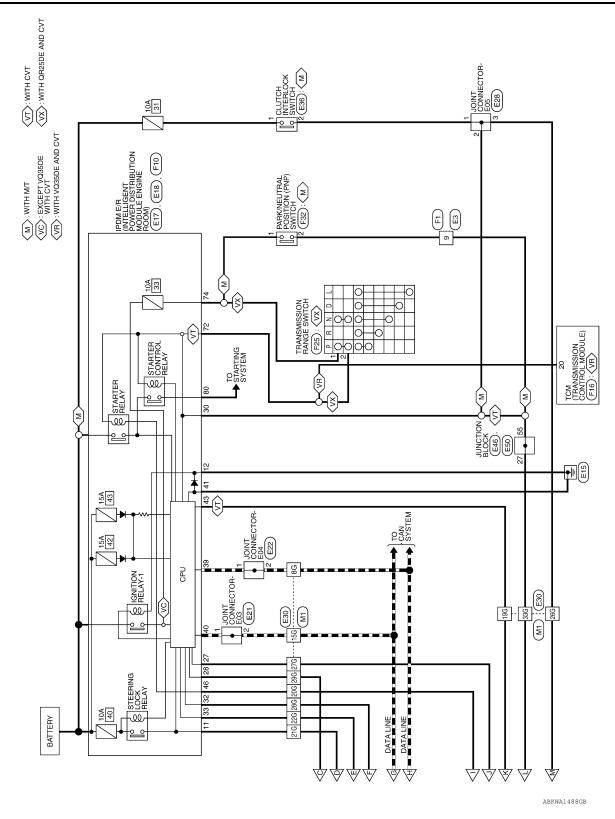
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TELLIGENT KEY SYSTEM/ENGINE START FUNCTION CONNECTORS	
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Connector No.	. M3	
Connector Name	me FUS	FUSE BLOCK (J/B)
Connector Color	lor WHITE	TE
哥 H.S.	NS NS	2N 1N SN 4N
Terminal No.	Color of Wire	Signal Name
Z.	M/L	1
A N	G/Y	1
2N	Λ/Λ	1
ΝZ	Y/R	1
-	-	

Terminal No. Wire	Color of Wire	Signal Name
98	Ь	_
15G	Г	_
19G	G/B	ı
20G	Œ	ı
21G	D/L	_
22G	G/R	_
26G	R/Y	_
27G	BR/W	_
28G	0/7	ı
29G	BR	_
33G	B/G	_
82G	W/B	I

								$\overline{}$
M1	WIRE TO WIRE	WHITE	96 86 76 66 56 46 36 176 166 156 146 136 126 116 106 26 16	26G 25G 24G 23G 22G 21G 20G 33G 32G 31G 30G 29G 28G 27G 19G 18G	41G 40G 39G 38G 37G 36G 35G 50G 49G 48G 47G 46G 45G 44G 43G 42G	58G 57G 56G 55G 63G 62G 61G 60G 59G 54G 53G 52G 51G	72G 71G 70G 69G 68G 67G 66G 80G 79G 78G 77G 76G 75G 74G 73G 65G 64G	83G 82G 81G
Connector No.	Connector Name	Connector Color	H.S.	346	200	930	800	

Connector No.	M4
Connector Name	Connector Name FUSE BLOCK (J/B)
Connector Color WHITE	WHITE
H.S.	40 30 20 10 10 10 30 80 70 80 50 50 10

40 30 30 30 10 10 10 10 10 10 10 10 10 10 10 10 10	Signal Name	I	1
100 90 8	Color of Wire	O/L	B/W
H.S.	Terminal No.	30	90

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Connector No. M10 Connector Name WIRE TO WIRE	
Signal Name	M17 M17 M0DULE) M0DULE) M0DULE) M0DULE) M0DULE M0D
Color of Wire 4J B B 11J W 17J SB 22J R/B	Connector Name BCM (B MODU) Connector Color WHITE A.S. Terminal No. Wire 13 B 13 B 15 N/L
Connector No. M6 Connector Name WIRE TO WIRE Connector Color WHITE Superior WHITE Superior WHITE Superior Su	Connector No. M16 Connector Name BCM (BODY CONTROL Connector Color BLACK LIS Terminal No. Wire Signal Name 1 W/B BAT_POWER_F/L

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

[SEDAN] < WIRING DIAGRAM >

ENG_START_SW CAN-L CAN-H IGN_ON_LED AT_DEVICE_OUT S/L_CONDITION_1 S/L_CONDITION_2 SHIFT_P F1_POWER_SUPPI S/L_POWER_SUPPI S/L_POWER_SUPPI
ENG_START_SW CAN-L CAN-H IGN_ON_LED AT_DEVICE_OUT S/L_CONDITION_1 S/L_CONDITION_2

	•	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
77 78 78 79 81 84 85 86 86 87 91)	0/1	BR	Ь	٦	LG	Y/R	0/7	G/R	G/B	L/R	G/Y	$\Gamma \lambda$
		71	77	78	62	81	84	85	98	87	91	94	66

Connector No.	M23
Connector Name CV SF	Connector Name CV SHIF SELECTOR Connector Color WHITE
H.S.	1 3

Connector Name CVT SHIFT SELECTOR	=	2 4 5 6 8 10	Signal Name	DETENT_KEY_SW	DETENT_KEY_SW
me CV1	lor WH	- 2	Color of Wire	Y/R	G/B
Connector Na	Connector Color WHITE	雨 H.S.	Terminal No.	8	6

Signal Name	TRUNK_ANT_1_B	TRUNK_ANT_1_A	IGN_USM_CONT1	ST_CONT_USM	RR_DOOR_SW	RL_DOOR_SW
Color of Wire	В	M	BR/W	В	B/W	B/B
Terminal No.	114	115	127	132	148	149

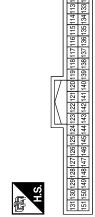
M19	Connector Name BCM (BODY CONTROL MODULE)	BLACK
Connector No.	Connector Name	Connector Color BLACK



Signal Name	ROOM_ANT_2_B	ROOM_ANT_2_A
Color of Wire	B/R	W/R
Terminal No.	09	61

		<u> </u>
DR_DOOR_SW		
SB		M21
		No

Connector No.	M21
Connector Name	Connector Name BCM (BODY CONTROL MODULE)
Connector Color GRAY	GRAY



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M18	Connector Name BCM (BODY CONTROI MODULE)	r GREEN	
Connector No.	Connector Name	Connector Color GREEN	



Signal Name	CLUTCH_SW	STOP_LAMP_LOW_SW	STOP_LAMP_HIGH_SW	FOB_IN_SW	AS_DOOR_SW
Color of Wire	R/Υ	R/W	O/L	>	B/B
Terminal No.	22	24	26	29	32

S/L_LOCK_LED

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42 45 48

GND_RF2_A/L

SHIFT_N/P IMMO_LED

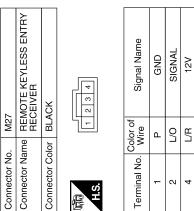
R/G 9

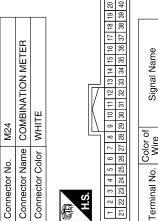
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M32	Connector Name ELECTRONIC STEERING COLUMN LOCK	WHITE
Connector No.	Connector Name	Connector Color WHITE
	EYLESS ENTRY	

CONNECTOR IN TOUR COLUMN LOCK	ITE	2 0 0 1 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0	Signal Name	S/L_12V_MECHANICAL (V1)	S/L_COM	S/L_CONDITION_1	GNĐ	GNĐ	S/L_12V_CPU (V2)	S/L_CONDITION_2
	lor WHITE	48	Color of Wire	P/L	\sim	0/1	В	В	G/Y	G/R
Connector Na	Connector Color	南 H.S.	Terminal No.	-	2	3	5	9	7	8

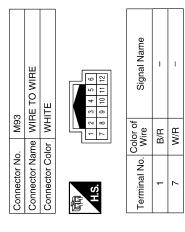




Signal Name BAT BAT CAN-H CAN-L GND (CIRCUIT) SECURITY SIGNA Signal Name 1 2 L 4 L CAN-H CAN-H GND (CIRCUIT)	3:	>	_	_	-							
Signal Name BAT GND (POWER) GND (ILL) ACC CAN-H CAN-L GND (CIRCUIT) SECURITY	Terminal No	i dililiai NO.	-	2	4							
Signal Name BAT GND (POWER) GND (ILL) ACC CAN-H CAN-L GND (CIRCUIT) SECURITY												1
				BAT	GND (POWER)	GND (ILL)	ACC	CAN-H	CAN-L	GND (CIRCUIT)	SECURITY	
			o. Wire									

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Connector No.). M40	0
Connector Name KEY SLOT	tme KE	/ SLOT
Connector Color WHITE	olor WH	IE
H.S.	7 2 8	2 3 4 5 6 8 9 10 111 12
Terminal No.	Color of Wire	Signal Name
1	G/Y	B+
7	В	GND
11	\	CARD SW 1

Connector No.	M38	3
Connector Name		PUSH-BUTTON IGNITION SWITCH
Connector Color		BROWN
H.S.	-4	5 6 7 8
Terminal No.	Color of Wire	Signal Name
-	В	GND
4	BR	START_SW
2	н	LOCK
9	Y/L	ACC
	LG	NO
8	G/Y	B+

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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

[SEDAN] < WIRING DIAGRAM >

	WIRE TO WIRE	ITE	2 3 • 4 5 6 7 9 10 11 11 2 13 14 15 16	Signal Name	ı
E3	me WII	lor WHITE	8 9 10 10 10 10 10 10 10 10 10 10 10 10 10	Color of Wire	a
Connector No.	Connector Name	Connector Color	南 H.S.	Terminal No. Wire	σ
	•	•	. <u> </u>		

	RE TO WIRE	벁	2 3 • 4 5 6 7 9 10 11 112 13 14 15 16	Signal Name	ı
	me WIF	lor WH	8 9 10	Color of Wire	BB
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	向 H.S.	Terminal No.	6

01	WIRE TO WIRE	ITE	12 11 10 9 8 7	Signal Name	-	-
. M210		lor WH	125	Color of Wire	B/R	W/R
Connector No.	Connector Name	Connector Color WHITE	H.S.	Terminal No.	-	7

Connector No.	M203	13
Connector Name		FRONT CONSOLE ANTENNA
Connector Color	olor GRAY	47
E	(
H.S.	9	1 2
Terminal No.	Color of Wire	Signal Name
-	W/R	ANT+
2	B/R	ANT-

(INTELLIGENT DISTRIBUTION ENGINE ROOM) Signal Name CAN-L CAN-H CAN								
POWER D POWER D WHITE		IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	IITE	41 40 39 45 44 43		CAN-L	CAN-H	GND (SIGNAL)
				42 44	Color of Wire	Д	٦	В
ttor No	Connector No	Connector Na	Connector Co	雨 H.S.		39	40	41

Connector No.	E6
Connector Name	Connector Name FUSE BLOCK (J/B)
Connector Color WHITE	WHITE
H.S.	7P 6P 5P 4P 3P 2P 1P

	9 4P 3P 2 9 10 9 9 9 9 9 9 9 9 9	Signal
	8P 15P 14F	Color of Wire
Connector Colo		Terminal No.
	Connector Color WHITE	WHITE 6P 5P 4P 6P 12P 11P 11SP 11P 11P 11P 11P 11P 11P 11P 1

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RANGE SW START CONT

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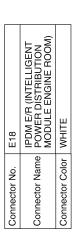
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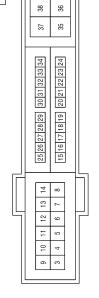
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Connector No.). E21	
Connector Na	Ime JOII	Connector Name JOINT CONNECTOR-E03
Connector Color WHITE	olor WHI	TE
呵呵 H.S.	4]4321]
Terminal No.	Color of Wire	Signal Name
1	٦	1
2	_	1

		_						
Signal Name	ESCL	GND (POWER)	IGN_SIGNAL	PUSH_START_SW	CLUTCH_I/L_SW (WITH M/T)	ECM (WITH CVT)	SL_CONDITION_1	SL_CONDITION_2
Color of Wire	0	В	Μ	SB	В	BR	Ь	g
Terminal No.	1	12	27	28	30	30	32	33





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Connector No.	lo. E28	8
Connector Name	ame JO	JOINT CONNECTOR-E05
Connector Color		WHITE
原引 H.S.	4	3 2 1 1 0
Terminal No. Wire	Color of Wire	Signal Name
-	ш	ı
2	œ	ı
m	<u>~</u>	ı

Connector Name JOINT CONNECTOR-E04
Connector Color | WHITE

H.S.

Terminal No. Wire Signal Name

1 P - -

E22

Connector No.

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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< WIRING DIAGRAM > [SEDAN]

Connector Name CLUTCH INTERLOCK	SWITCH	Connector Color BROWN		c	7 1			al No. Wire Signal Name			=				Connector No. E46		Connector Color WHIIE	31 30 20 28	Color of Signal Name Signal Name	- BB			
Connec		Connec		E	HS			Terminal No.	•		ı				Connec	Connec	Connec	原 H.S.	Terminal No.	27			
																ТСН			lame				
<u> </u>	'	1	ı		'	1	ļ		1	1	1	1				STOP LAMP SWITCH	X		Signal Name	ı	1		
1	۵	_	>	BB	0	9	ш	8	۵	SB	BB	7	۵		No. E38			2	Color of Wire	œ	re		
	8G	15G	19G	20G	21G	22G	26G	27G	28G	29G	33G	51G	52G		Connector No.	Connector Name	Connector Color	斯 H.S.	Terminal No.	-	2		
		7	//	//							L							1		1			
VIRE				56 66 76 86 96	10G 11G 12G 13G 14G 15G 16G 17G	000	18G 19G 27G 28G 29G 30G 31G 32G 33G 34G		35G 36G 37G 38G 39G 40G 41G		53G 54G 50C 51C 58G	230 200 210 250 250	66G 67G 68G 69G 70G 71G 72G	826 836		STOP LAMP SWITCH			Signal Name	ı	1		
WIRE TO WIRE				36 46	16 26 106 116 11	070	196 276 286 2		35G 36G 37 42G 43G 44G 45	2	516 526 536 54	L	66G 67G 68G 69G 70G	816	E38	STOP LAN	WHITE	1 3 4 4		~	G		
Connector Name	Connector Color		_	\\ \\			186				L ic	·			Connector No.	Connector Name	Connector Color		Color of Wire	<u>«</u>	LG		
Connec	Connec		Œ		Ċ O						•				Connec	Connec	Connec	哥 H.S.	Terminal No.	_	2		
																						AAKIA0623GB	

Revision: February 2013 SEC-409 2012 Altima GCC

Connector No. E56 Connector Name JOINT CONNECTOR-E14 Connector Color WHITE [日本日本 10 10 10 10 10 10 10 1	Terminal No. Color of Signal Name 3 LG – 4 LG –	Connector No. F10 PDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) Connector Color WHITE S3 54 55 56 57 58 A7 48 49 50 51 52 S96616263 G46566763 T9 80 Terminal No. Wire Signal Name T4
Connector No. E55 Connector Name JOINT CONNECTOR-E07 Connector Color WHITE	Signal Name	F1 WIRE TO WIRE WHITE
Connector No. E55 Connector Name JOINT Connector Color WHITE	Terminal No. Color of Wire 1 W 3 R 4 R	Connector No. F1 Connector Name WIF Connector Color WH Terminal No. Color of Wire 9 Wire
UNCTION BLOCK WHITE	Signal Name	STOP LAMP RELAY-1 BLUE STOP LAMP RELAY-1 STOP Signal Name G
Connector No. E50 Connector Name JUNCT Connector Color WHITE H.S.	Terminal No. Wire 55 BR	Connector No. E57 Connector Name STOP Connector Color BLUE Terminal No. Wire 1 LG 2 B 3 Y 5 W
		AAKIA0624GB

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< WIRING DIAGRAM > [SEDAN]

Connector No. F32 Connector Name PARK/NEUTRAL POSITION (PNP) SWITCH Connector Color BLACK	(2 1 1)	Terminal No. Wire Signal Name	7 3	Connector No. B8 Connector Name FRONT DOOR SWITCH LH Connector Color WHITE Terminal No. Wire Signal Name 2 SB DOOR SW (DR)	A B C D
F25 TRANSMISSION RANGE SWITCH BLACK		Signal Name	P N OUTPUT	Signal Name	G
	8 2 2 8 3 3 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Color of Wire	 	Color of Wire SB SB BR	I
Connector No. Connector Name Connector Color	H.S.	Terminal No.	- 0	Terminal No. 11.0 17.1 22.0 22.0	J
F16 TCM (TRANSMISSION CONTROL MODULE) BLACK	2 8 8 9	9 10 41	Signal Name ST RLY	80 81 85 85 85 85 85 85 85 85 85 85 85 85 85	L
Connector No. F16 Connector Name TCM (T CONTR	H.S. (31 22 33 44 35 36 37 38 17 18 17 12 13 14 15 16 17 18	1 2 3 4 5	Terminal No. Wire	Connector No. B1	N
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Revision: February 2013 SEC-411 2012 Altima GCC

B104	WIRE TO WIRE	BROWN	
Connector No.	Connector Name WIRE TO WIRE	Connector Color BROWN	
	HELF		

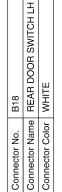
8 9 10 11 12	Signal Name	I	
6 1 2	Color of Wire	GR	
H.S.	erminal No.	10	







Signal Name



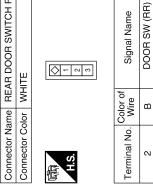


Signal Name	DOOR SW (RL)
Color of Wire	BR
Terminal No.	2



+ NA	ANT-		B116	
>	>			i
_	2		nnector No.	





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DOOR SW (AS) Signal Name

Color of Wire GR

Terminal No. N

Conr	Conr	Œ	Ĭ

Connector No.	B108
Connector Name	FRONT DOOR SWITCH RH
Connector Color	WHITE
H.S.	

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< WIRING DIAGRAM > [SEDAN]

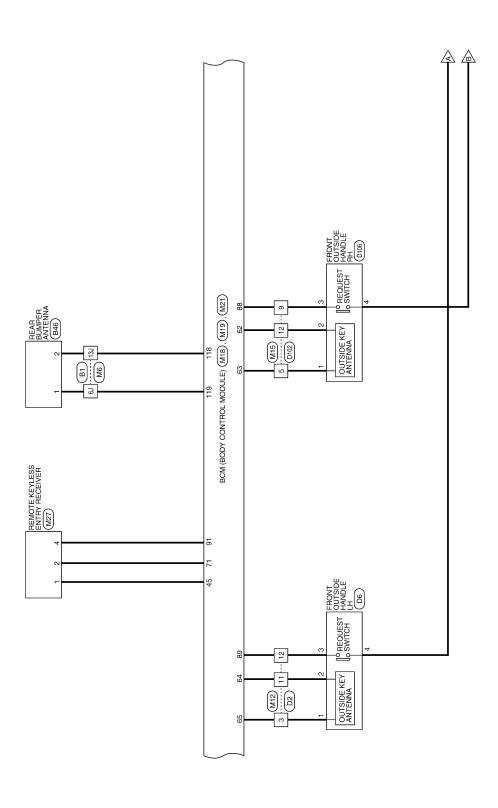
VEHICLE SECURITY SYSTEM

Wiring Diagram

В

С D ◆ TO POWER DISTRIBUTION SYSTEM Е F FRONT DOOR SWITCH RH (B108) M10 M104 G BCM (BODY CONTROL MODULE) (M16), (M17), (M18), (M19), (M21) Н REAR DOOR SWITCH LH (B18) KEY SLOT FUSE BLOCK (J/B) J FRONT DOOR SWITCH LH COMBINATION METER M24 SEC L VEHICLE SECURITY SYSTEM M M6 B1 Ν -II(a) 82G M1 40 H BATTERY 0 Ρ

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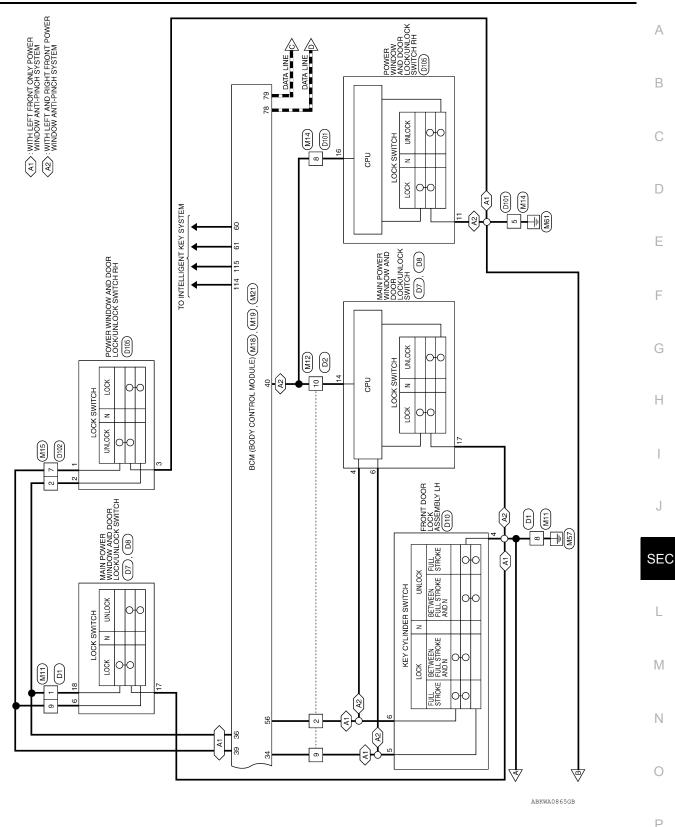
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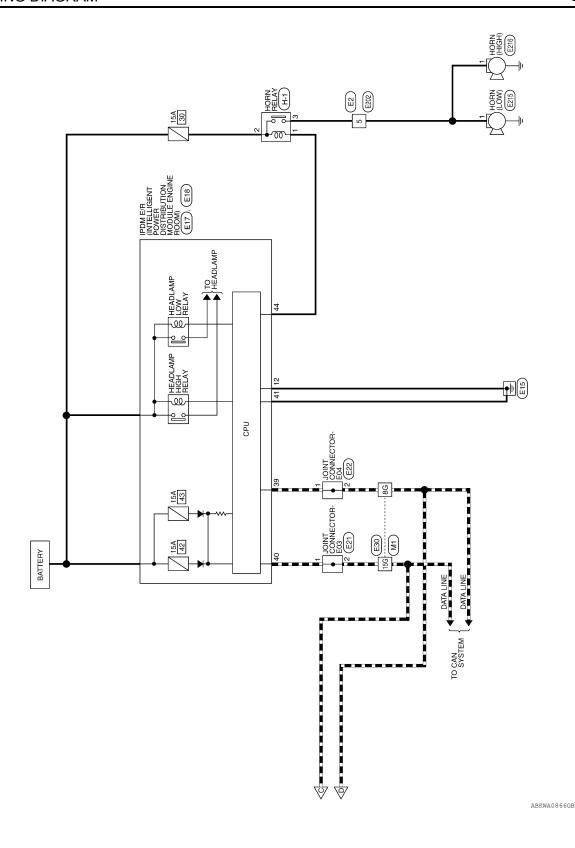
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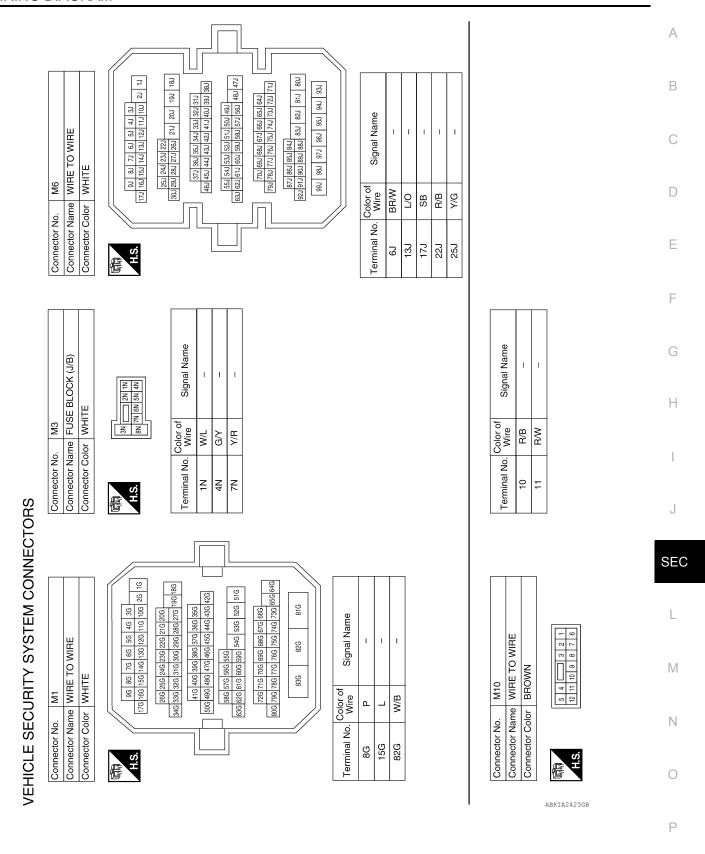
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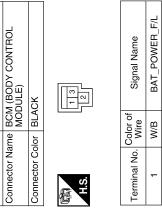
SEC-415 Revision: February 2013 2012 Altima GCC





Connector No. M11 Connector Name WIRE TO WIRE Connector Color WHITE	lo. M11 lame WIRE	E TO WIRE	Connector No. M12 Connector Name WIRE TO WIRE Connector Color WHITE	lo. M12 lame WIRE	E TO WIRE	Connector No. M14 Connector Name WIRE TO WIRE Connector Color WHITE	me WIRE	TO WIRE	
H.S.	8 1 8 0 1 C C C C C C C C C C C C C C C C C C	1 2 3	画面 H.S.	1 2 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	12 13 14 15 16	E.S.	2 9 7	6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	
-	GR	1	2	L/B	1	5	В	1	
8	В	1	က	۵	ı	8	J//G	I	
6	GR/R	ı	o	L'B	1				1
			10	Y/G	ı				
			=	>	ı				
			12	B/W	1				
Connector No.	lo. M15		Connector No.	o. M16		Connector No.	. M17		
Connector Name WIRE TO WIRE	lame WIRE	TO WIRE	Connector N	ame BCM MOD	Connector Name BCM (BODY CONTROL MODULE)	Connector Na	me BCM (Connector Name BCM (BODY CONTROL MODULE)	1
	5	1	Connector Color	olor BLACK	X	Connector Color WHITE	lor WHITI	ш	
				[1

M17 M17 M0DULE M0DULE M0DULE M0DULE M17E M	GND1
9 2 4 1 5 > >	۳
Connector No. Connector Name BCM (E MODUI Connector Color WHITE A.S. Terminal No. Wire 11 Y/R	13



3 4 4 5 6 6 7 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Signal Name	ı	I	I	I	ı
2 8 2	Color of Wire	G/R	LG	GR/R	P/L	₽/A
是 H.S.	Terminal No.	2	5	7	6	12

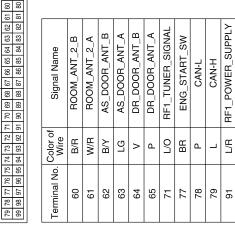
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Connector No.	M21
Connector Name	Connector Name BCM (BODY CONTROL MODULE)
Connector Color GRAY	GRAY

3 122 121	Terminal No. Wire Signal Name
12812712	S
H.S.	rmina

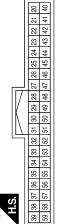
	_		_	_		_	_
Signal Name	TRUNK_ANT_1_B	TRUNK_ANT_1_A	BACK_DOOR_ANT_B	BACK_DOOR_ANT_A	WS_NURT	RR_DOOR_SW	RL_DOOR_SW
Color of Wire	В	*	9	BR/W	A/G	W/A	R/B
Terminal No. Wire	114	115	118	119	130	148	149

Connector No.	M19
Connector Name	Connector Name BCM (BODY CONTROL MODULE)
Connector Color BLACK	BLACK



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Signal Name	FOB_IN_SW_1	AS_DOOR_SW	DOOR_KEY/C_ UNLOCK_SW	CENTRAL_LOCK_SW	CENTRAL_ UNLOCK_SW	PW_K-LINE	GND_RF2_A/L	IMMO_LED	DOOR_KEY/C_ LOCK_SW	DR_DOOR_SW
Color of Wire	Υ	R/B	L/R	GR	GR/R	Y/G	Ь	0/1	L/B	SB
Terminal No.	59	32	34	36	39	40	45	49	56	58

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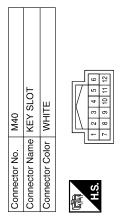
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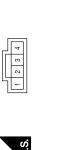
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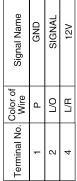
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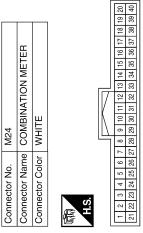


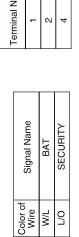
Signal Name	B+	GND	CARD SW 1
Color of Wire	G/Y	В	У
Terminal No.	1	2	11







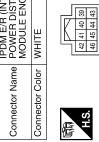




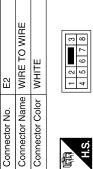
Terminal No.

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Signal Name	CAN-L	CAN-H	GND (SIGNAL)	HORN_RLY
Color of Wire	Ь	٦	В	W
Terminal No. Wire	39	40	41	44







Signal Name	_	
Color of Wire	0	
Terminal No.	2	

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VEHICLE SECURITY SYSTEM

< WIRING DIAGRAM > [SEDAN]

Connector No. E21 Connector Name JOINT CONNECTOR-E03 Connector Color WHITE H.S. Image: Ima	No. Color of Signal Name P	A B C
Connector No. Connector Collector Co	8G 15G 82G 82G	Е
me /ER)	SSG	F
Color of Signal Name Wire B GND (POWER)	7 7 6 1 7 7 6 1 1 1 1 1 1 1 1 1 1 1 1 1	G
Terminal No.	Connector No. E30 Connector Name WIRE TO WIRE Connector Color WHITE To 36 46 56 66 66 67 286 276 286 376 286 376 286 576 286 276 286 576 576 286 576 576 576 576 576 576 576 576 576 57	J
32 33		SEC
E18 IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) WHITE 3 14 1516171819 2021223324 1516171819 2021223324	WHITE WHITE Signal Name	L
E18 IPDM E/R (I MODULE EI WHITE 3 114	WHITE Sign of	M
	└	Ν
Connector No. Connector Color H.S. 1 1 1 1 2 3 4 5 6 6	Connector No. Connector Color Connector Color Terminal No. 1 2	0
	ABKIA2427GB	Р

Revision: February 2013 SEC-421 2012 Altima GCC

Connector No. E216 Connector Name HORN (HIGH) Connector Color BI ACK		H.S.	Terminal No. Wire Signal Name	1 G -	1	Connector Name FRONT DOOR SWITCH LH	Connector Color WHITE			ÿ- S	2 8	1	Terminal No. Color of Signal Name	2 SB DOOR SW (DR)					
S (LOW)			Signal Name	I		Signal Name	ı	-	_	-	I								
b. E215 ame HORN	_		Color of Wire	U		Color of Wire	٦	рП	SB	BB	Μ								
Connector No. E215 Connector Name HORN (LOW) Connector Color Bl ACK		哥 H.S.	Terminal No.	-		Terminal No.	6.1	13J	17.1	22J	25J								
Connector No. E202 Connector Name WIRE TO WIRE Connector Color WHITE		(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	Terminal No. Color of Signal Name	5 G		Connector No. B1 Connector Name WIRE TO WIRE	Connector Color WHITE			31 41 51 61 71 81	11 22 103 113 143 143 163 173	18J 19J 20J 22J 23J 24J 25J 25J	11 32 33 34 35 36 37	(382) (383) (40.0) (4.1.0) (4.2.0) (4.3.0) (4.4.0) (4.2.0)	49J 56J 57J 58J 58J 58J 68J 68J 68J 68J 68J	84.) [83.] [67.] [88.] [67.] [89.] [70.] [71.] [72.] [73.] [824 854 854 857 858 859	[833 944 953 964 973 984 993	

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	REAR BUMPER ANTENNA GRAY	<		Signal Name	ANT+	ANT-	
	ne RE/ or GR/			Solor of Wire	_	ГG	
Connector No.	Connector Name REAR Connector Color GRAY	•	H.S.	Terminal No. Wire	-	2	
	Connector Name SOLENDIA SOUTCH SOLENDIA SOLENDIA SOLENDIA	ITE	0 4 T	Signal Name	ı	ı	
B28	ne ANE SOI	or WH		Solor of Wire	8	В	
Connector No.	Connector Nar	Connector Color WHITE	图 H.S.	Terminal No. Wire	-	2	
	Connector Name REAR DOOR SWITCH LH Connector Color WHITE		<u> </u>	Signal Name	DOOR SW (RL)		
. B18	me REAR I			Color of Wire	BR		
Connector No.	Connector Name Connector Color	ą.	H.S.	Terminal No. Wire	2		

B116	Connector Name REAR DOOR SWITCH RH	WHITE		Signal Name	DOOR SW (RR)
	ame RE			Color of Wire	В
Connector No.	Connector Na	Connector Color	H.S.	Terminal No. Wire	2
	Ī-		l		I
	GH R				
80	ONT DOOR SWIT	HTE		Signal Name	DOOR SW (AS)
Connector No. B108	Connector Name FRONT DOOR SWITCH RH	Connector Color WHITE		Terminal No. Wire Signal Name	GR DOOR SW (AS)

4	WIRE TO WIRE	BROWN	7 8 9 10 11 12	Signal Name	I	1
- DIO			<u>- 0</u>	Color of Wire	GR	В
Collinector No.	Connector Name	Connector Color	H.S.	Terminal No.	10	1

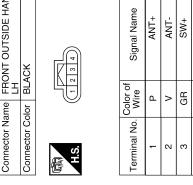
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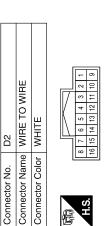
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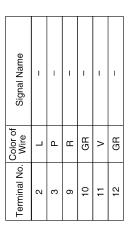
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Connector Name FRONT OUTSIDE HANDLE LH Connector Color BLACK	Connector No.	D6
	Connector Name	FRONT OUTSIDE HANDLE LH
		BLACK











Signal Name	ı	I	-
Color of Wire	GR	В	GR/R
Terminal No.	-	8	6

D8	Connector Name AND DOOR LOCK/UNLOCK SWITCH	WHITE	
Connector No.	Connector Name	Connector Color WHITE	Ð

	S 	
Connector Na	me ANE SWI	Connector Name AND DOOR LOCK/UNLOC SWITCH
Connector Color WHITE	olor WHI	TE
H.S.		7 18 19
Terminal No. Wire	Color of Wire	Signal Name
17	В	GND
4	89	XUU I

Signal Name	LOCK	UNLOCK (WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM)	UNLOCK (WITH LEFT FRONT ONLY POWER WINDOW ANTI-PINCH SYSTEM)	COM
Color of Wire	Г	В	GR/R	GR
Terminal No.	4	9	9	14

Connector No.	D7
Connector Name	Connector Name AND DOOR LOCK/UNLOCK SWITCH
Connector Color WHITE	WHITE
H.S.	1 2 3 4

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SW-

onnector No. D101	D101	Connector No. D102	D102
Sonnector Name	onnector Name WIRE TO WIRE	Connector Name	onnector Name WIRE TO WIRE
Connector Color WHITE	WHITE	Connector Color WHITE	WHITE

D10	FRONT DOOR LOCK ASSEMBLY LH	GRAY	2 3 4 4 5 6
Connector No.	Connector Name	Connector Color GRAY	H.S.

Signal Name	GND	DOOR_KEY/C_ UNLOCK_SW_	DOOR_KEY/C_ LOCK_SW
Color of Wire	В	æ	Г
Terminal No. Wire	4	5	9

Signal Name	1	-	ı	_	ı
Color of Wire	GR	Н	GR/R	GR	٦
Terminal No. Wire	2	5	7	6	12

Signal Name	ı	ı	
Color of Wire	В	ш	
Terminal No. Wire	5	8	

Signal Name	GND	DOOR_KEY/C_UNLOCK_SW	DOOR_KEY/C_ LOCK_SW
Color of Wire	В	Œ	Г
Terminal No. Wire	4	ß	9

90	FRONT OUTSIDE HANDLE RH	, CK	2 3 4	Signal Name	ANT+	ANT-	SW+
D106		olor BLACK		Color of Wire	ш	د	GR
Connector No.	Connector Name	Connector Color	斯 H.S.	Terminal No. Wire	1	2	က

Connector No.	D105
Connector Name	POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH (WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM)
Connector Color WHITE	WHITE
而 H.S.	2 3 4

			. ₹ ₹	당	WINDOW SYSTEM)	>=	Ż	≟	[€	WINDOW ANTI-PINCH SYSTEM)
Connector Color WHITE	Color	_	≱	⊑	ш					
管	- 8	21 0	e 0	4 =	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	□ =	€ 1	9 5	7 1	
Ŋ̈́]	11		1	11		1	1	_

Signal Name	GND	COM
Color of Wire	В	В
Terminal No.	11	16

Signal Name

Color of Wire

Terminal No.

LOCK

GR/R B

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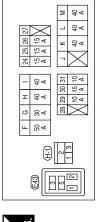
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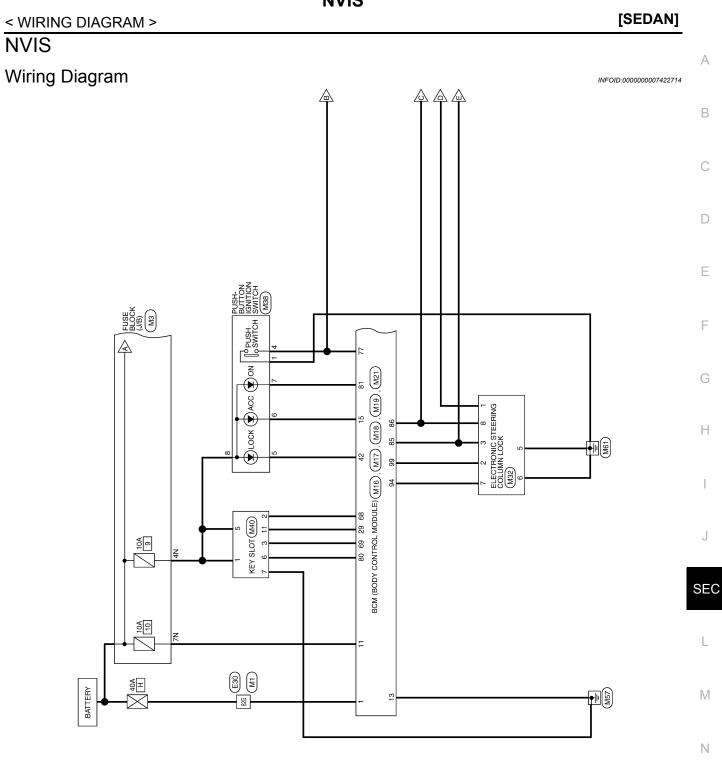
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	Signal Name	_	_	_
	Color of Wire	Μ	SB	0
J	Terminal No. Wire	-	2	3

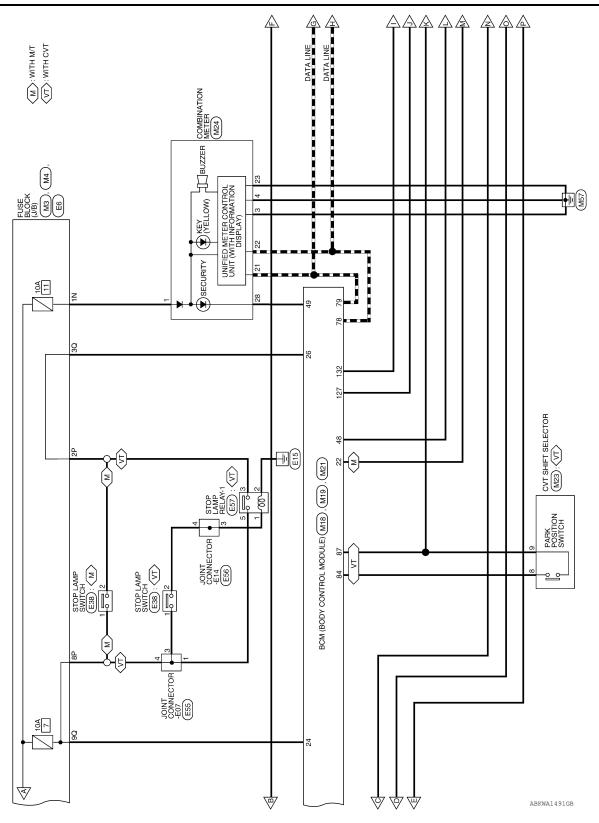
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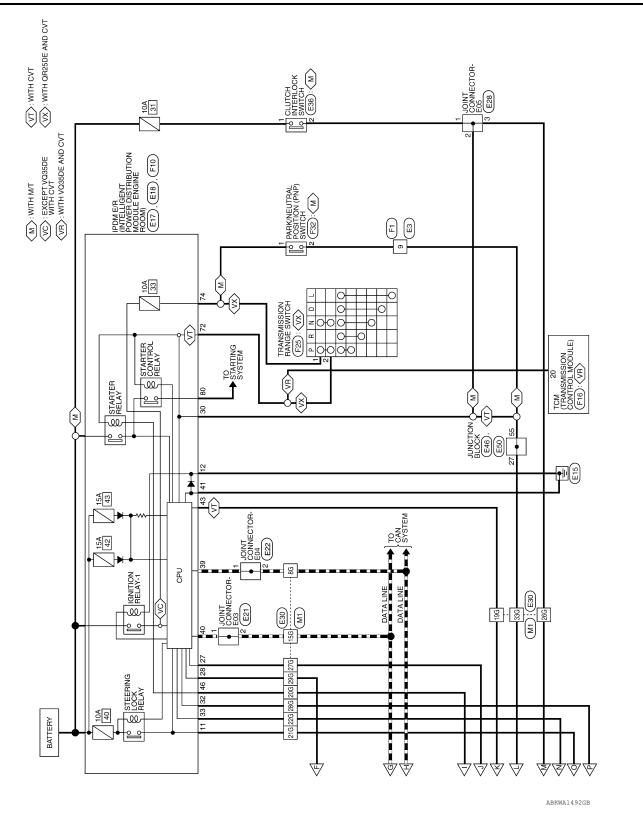


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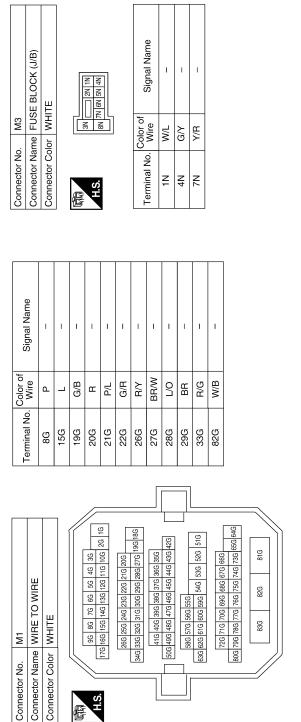
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NVIS CONNECTORS



M17	Connector Name BCM (BODY CONTROL MODULE)	WHITE	
Connector No.	Connector Name	Connector Color WHITE	



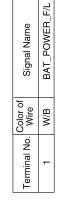


Connector Name BCM (E MODUI	Connector Name BCM (BODY CONTROL MODULE) Connector Color BLACK
原 H.S.	<u> </u>

M16

Connector No.





Connector No.). M4	
Connector Name		FUSE BLOCK (J/B)
Connector Color	olor WHITE	ПЕ
可 H.S.	100 900 1	40 S0
Terminal No.	Color of Wire	Signal Name
30	O/L	_
g 6	R/W	I

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NVIS [SEDAN] < WIRING DIAGRAM >

								01			
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	BR	Ь	Г	R/L	LG	Y/R	0/7	G/R	G/B	G/Y	₹
Terminal No.	77	78	79	80	81	84	85	86	87	94	66

Connector No.	M19	_										
Connector Name	BCM (BODY CONTROL MODULE)		βŵ	ž	18	ΙĘ	<u>بر</u>	占				
Connector Color	BLACK	S										
原动 H.S.]		
	Ц	\parallel	W	\Box								
79 78 77 76 75 74 73	73 72 71	20	70 69 68 67	88	120	99	65 64 63	4	9	62 61	99	
99 98 97 96 95 94 93	3 92 91	8	90 89 88 87	88		98	86 85 84	22	83	82 81	8	
Terminal No. Wire	Color of Wire		Š	Signal Name	<u>Z</u>	a	<u> </u> မွ					

M18	BCM (BODY CONTROL MODULE)	Connector Color GREEN		36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20	58 57 56 55 54 53 52 51 50 49 48 47 46 45 44 43 42 41 40
	Connector Name	lor		34 33	54 53
Connector No.	. Na	r Co		35	22
ᅙ	ᅙ	tol		8	92
ĕ	ĕ)ec	(i)	38 37	22
ř	=	'n	H.S.		
ŏ	ŏ	ပ	喧	33	29

of 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	₽Y	₩.	O/L	>	Œ	B/G	0/1
Terminal No.	22	24	56	59	42	48	49

FOB_READER_CLOCK FOB_READER_DATA

G/0 0

89

Connector No.). M23	
Connector Na	ıme CVT	Connector Name CVT SHIFT SELECTOR
Connector Color	olor WHITE	ТЕ
原 H.S.	- 2	4 5 6 8 10 4 5 6 8 10
Terminal No.	Color of Wire	Signal Name
80	Y/R	DETENT_KEY_SW
c	ز	140 XLX

Connector No.	M21
Connector Name	Connector Name BCM (BODY CONTROL MODULE)
Connector Color GRAY	GRAY

	131 130 129 128 127 126 125 124 123 122 121 120 119 118 117 116 115 114 113 112	151 150 149 148 147 146 145 144 143 142 141 140 139 138 137 136 135 134 133 132	Signal Name	IGN USM CONT1
	124 123 122 12	144 143 142 14		BR/W
	28127126125	48 147 146 149	No. No.	
H.S.	131 130 129 12	151 150 149 14	Terminal No. Wire	127

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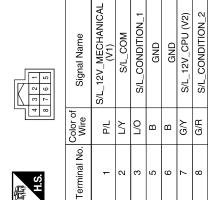
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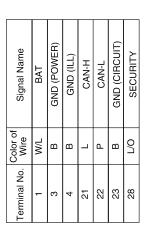
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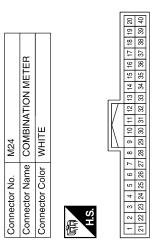
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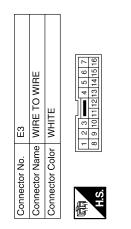
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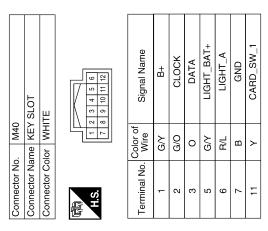
Connector No.	M32
Connector Name	Connector Name ELECTRONIC STEERING COLUMN LOCK
Connector Color WHITE	WHITE











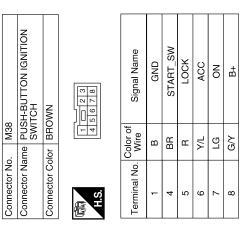
Signal Name

Color of Wire

Terminal No.

BB

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WHITE Ill 4 3 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Connector No. Connector Name Connector Color H.S. Terminal No. Color
Name :SCL POWER) SIGNAL START_SW TH M/T) WITH CVT) NDITION_1

Connector No.	E17
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color WHITE	WHITE



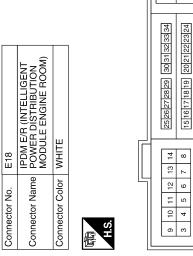


Signal Name	CAN-L	CAN-H	GND (SIGNAL)	RANGE SW	START_CONT
Color of Wire	Ь	٦	В	\	BR
Terminal No.	39	40	41	43	46

Connector No. E6 Connector Name FUSE BLOCK (J/B) Connector Color WHITE	77P 68P 58P 48P 37P 12P 17P 16P 18P 18P 18P 18P 18P 18P 18P 18P 18P 18
--	--

Signal Name	– (WITH M/T)	- (WITH CVT)	_
Color of Wire	ГG	Υ	В
Terminal No. Wire	2P	2P	8P

Signal Name	ESCL	GND (POWER)	IGN_SIGNAL	PUSH_START_SW	CLUTCH_I/L_SW (WITH M/T)	ECM (WITH CVT)	SL_CONDITION_1	SL_CONDITION_2
Color of Wire	0	В	Μ	SB	Œ	BR	Ь	G
Terminal No.	11	12	22	28	30	30	32	88



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[SEDAN] < WIRING DIAGRAM >

Signal Name

No. E36	Name CLUTCH INTERLOCK SWITCH	Color BROWN		Color of Signal Name	M	- a
Connector No.	Connector Name	Connector Color	H.S.	Terminal No. Wire	-	٥

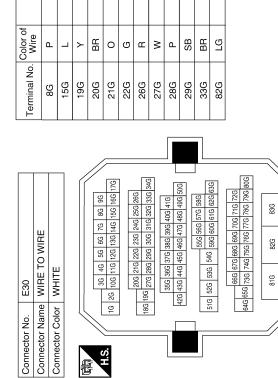
8	Connector Name JOINT CONNECTOR-E05	ITE	3210	Signal Name	1	ı	I
E28	ne JOI	or	4	Color of Wire	œ	œ	ш
Connector No.	Connector Na	Connector Color WHITE	用.S.	Terminal No. Wire	1	2	3
					•		1
2	lame JOINT CONNECTOR-E04	WHITE	4 3 2 1 0	Signal Name	ı	ı	
. E22	me JO	color W		Color of Wire	۵	_	
ġ.	ā	Q					1

Terminal No.

N

Connector Name Connector Color

Connector No.



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Connector No.

NVIS [SEDAN] < WIRING DIAGRAM >

		_					_		
E46	Connector Name JUNCTION BLOCK	J	31 30 29 29 (re Signal Name	BB -			
Connector No.	Connector Name JUNCT		H.S.	Colc	Terminal No. Wire	27 B			
	P LAMP SWITCH H M/T)	CK	2 1		Signal Name		ı	1	
Connector No. E38	Connector Name STOP LAMP SWITCH (WITH M/T)	Connector Color BLACK	H.S.		Color of Terminal No	ANILE NAILE	т С	2 LG	
38	Connector Name STOP LAMP SWITCH (WITH CVT)	HITE	10 1		Signal Namo		ı	1	
o. E38	ame ST (W	olor W			Color o	wire	ш	ГG	
Connector No.	Connector N	Connector Color WHITE	雨. H.S.		Terminal No		-	2	

Connector No.	. E55		Connector No.	. E56	
Connector Na	me JOII	Connector Name JOINT CONNECTOR-E07	Connector Nar	me JOIN	Connector Name JOINT CONNECTOR-E14
Connector Color WHITE	lor WH	ПЕ	Connector Color WHITE	lor WHIT	Щ
H.S.	4	3 2 1	所 H.S.	4	3 2 1
Terminal No. Color of Wire	Color of Wire	Signal Name	Terminal No. Wire	Color of Wire	Signal Name
-	≯	ı	က	re	ı
ဇ	æ	1	4	P.	1
4	۳	ı			

	JUNCTION BLOCK	WHITE	26 55	Signal Name	1
). E50		-		Color of Wire	BB
Connector No.	Connector Name	Connector Color	题 H.S.	Terminal No.	55

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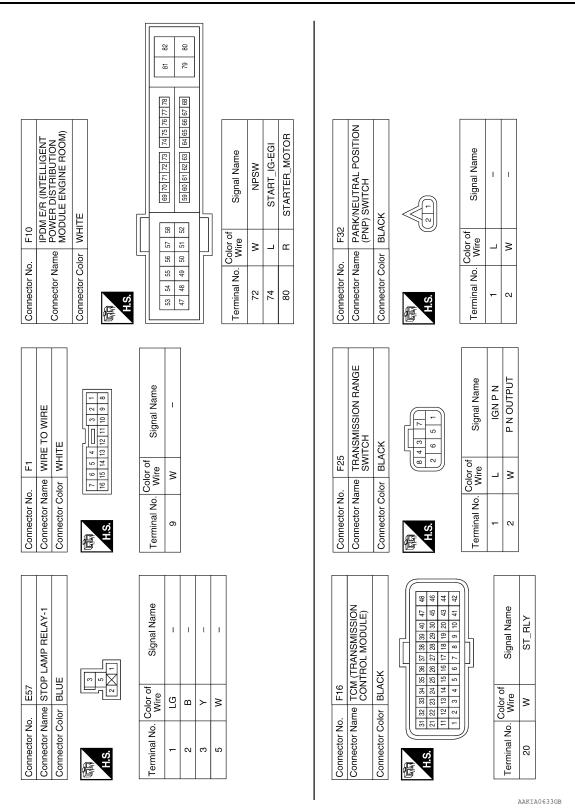
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NVIS [SEDAN] < WIRING DIAGRAM >



INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION SYMPTOMS

< SYMPTOM DIAGNOSIS > [SEDAN]

SYMPTOM DIAGNOSIS

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION SYMPTOMS

Symptom Table

Engine cannot be started with all Intelligent Keys.

CAUTION:

- Follow Trouble Diagnosis Flowchart referring to "<u>SEC-222, "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.
- 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 pro	ocedure	Reference page
1. Check newer supply and ground circuit	ВСМ	BCS-36
Check power supply and ground circuit	IPDM E/R	PCS-20
2. Check push button ignition switch	SEC-339	
3. Check Intermittent Incident		<u>GI-42</u>

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VEHICLE SECURITY SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000007422716

Procedure			Diagnostic procedure	Refer to page
Symptom		tom	- Diagnostic procedure	Neier to page
	Vehicle security system cannot be set by	Door switch	Check door switch	<u>DLK-289</u>
		Trunk	Check trunk room lamp switch	DLK-321
		Door outside key	Check key cylinder switch	DLK-306
1		Intelligent Key	Check Intelligent Key.	DLK-353
		_	Check Intermittent Incident	<u>GI-42</u>
	Security indicator does not turn ON.		Check vehicle security indicator	SEC-359
			Check Intermittent Incident	<u>GI-42</u>
	* Vehicle security system does not sound alarm when ····	Any door is opened.	Check door switch	DLK-289
2			Check Intermittent Incident	<u>GI-42</u>
	Vehicle security alarm does not activate.	Horn alarm	Check horn	<u>SEC-355</u>
_			Check Intermittent Incident	<u>GI-42</u>
3		Head lamp alarm	Check head lamp alarm	SEC-357
			Check Intermittent Incident	<u>GI-42</u>
	Vehicle security system cannot be canceled by ····	Door outside key	Check key cylinder switch	SEC-350
4			Check Intermittent Incident	<u>GI-42</u>
4		Intelligent Key	Check Intelligent Key	DLK-353
			Check Intermittent Incident	<u>GI-42</u>

^{*:} Check that the system is in the armed phase.

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS SYMPTOMS

< SYMPTOM DIAGNOSIS >

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NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS SYMPTOMS

Symptom Table

Security indicator does not turn ON or flash.

CAUTION:

- Follow Trouble Diagnosis Flowchart referring to "<u>SEC-222, "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
Check vehicle security indicator	<u>SEC-359</u>
2. Check Intermittent Incident	<u>GI-42</u>

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PRECAUTIONS

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PRECAUTION

PRECAUTIONS

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

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

WARNING:

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

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

Precaution Necessary for Steering Wheel Rotation After Battery Disconnect

INFOID:0000000007422719

NOTE:

- Before removing and installing any control units, first turn the push-button ignition switch to the LOCK position, then disconnect both battery cables.
- After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- Always use CONSULT to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

This vehicle is equipped with a push-button ignition switch and a steering lock unit.

If the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.

If turning the steering wheel is required with the battery disconnected or discharged, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

Connect both battery cables.

NOTE:

Supply power using jumper cables if battery is discharged.

- 2. Carry the Intelligent Key or insert it to the key slot and turn the push-button ignition switch to ACC position. (At this time, the steering lock will be released.)
- Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.
- Perform the necessary repair operation.

PRECAUTIONS

< PRECAUTION > [SEDAN]

5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the push-button ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the push-button ignition switch is turned to LOCK position.)

Perform self-diagnosis check of all control units using CONSULT.

Precaution for Work

• When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.

- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- · Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components.
- Water soluble dirt: Dip a soft cloth into lukewarm water, and wring the water out of the cloth to wipe the dirty area.

Then rub with a soft and dry cloth.

- Oily dirt: Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%), and wipe the dirty area.
 - Then dip a cloth into fresh water, and wring the water out of the cloth to wipe the detergent off. Then rub with a soft and dry cloth.
- Do not use organic solvent such as thinner, benzene, alcohol, or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

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PREPARATION

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PREPARATION

PREPARATION

Special Service Tools

INFOID:0000000007422721

Tool number (Kent-Moore No.) Tool name		Description
— (J-46534) Trim Tool Set	AWJIA048322	Removing trim components

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REMOVAL AND INSTALLATION

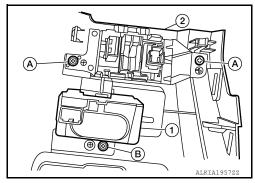
KEY SLOT

Removal and Installation

INFOID:0000000007422722

REMOVAL

- 1. Remove the instrument lower panel LH. Refer to IP-18. "Removal and Installation".
- 2. Remove the switch assembly screws (A), remove the key slot screw (B), and then remove key slot (1) from instrument lower panel LH (2).



INSTALLATION

Installation is in the reverse order of removal.

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PUSH BUTTON IGNITION SWITCH

Removal and Installation

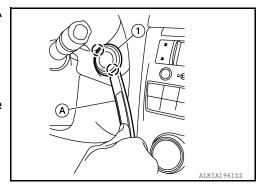
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REMOVAL

- 1. Remove the push button ignition switch (1) from cluster lid A using suitable tool (A).
 - (_): Pawl

Tool number : — (J-46534)

2. Disconnect the electrical harness connector and remove the push button ignition switch.



INSTALLATION

Installation is in the reverse order of removal.