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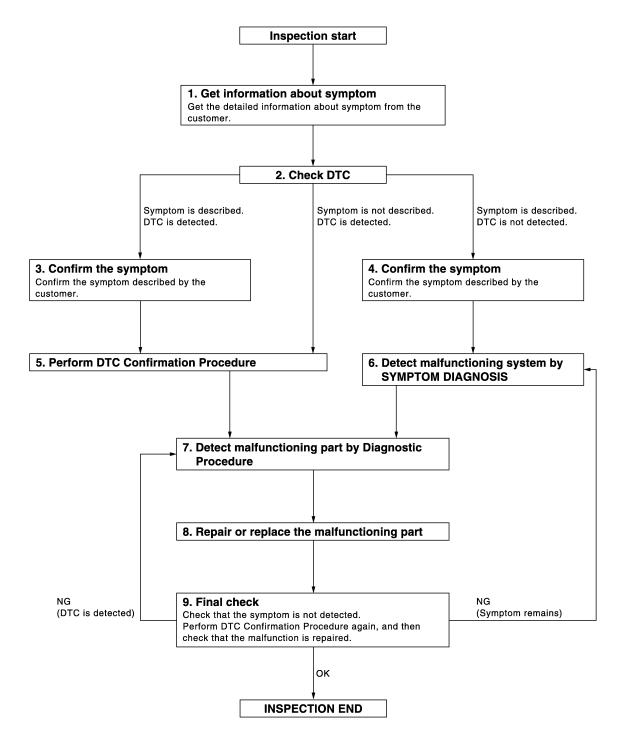
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BASIC INSPECTION DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:000000005037540

OVERALL SEQUENCE



DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[WITH INTELLIGENT KEY SYSTEM]

1. GET INFORMATION ABOUT SYMPTOM
Get detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurrs).
>> GO TO 2.
2. CHECK DTC
1. Check BCM and IPDM E/R for DTC.
 Perform the following procedure if DTC is detected.
- Record DTC and freeze frame data (Print them out using CONSULT-III.)
 Erase DTC. Study the relationship between the cause detected by DTC and the symptom described by the customer.
3. Check related service bulletins for information.
Are any symptoms described and any DTC detected?
Symptom is described, DTC is detected>>GO TO 3.
Symptom is described, DTC is not detected>>GO TO 4.
Symptom is not described, DTC is detected>>GO TO 5.
3.CONFIRM THE SYMPTOM
Confirm the symptom described by the customer. Connect CONSULT-III to the vehicle in the "DATA MONITOR" mode and check real time diagnosis results. Verify relation between the symptom and the condition when the symptom is detected.
>> GO TO 5.
4.CONFIRM THE SYMPTOM
Confirm the symptom described by the customer. Connect CONSULT-III to the vehicle in the "DATA MONITOR" mode and check real time diagnosis results. Verify relation 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 detected DTC, and then check that DTC is detected again. At this time, always connect CONSULT-III to the vehicle, and check diagnostic results in real time. If two or more DTCs are detected, refer to <u>SEC-169</u> , " <u>DTC Inspection Priority Chart</u> " (BCM) or <u>SEC-187</u> . " <u>DTC Index</u> " (IPDM E/R), and determine trouble diagnosis order.
Is DTC detected?
YES >> GO TO 7. NO >> Refer to GI-34, "Intermittent Incident".
6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM DIAGNOSIS
Detect malfunctioning system according to SYMPTOM DIAGNOSIS based on the confirmed symptom in step 4, and determine the trouble diagnosis order based on possible causes and symptom.
>> GO TO 7.
7. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE
Inspect according to Diagnostic Procedure of the system. NOTE:
The Diagnostic Procedure is described based on open and short circuit inspection.
Is malfunctioning part detected?
YES >> GO TO 8.
NO >> Check voltage of related BCM terminals using CONSULT-III.
8. REPAIR OR REPLACE THE MALFUNCTIONING PART
1. Repair or replace the malfunctioning part.

Revision: 2009 March

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[WITH INTELLIGENT KEY SYSTEM]

- 2. Reconnect parts or connectors disconnected during Diagnostic Procedure again after repair and replacement.
- 3. Check DTC. If DTC is detected, erase it.

>> GO TO 9.

9.FINAL CHECK

When DTC is detected in step 2, perform DTC Confirmation Procedure or Component Function Check again, and then check that the malfunction is repaired securely.

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

Does the symptom reappear?

- YES (DTC is detected)>>GO TO 7.
- YES (Symptom remains)>>GO TO 6.
- NO >> INSPECTION END

INSPECTION AND ADJUST	ſMENT	
< BASIC INSPECTION >	[WITH INTELLIGENT KEY SYSTEM]	
INSPECTION AND ADJUSTMENT		
ECM RECOMMUNICATING FUNCTION	A	
ECM RECOMMUNICATING FUNCTION : Description	INFOID:00000005037541	
Performing the following procedure can automatically activate record when the ECM is replaced with a new one*.	mmunication of ECM and BCM, but only	
*: New one means a virgin ECM that is never energized on-board. (In this step, initialization procedure by CONSULT-III is not necessar	у) С	
 NOTE: When registering new Key IDs or replacing the ECM that is not ation Manual NATS-IVIS/NVIS. If multiple keys are attached to the key holder, separate them I 	D	
 Distinguish keys with unregistered key IDs from those with registered key IDs from those key IDs		
ECM RECOMMUNICATING FUNCTION : Special Re	pair Requirement	
1. PERFORM ECM RECOMMUNICATING FUNCTION	F	
1. Install ECM.		
 Contact backside of registered Intelligent Key* to push-button ign *: To perform this step, use the key that is used before performing 	g ECM replacement.	
 Maintain ignition switch in the "ON" position for 5 seconds or mo Turn ignition switch to "OFF". 	re. G	
5. Start engine. Can engine be started?	н	
YES >> Procedure is complete.		
NO >> Initialize control unit. Refer to CONSULT-III Operation M	anual NATS-IVIS/NVIS.	
	I	
	J	

SEC

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< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

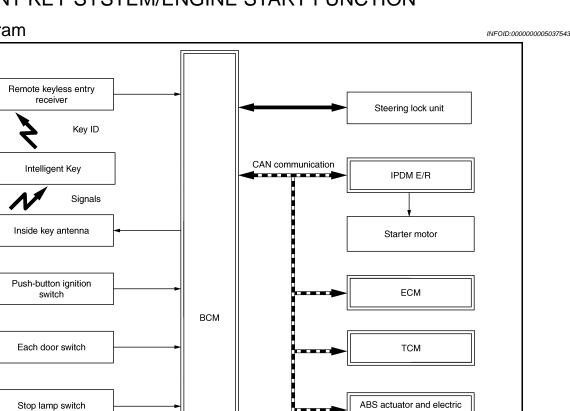
unit (control unit)

Combination meter

SYSTEM DESCRIPTION

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

System Diagram



System Description

INFOID:000000005037544

JMKIA4031GB

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 an electronic ID using two-way communication when pressing the push-button ignition switch while carrying the Intelligent Key, which operates based on the results of electronic ID verification of Intelligent Key using two-way communication between the Intelligent Key and the vehicle.

NOTE:

The driver should carry the Intelligent Key at all times.

CVT shift selector

(detention switch)

Transmission range switch

- Intelligent Key has 2 IDs [Intelligent Key and 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 Intelligent Key battery is discharged, engine can be started by operating push-button ignition switch after contacting Intelligent Key backside to push-button ignition switch. At that time, verification is performed by immobilizer ID.
- If the ID is successfully verified, when push-button ignition switch is pressed, steering lock is released and the engine can be started.

SEC-10

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

to N R	p to 4 Intelligent Keys can be registered (Including the standard Intelligent Key) upon request from the cus- omer. OTE: efer to <u>DLK-16, "INTELLIGENT KEY SYSTEM : System Description"</u> for any functions other than engine	A
st	art function of Intelligent Key system.	В
	ECAUTIONS FOR INTELLIGENT KEY SYSTEM	
into fore In t	the Intelligent Key system, the transponder [the chip for NVIS (NATS) ID verification] is integrated to the Intelligent Key. (For the conventional models, it is integrated into the mechanical key.) There- e, ID verification cannot be performed by mechanical key only and engine cannot be started. that case, immobilizer ID verification can be performed when Intelligent Key backside is contacted bush-button ignition switch. If verification result is OK, engine can be started.	С
•	ERATION WHEN INTELLIGENT KEY IS CARRIED	D
1.	When the push-button ignition switch is pressed, the BCM activates the inside key antenna and transmits	
	the request signal to the Intelligent Key.	Е
2.	The Intelligent Key receives the request signal and transmits the Intelligent Key ID signal to the BCM via the remote keyless entry receiver.	
3.	The Intelligent Key receives the Intelligent Key ID signal and verifies it with the registered ID.	F
4.	BCM transmits the steering lock unlock signal to steering lock unit and IPDM E/R if the verification results are OK.	
5.	IPDM E/R turns the steering lock relay ON and supplies power supply to the steering lock unit.	G
6.	The steering lock releases.	
7.	BCM transmits the power supply stop signal to IPDM E/R when detecting that the steering lock is in the unlock condition.	Н
8.	IPDM E/R turns the steering lock relay OFF and stops power supply to the steering lock unit.	
9.	BCM turns ACC relay ON and transmits the ignition power supply ON signal to IPDM E/R.	
	IPDM E/R turns the ignition relay ON and starts the ignition power supply.	I
	BCM detects that the selector lever position and brake pedal operating condition.	
	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.	J
	IPDM E/R turns the starter control relay ON when receiving the starter request signal.	
14.	Power supply is supplied through the starter relay and the starter control relay to operate the starter motor and start cranking. CAUTION: If a malfunction is detected in the Intelligent Key system, the "KEY" warning lamp in the combina-	SEC
	tion meter illuminates. At that time, the engine cannot be started.	L
15.	When BCM receives feedback signal from ECM indicating that the engine is started, the BCM transmits a stop signal to IPDM E/R and stops cranking by turning OFF the starter motor relay. (If engine start is unsuccessful, cranking stops automatically within 5 seconds.) CAUTION:	M
	When the Intelligent Key is carried outside of the vehicle (inside key antenna detection area) while the power supply is in the ACC or ON position, even if the engine start condition* is satisfied, the engine cannot be started.	Ν
	or the engine start condition, refer to "POWER SUPPLY POSITION CHANGE TABLE BY PUSH-BUTTON NITION SWITCH OPERATION".	
OP	ERATION RANGE	0
Eng	gine can be started when Intelligent Key is inside the vehicle. However, sometimes engine may not start en Intelligent Key is on instrument panel or in glove box.	D
	GINE START OPERATION WHEN INTELLIGENT KEY IS HELD CLOSE TO PUSH-BUTTON IG- TION SWITCH	Ρ
Wh and	en Intelligent Key battery is discharged, immobilizer ID verification between transponder in Intelligent Key BCM is performed when Intelligent Key backside is contacted to push-button ignition switch. Engine can started.	

BATTERY SAVER SYSTEM

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

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

- The ignition switch is in the ACC position
- All doors are closed
- Selector lever is in the P position

Reset Condition of Battery Saver System

In order to prevent the battery from discharging, the battery saver system cuts off the power supply when all doors are closed, the selector lever is in the P position, and the ignition switch is left in the ACC position for 60 minutes. If any of the following conditions are met the battery saver system is released and the steering changes automatically to the lock position from the OFF position.

- Opening any door
- Operating door lock using door request switch
- Operating door lock using Intelligent Key

Press push-button ignition switch and ignition switch changes to the ACC position from the OFF position.

STEERING LOCK OPERATION

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

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

POWER SUPPLY POSITION CHANGE TABLE BY PUSH-BUTTON IGNITION SWITCH OPERA-TION

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 and when Intelligent Key backside is contacted to push-button ignition switch, it is equivalent to the operations below.
- When starting the engine, the BCM monitors under the engine start conditions,
- Brake pedal operating condition
- Selector lever position
- Vehicle speed

Vehicle speed: less than 4 km/h (2.5 MPH)

	Engine start	Push-button ignition switch	
Power supply position	Selector lever	Brake pedal operation condi- tion	operation frequency
$LOCK\toACC$	_	Not depressed	1
$LOCK\toACC\toON$	_	Not depressed	2
$LOCK \to ACC \to ON \to OFF$	_	Not depressed	3
$\begin{array}{l} LOCK \to START \\ ACC \to START \\ ON \to START \end{array}$	P or N position	Depressed	1
Engine is running \rightarrow OFF	_	—	1

Vehicle speed: 4 km/h (2.5 MPH) or more

	Engine start/stop condition		Push-button ignition switch	
Power supply position	Selector lever	Brake pedal operation condi- tion	operation frequency	
Engine is running $\rightarrow ACC$	—	—	Emergency stop operation	
Engine stall return operation while driving	N position	Not depressed	1	

Emergency stop operation

• Press and hold the push-button ignition switch for 2 seconds or more.

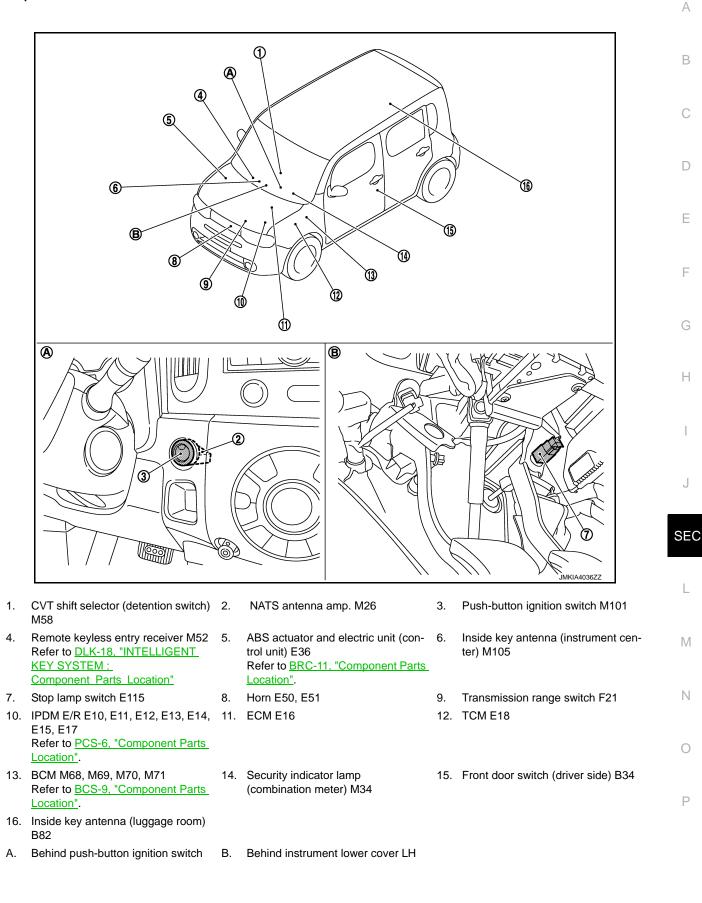
• Press the push-button ignition switch 3 times or more within 1.5 seconds.

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Component Parts Location

INFOID:000000005037545



INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION SCRIPTION > [WITH INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

Component Description

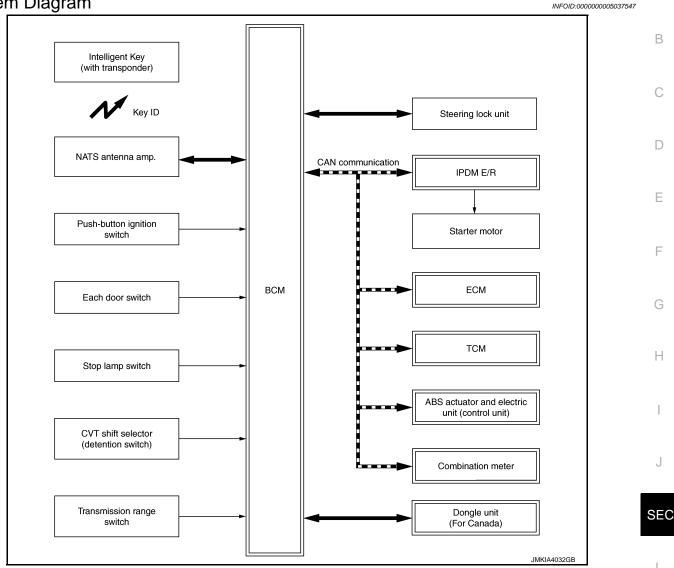
INFOID:000000005037546

Component	Reference
BCM	<u>SEC-82</u>
Steering lock unit	<u>SEC-75</u>
Push-button ignition switch	<u>SEC-51</u>
Door switch	<u>DLK-55</u>
CVT shift selector (detention switch)	<u>SEC-106</u>
Inside key antenna	<u>DLK-44</u>
Remote keyless entry receiver	<u>DLK-75</u>
Stop lamp switch	<u>SEC-49</u>
ТСМ	<u>SEC-65</u>
Steering lock relay	<u>SEC-84</u>
Starter relay	<u>SEC-70</u>
Starter control relay	<u>SEC-101</u>
Security indicator lamp	<u>SEC-113</u>
Key warning lamp	<u>DLK-88</u>

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS < SYSTEM DESCRIPTION > [WITH INTELLIGENT KEY SYSTEM]

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

System Diagram



System Description

INFOID:000000005037548

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SYSTEM DESCRIPTION

- The NVIS (NATS) is an anti-theft system that registers an Intelligent Key ID to the vehicle and prevents the engine from being started by an unregistered Intelligent Key. It has higher protection against auto theft involving the duplication of mechanical keys.
- It performs ID verification when starting the engine in the same way as the Intelligent 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 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 backside is contacted to push-button ignition switch. If the verification results are OK, the engine start operation can be performed by the push-button ignition switch operation.
- Locate the security indicator lamp and apply the anti-theft system equipment sticker that warns that the NVIS (NATS) is onboard the model.
- Security indicator lamp always blinks when the power supply position is in any position except the ON position.
- Up to 4 Intelligent Keys can be registered (including the standard ignition key) upon request from the owner.

SEC-15

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

- Specified registration is required when replacing ECM, BCM, or Intelligent Key. For the registrations procedures for NVIS (NATS) and Intelligent Key when installing the BCM, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.
- Possible symptom of NVIS (NATS) malfunction is "Engine cannot start". 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-6, "Work Flow"</u>.
- If ECM other than genuine part is installed, the engine cannot be started. For ECM replacement procedure, refer to <u>EC-15</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT</u> : <u>Special Repair Require-</u><u>ment</u>".

PRECAUTIONS FOR KEY REGISTRATION

- The key registration is a procedure that erases the current NVIS (NATS) ID once, and then reregisters a new ID operation. Therefore a 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, perform only one procedure to simultaneously register both ID (NVIS "NATS" ID and Intelligent Key ID).

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 Intelligent Key backside is contacted to push-button ignition switch. 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 LAMP

- Warns that the vehicle is equipped with NVIS (NATS).
- Security indicator lamp always blinks when the ignition switch is in any position except the ON position. **NOTE:**

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

ENGINE START OPERATION WHEN INTELLIGENT KEY IS CONTACTED TO PUSH-BUTTON IGNITION SWITCH

- 1. When brake pedal is depressed while selector lever is in the P position, BCM activates immobilizer antenna amplifier that is located on push-button ignition switch backside.
- When Intelligent Key (transponder built-in) backside is contacted to push-button ignition switch, immobilizer ID verification is started between Intelligent Key built-in transponder and immobilizer antenna amplifier.
- 3. When immobilizer ID verification result is OK, buzzer in combination meter sounds.
- 4. BCM transmits immobilizer ID verification result to ECM via CAN communication.
- 5. When push-button ignition switch is pressed, BCM transmits steering unlock signal to steering lock unit and IPDM E/R.
- 6. IPDM E/R supplies power supply to steering lock unit via steering lock relay.
- 7. When unlocking steering lock, steering lock unit unlocks steering lock.
- 8. When BCM detects that steering is unlocked, power supply stop signal is transmitted to IPDM E/R.
- 9. IPDM E/R turns steering lock relay OFF and stops power supply to steering lock unit.
- 10. BCM turns ACC relay ON and transmits ignition power supply ON signal to IPDM E/R.
- 11. IPDM E/R turns ignition relay ON and starts ignition power supply.
- 12. BCM detects that the shift position is P or N.
- BCM transmits starter request signal to IPDM E/R via CAN communication. When engine start conditions* are satisfied, BCM turns starter motor relay in IPDM E/R ON.
- 14. When starter request signal is received, IPDM E/R turns starter motor control relay ON.
- 15. IPDM E/R supplies power supply via starter motor relay and starter motor control relay, activates starter motor, and starts cranking.
- 16. When BCM receives engine start or speed feedback signal from ECM, BCM transmits stop signal to IPDM E/R, turns starter motor relay OFF, and stops cranking.

POWER SUPPLY POSITION CHANGE TABLE BY PUSH-BUTTON IGNITION SWITCH OPERA-TION

SEC-16

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

The power supply position changing operation can be performed with the following operations. • When an Intelligent Key is within the detection area of inside key antenna and when Intelligent Key backside is contacted to push-button ignition switch, it is equivalent to the operations below.

- When starting the engine, the BCM monitors under the engine start conditions,
- Brake pedal operating condition
- Selector lever position
- Vehicle speed

NOTE:

Vehicle speed: less than 4 km/h (2.5 MPH)

	Engine start/stop condition		Duch hutten impition quitch	
Power supply position	Selector lever	Brake pedal operation condi- tion	Push-button ignition switch operation frequency	
$LOCK \to ACC$		Not depressed	1	
$LOCK\toACC\toON$	_	Not depressed	2	
$LOCK \to ACC \to ON \to OFF$	_	Not depressed	3	
$\begin{array}{l} LOCK \to START \\ ACC \to START \\ ON \to START \end{array}$	P or N position	Depressed	1	
Engine is running \rightarrow OFF	_	_	1	

Vehicle speed: 4 km/h (2.5 MPH) or more

	Engine start/	stop condition	Push-button ignition switch	.
Power supply position	Selector lever	Brake pedal operation condi- tion	operation frequency	
Engine is running $\rightarrow ACC$	—	—	Emergency stop operation	•
Engine stall return operation while driving	N position	Not depressed	1	

Emergency stop operation

• Press and hold the push-button ignition switch for 2 seconds or more.

• Press the push-button ignition switch 3 times or more within 1.5 seconds.

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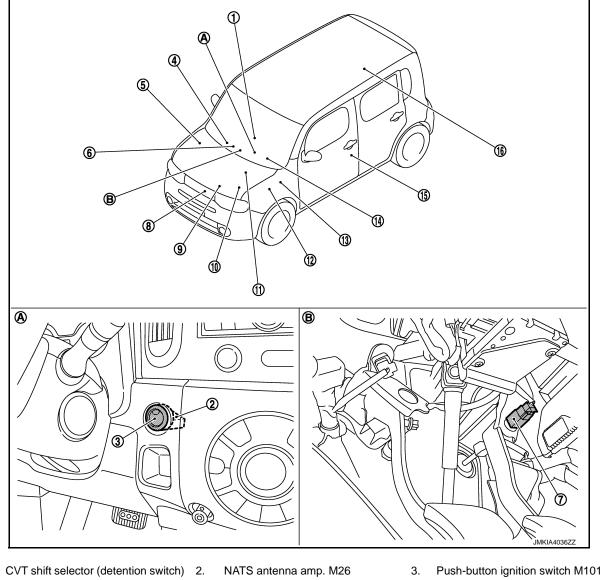
NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Component Parts Location

INFOID:000000005037549



- Inside key antenna (instrument center) M105
 - Transmission range switch F21 9.
 - 12. TCM E18
 - 15. Front door switch (driver side) B34

- 1. M58
- Remote keyless entry receiver M52 5. 4. Refer to DLK-18, "INTELLIGENT KEY SYSTEM : Component Parts Location"
- 7. Stop lamp switch E115
- 10. IPDM E/R E10, E11, E12, E13, E14, 11. ECM E16 E15, E17 Refer to PCS-6, "Component Parts Location".
- 13. BCM M68, M69, M70, M71 Refer to <u>BCS-9</u>, "Component Parts Location".
- 16. Inside key antenna (luggage room) B82
- Α. Behind push-button ignition switch

- ABS actuator and electric unit (con- 6. trol unit) E36 Refer to BRC-11, "Component Parts Location".
- Horn E50, E51 8.
- 14. Security indicator lamp (combination meter) M34
- В. Behind instrument lower cover LH

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS PTION > [WITH INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

Component Description

INFOID:000000005037550

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Component	Reference	
BCM	<u>SEC-82</u>	
Steering lock unit	<u>SEC-75</u>	
Push-button ignition switch	<u>SEC-51</u>	
Door switch	<u>DLK-55</u>	
CVT shift selector (detention switch)	<u>SEC-106</u>	
Stop lamp switch	<u>SEC-49</u>	
ТСМ	<u>SEC-65</u>	
Steering lock relay	<u>SEC-84</u>	
Starter relay	<u>SEC-70</u>	
Starter control relay	<u>SEC-101</u>	
Security indicator lamp	<u>SEC-113</u>	

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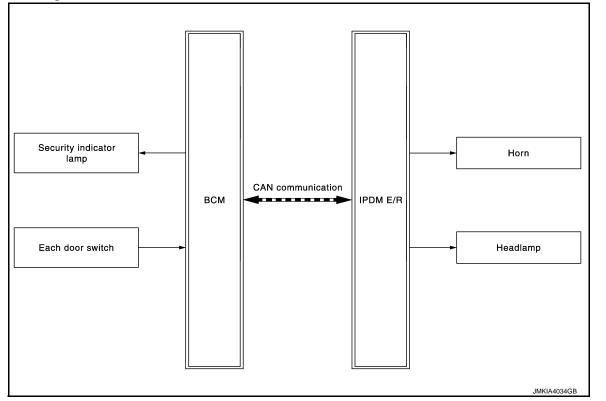
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VEHICLE SECURITY SYSTEM

< SYSTEM DESCRIPTION >

VEHICLE SECURITY SYSTEM

System Diagram

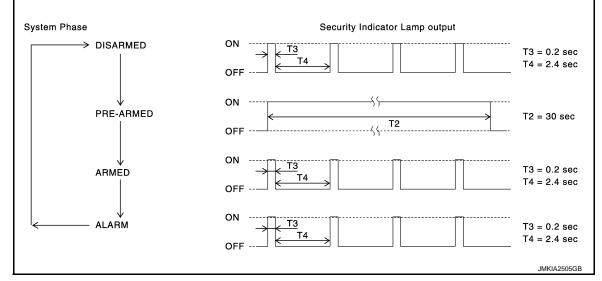


System Description

INFOID:000000005037552

INFOID:000000005037551

OPERATION FLOW



SETTING THE VEHICLE SECURITY SYSTEM

Initial Condition

• Ignition switch is in the OFF position.

Disarmed Phase

• When any door is open, the vehicle security system is set in the disarmed phase on the assumption that the owner is inside or near the vehicle.

SEC-20

VEHICLE SECURITY SYSTEM

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

• When the vehicle security system is in the disarmed phase, the security indicator lamp blinks every 2.4 onds.	sec-
Pre-armed Phase and Armed Phase When the following operation 1 or 2 is performed, the vehicle security system turns into the "pre-arm phase. (Security indicator lamp illuminates.)	med" B
 BCM receives LOCK signal from door lock and unlock switch, door key cylinder switch door req switch or Intelligent Key, after all doors are closed. 	luest
2. All doors are closed after all doors are locked by mechanical key or door lock and unlock switch.	С
CANCELING THE ARMED PHASE VEHICLE SECURITY SYSTEM When one of the following operations is performed, the armed phase is canceled.	. D
 Unlock all doors with the door lock and unlock switch, door key cylinder switch door request switc Intelligent Key. 	ch or
2. Turn ignition switch "ON" or "ACC" position.	Е
CANCELING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM When on of the following operations is performed, the alarm operation is canceled.	_
 Unlock all doors with the door request switch or Intelligent Key. 	F
2. Turn ignition switch "ON" or "ACC" position.	
ACTIVATING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM Check that the system is in the armed phase. (Security indicator lamp blinks every 2.4 seconds.) When the following operations 1 or 2 is performed, the system sounds the horns and blinks the headlamp about 50 seconds.	G os for
1. Any door is open during the armed phase.	Н
2. Disconnecting and connecting the battery connector before canceling the armed phase.	
PANIC ALARM OPERATION When BCM receives panic alarm signal from Intelligent Key, ground is supplied intermittently to both he lamp relay and horn relay.	lead-
When headlamp relay and horn relay are energized, then power is supplied to headlamps (HI) and horn. The headlamp (HI) blinks and the horn sounds intermittently. The alarm automatically turns off after 50 seconds or when BCM receives any signal from Intelligent Ke door request switch.	J ey or

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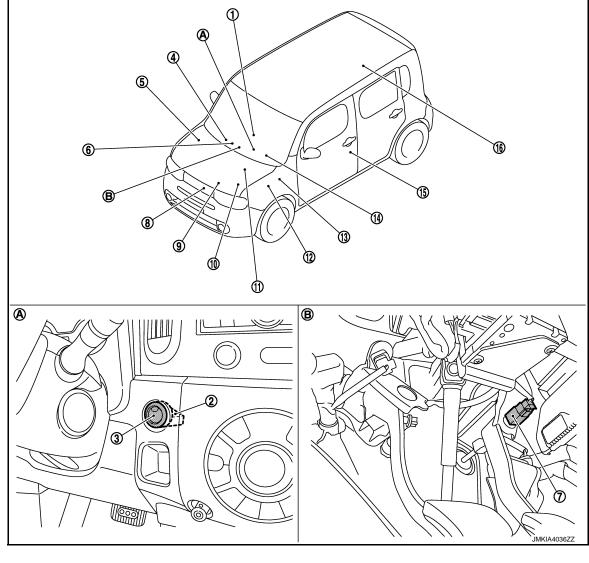
VEHICLE SECURITY SYSTEM

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Component Parts Location

INFOID:000000005037553



- CVT shift selector (detention switch) 2. 1. M58
- Remote keyless entry receiver M52 5. 4. Refer to DLK-18, "INTELLIGENT KEY SYSTEM : Component Parts Location"
- 7. Stop lamp switch E115
- 10. IPDM E/R E10, E11, E12, E13, E14, 11. ECM E16 E15, E17 Refer to PCS-6, "Component Parts Location".
- 13. BCM M68, M69, M70, M71 Refer to <u>BCS-9</u>, "Component Parts Location".
- 16. Inside key antenna (luggage room) B82
- Α. Behind push-button ignition switch

- NATS antenna amp. M26
- ABS actuator and electric unit (con-6. trol unit) E36 Refer to BRC-11, "Component Parts Location".
- Horn E50, E51 8.
- 14. Security indicator lamp (combination meter) M34
- В. Behind instrument lower cover LH

Push-button ignition switch M101 3.

> Inside key antenna (instrument center) M105

- Transmission range switch F21 9.
- 12. TCM E18

15. Front door switch (driver side) B34

Revision: 2009 March

VEHICLE SECURITY SYSTEM [WITH INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

Component Description

INFOID:000000005037554

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Component	Reference	
BCM	<u>SEC-82</u>	
Security indicator lamp	<u>SEC-113</u>	
Door switch	<u>DLK-55</u>	
Headlamp	<u>SEC-117</u>	
Horn	<u>SEC-115</u>	



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Revision: 2009 March

DIAGNOSIS SYSTEM (BCM) COMMON ITEM

COMMON ITEM : CONSULT-III Function (BCM - COMMON ITEM)

INFOID:000000005158147

APPLICATION ITEM

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

Diagnosis mode	Function Description
Work Support	Changes the setting for each system function.
Self Diagnostic Result	Displays the diagnosis results judged by BCM.
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM. Refer to CONSULT-III opera- tion manual.
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	Read and save the vehicle specification.Write the vehicle specification when replacing BCM.

SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

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

Sustem	Cub system coloction item	Diagnosis mode		
System	Sub system selection item	Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
Automatic air conditioner	AIR CONDITONER		×	×
Intelligent Key systemEngine start system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	ВСМ	×		
NVIS - NATS	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	TPMS (AIR PRESSURE MONITOR)	×	×	×

FREEZE FRAME DATA (FFD)

The BCM records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT-III.

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (BCM)

[WITH INTELLIGENT KEY SYSTEM]

CONSULT screen item	Indication/Unit	Description	
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected	
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected	
	SLEEP>LOCK		While turning BCM status from low power consumption mode to normal mode (Power supply position is "LOCK")
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".)
	LOCK>ACC		While turning power supply position from "LOCK" to "ACC"
	ACC>ON		While turning power supply position from "ACC" to "IGN"
	RUN>ACC		While turning power supply position from "RUN" to "ACC" (Vehicle is stopping and selector lever is except P position.)
	CRANK>RUN	Power position status of the moment a particular DTC is detected	While turning power supply position from "CRANKING" to "RUN" (From cranking up the engine to run it)
	RUN>URGENT		While turning power supply position from "RUN" to "ACC" (Emer- gency stop operation)
	ACC>OFF		While turning power supply position from "ACC" to "OFF"
	OFF>LOCK		While turning power supply position from "OFF" to "LOCK"
Vehicle Condition	OFF>ACC		While turning power supply position from "OFF" to "ACC"
	ON>CRANK		While turning power supply position from "IGN" to "CRANKING"
	OFF>SLEEP		While turning BCM status from normal mode (Power supply position is "OFF".) to low power consumption mode
	LOCK>SLEEP		While turning BCM status from normal mode (Power supply position is "LOCK".) to low power consumption mode
	LOCK		Power supply position is "LOCK" (Ignition switch OFF with steer- ing is locked.)
	OFF		Power supply position is "OFF" (Ignition switch OFF with steering is unlocked.)
	ACC		Power supply position is "ACC" (Ignition switch ACC)
	ON	-	Power supply position is "IGN" (Ignition switch ON with engine stopped)
	ENGINE RUN		Power supply position is "RUN" (Ignition switch ON with engine running)
	CRANKING		Power supply position is "CRANKING" (At engine cranking)
IGN Counter	0 - 39	 The number of times that ignition switch is turned ON after DTC is detected The number is 0 when a malfunction is detected now. The number increases like 1 → 2 → 338 → 39 after returning to the normal condition whenever ignition switch OFF → ON. 	

INTELLIGENT KEY

INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY) INFOLD:000000005158146

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WORK SUPPORT

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< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (BCM)

[WITH INTELLIGENT KEY SYSTEM]

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 MODE 1: OFF MODE 2: 30 sec MODE 3: 1 minute MODE 4: 2 minutes MODE 5: 3 minutes MODE 6: 4 minutes MODE 6: 4 minutes MODE 7: 5 minutes	
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch mode can be changed to operation in this mode On: Operate Off: Non-operation 	
ENGINE START BY I-KEY	Engine start function mode can be changed to operation with this modeOn: OperateOff: Non-operation	
TRUNK/GLASS HATCH OPEN	NOTE: This item is displayed, but cannot be monitored	
PANIC ALARM SET	 Panic alarm button pressing time on Intelligent Key remote control button can be selected from the following with this mode MODE 1: 0.5 sec MODE 2: Non-operation MODE 3: 1.5 sec 	
TRUNK OPEN DELAY	NOTE: This item is displayed, but cannot be monitored	
LO- BATT OF KEY FOB WARN	Intelligent Key low battery warning mode can be changed to operation with this modeOn: OperateOff: Non-operation	
ANTI KEY LOCK IN FUNCTI	Key reminder function mode can be changed to operation with this modeOn: OperateOff: Non-operation	
HAZARD ANSWER BACK	 Hazard reminder function mode by door request switch and Intelligent Key button 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 operation with this mode On: Operate Off: Non-operation 	
SHORT CRANKING OUTPUT	Starter motor can operate during the times below	
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 On: Operate Off: Non-operation 	

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

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 back door request switch	
PUSH SW	Indicates [On/Off] condition of push-button ignition switch	
CLUTCH SW ^{*1}	Indicates [On/Off] condition of clutch switch	
BRAKE SW 1	Indicates [On/Off]* ² condition of brake switch power supply	
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 unit (LOCK)	
S/L -UNLOCK	Indicates [On/Off] condition of steering lock unit (UNLOCK)	
S/L RELAY -F/B	Indicates [On/Off] condition of steering lock relay	
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 unit (LOCK)	
S/L UNLK-IPDM	Indicates [On/Off] condition of steering lock unit (UNLOCK)	
S/L RELAY-REQ	Indicates [On/Off] condition of steering lock relay	
VEH SPEED 1	Display the vehicle speed signal received from combination meter by numerical value [Km/h]	
VEH SPEED 2	Display the vehicle speed signal received from ABS or VDC or TCM 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	
PRMT RKE STRT	NOTE: This item is displayed, but cannot be monitored	
TRNK/HAT MNTR	NOTE: This item is displayed, but cannot be monitored	
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	NOTE: This item is displayed, but cannot be monitored	
RKE-PANIC	Indicates [On/Off] condition of PANIC button of Intelligent Key	
RKE-MODE CHG	Indicates [On/Off] condition of MODE CHANGE signal from Intelligent Key	
RKE OPE COUN1	When remote keyless entry receiver receives the signal transmitted while operating on Intelli- gent Key, the numerical value start changing	
RKE OPE COUN2	NOTE: This item is displayed, but cannot be monitored	

*1: It is displayed but does not operate on M/T models.

 *2 : OFF is displayed when brake pedal is depressed while brake switch power supply is OFF.

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

ACTIVE TEST

Test item	Description	
BATTERY SAVER	This test is able to check interior room lamp operationOn: OperateOff: Non-operation	
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operationOn: OperateOff: Non-operation	
INSIDE BUZZER	 This test is able to check warning chime in combination meter operation Take out: Take away warning chime sounds when CONSULT-III screen is touched Key: Key warning chime sounds when CONSULT-III screen is touched Knob: OFF position warning chime sounds when CONSULT-III screen is touched 	
INDICATOR	 This test is able to check warning lamp operation KEY ON: "KEY" Warning lamp illuminates when CONSULT-III screen is touched "KEY" Warning lamp blinks when CONSULT-III screen is touched 	
INT LAMP	This test is able to check interior room lamp operation On: Operate Off: Non-operation 	
LCD	 This test is able to check meter display information BP N: Engine start operation indicator lamp indicate when CONSULT-III screen is touched BP I: Engine start operation indicator lamp indicate when CONSULT-III screen is touched ID NG: This item is displayed, but cannot be monitored ROTAT: This item is displayed, but cannot be monitored SFT P: Shift P warning lamp indicate when CONSULT-III screen is touched INSRT: This item is displayed, but cannot be monitored SFT P: Shift P warning lamp indicate when CONSULT-III screen is touched INSRT: This item is displayed, but cannot be monitored BATT: Key warning lamp indicator when CONSULT-III screen is touched NO KY: This item is displayed, but cannot be monitored OUTKEY: Engine start operation indicator lamp indicate when CONSULT-III screen is touched LK WN: Engine start operation indicator lamp indicate when CONSULT-III screen is touched 	
FLASHER	This test is able to check security hazard lamp operation The hazard lamps are activated after "LH/RH/Off" on CONSULT-III screen is touched	
HORN	This test is able to check horn operation The horn is activated after "ON" on CONSULT-III screen is touched	
P RANGE	This test is able to check CVT shift selector power supplyOn: OperateOff: Non-operation	
ENGINE SW ILLUMI	This test is able to check push-ignition switch illumination operation Push-ignition switch illumination illuminates when "ON" on CONSULT-III screen is touched	
PUSH SWITCH 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-III screen is touched	
TRUNK/BACK DOOR	NOTE: This item is displayed, but cannot be monitored	

THEFT ALM

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

INFOID:000000005037557

DATA MONITOR

Monitored Item	Description	
REQ SW -DR	Indicates [ON/OFF] condition of door request switch (driver side).	
REQ SW -AS	Indicates [ON/OFF] condition of door request switch (passenger side).	
REQ SW -RR	NOTE: This is displayed even when it is not equipped.	

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Monitored Item	Description	-
REQ SW -RL	NOTE: This is displayed even when it is not equipped.	
REQ SW -BD/TR	Indicates [ON/OFF] condition of back door request switch.	_
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch	- D
UNLK SEN -DR	Indicates [ON/OFF] condition of driver door UNLOCK status.	-
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch (driver side).	С
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch (passenger side).	_
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.	
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.	- D
DOOR SW-BK	Indicates [ON/OFF] condition of back door switch.	
CDL LOCK SW	Indicates [ON/OFF] condition of lock signal from door lock/unlock switch LH and RH.	
CDL UNLOCK SW	Indicates [ON/OFF] condition of unlock signal from door lock/unlock switch LH and RH.	
KEY CYL LK-SW	Indicates [ON/OFF] condition of lock signal from door key cylinder.	
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from door key cylinder.	F
TR/BD OPEN SW	NOTE: This is displayed even when it is not equipped.	
TRNK/HAT MNTR	NOTE: This is displayed even when it is not equipped.	
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	NOTE: This is displayed even when it is not equipped.	

WORK SUPPORT

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

ACTIVE TEST

Test Item	Description	
THEFT IND	This test is able to check security indicator lamp operation. Security indicator lamp is turned on when "ON" on CONSULT-III screen is touched.	
VEHICLE SECURITY HORN	This test is able to check horn operation. Horn is activated for 0.5 seconds after "ON" on CONSULT- III screen is touched.	
HEADLAMP(HI)	This test is able to check headlamp operation. Headlamps are activated for 0.5 seconds after "ON" on CONSULT-III screen is touched.	Ν
FLASHER	This test is able to check hazard warning lamp operation. Hazard warning lamps are activated after "ON" on CONSULT-III screen is touched.	0

IMMU

IMMU : CONSULT-III Function (BCM - IMMU)

DATA MONITOR

INFOID:000000005037558

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (BCM)

[WITH INTELLIGENT KEY SYSTEM]

Monitor item	Content	
CONFRM ID ALL		
CONFIRM ID4	Indicates [YET] at all time.	
CONFIRM ID3	Switches to [DONE] when a registered Intelligent Key backside is contacted to push-button ignition	
CONFIRM ID2	switch.	
CONFIRM ID1		
NOT REGISTERED	Indicates [ID OK] when key ID that is registered is received or is not yet received. Indicates [ID NG] when key ID that is not registered is received.	
TP 4		
TP 3	Indicates the number of IDs that are registered	
TP 2	Indicates the number of IDs that are registered.	
TP 1		
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch.	

ACTIVE TEST

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

WORK SUPPORT

Service item	Description
CONFIRM DONGLE ID	It is possible to check that dongle unit is applied to the vehicle.

DTC/CIRCUIT DIAGNOSIS

P1610 LOCK MODE Description INFOID:000000005037568 В ECM forcibly switches to the mode that inhibits engine start, when engine start operation is performed 5 times or more while communication between ECM and BCM is not normal. DTC Logic INFOID:000000005037569 DTC DETECTION LOGIC D DTC No. Possible cause Trouble diagnosis name DTC detecting condition When ECM detects a communication malfunction between P1610 LOCK MODE ECM and BCM 5 times or more DTC CONFIRMATION PROCEDURE F **1.**PERFORM DTC CONFIRMATION PROCEDURE Turn ignition switch ON. 1. Check "Self-diagnosis result" using CONSULT-III. 2. Is DTC detected? YES >> Go to SEC-31, "Diagnosis Procedure". >> INSPECTION END NO Н Diagnosis Procedure INFOID:000000005037570 **1.**CHECK ENGINE START FUNCTION Perform the check for DTC except DTC P1610. 1. Use CONSULT-III to erase DTC after fixing. 2. J Turn ignition switch OFF. 3. 4. Turn ignition switch ON when registered Intelligent Key backside is contacted to push-button ignition switch and wait for 5 seconds. 5. Turn the ignition switch OFF and wait 5 seconds. SEC Repeat steps 4 and 5 twice (a total of 3 times). 6. Check that engine can start when registered Intelligent Key backside is contacted to push-button ignition 7. switch. L >> INSPECTION END Μ Ν Ρ

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< DTC/CIRCUIT DIAGNOSIS >

P1611 ID DISCORD, IMMU-ECM

Description

BCM performs the ID verification with ECM that allows the engine to start. Start the engine if the ID is successfully verified. 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 P1611 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-39, "DTC Logic"</u>.
- If DTC P1611 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-40, "DTC Logic"</u>.

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

- YES >> Go to SEC-32, "Diagnosis Procedure".
- NO >> INSPECTION END

Diagnosis Procedure

1.PERFORM INITIALIZATION

Perform initialization using CONSULT-III. Reregister all Intelligent Keys.

For initialization and registration of Intelligent Key, refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".

Can the system be initialized and can the engine be started with reregistered Intelligent Key?

YES >> INSPECTION END

NO >> GO TO 2.

- **2.**CHECK SELF-DIAGNOSIS RESULT
- 1. Perform "Self-diagnosis result" of ECM using CONSULT-III.
- 2. Erase DTC.
- 3. Perform DTC confirmation Procedure. Refer to EC-447, "DTC Inspection Priority Chart".
- Is DTC detected?

YES >> GO TO 3.

NO >> INSPECTION END

3.REPLACE BCM

- 1. Replace BCM. Refer to <u>BCS-82, "Removal and Installation"</u>.
- Perform initialization using CONSULT-III. For initialization, refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".

Can the system be initialized and can the engine be started with reregistered Intelligent Key?

YES >> INSPECTION END

NO >> GO TO 4.

INFOID:000000005037571

INFOID:000000005037572

INFOID:000000005037573

P1611 ID DISCORD, IMMU-ECM

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IVVIIH			$\mathbf{Y} > \mathbf{I} \vdash \mathbf{M} \mathbf{I}$

< DTC/CIRCUIT DIAGNOSIS >

4.REPLACE ECM

1. Re	place ECM. Refer to EC-15, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special
<u>Re</u>	pair Requirement".
2. Pe	rform initialization using CONSULT-III.
Fo	r initialization, refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".
Can the	e system be initialized and can the engine be started with reregistered Intelligent Key?
YES	>> INSPECTION END
NO	>> GO TO 5.

5. CHECK INTERMITTENT INCIDENT

Refer to GI-34, "Intermittent Incident".

>> INSPECTION END

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< DTC/CIRCUIT DIAGNOSIS >

P1612 CHAIN OF ECM-IMMU

Description

BCM performs ID verification with ECM that allows the engine to start. Start the engine if the ID is successfully verified. 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:000000005037575

INFOID:000000005037576

INFOID:000000005037574

DTC DETECTION LOGIC

NOTE:

- If DTC P1612 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-39, "DTC Logic"</u>.
- If DTC P1612 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-40, "DTC Logic"</u>.

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

1.REPLACE BCM

- 1. Replace BCM. Refer to <u>BCS-82, "Removal and Installation"</u>.
- 2. Perform initialization using CONSULT-III.
- For initialization, refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".

Does the engine start?

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

2.REPLACE ECM

Replace ECM. Refer to <u>EC-15</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> INSPECTION END

< DTC/CIRCUIT DIAGNOSIS >

B2192 ID DISCORD, IMMU-ECM

Description

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

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2192 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-39, "DTC Logic"</u>.
- If DTC B2192 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-40, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2192	ID DISCORD, BCM-ECM	The ID verification results between BCM and ECM are NG.	BCMECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

- YES >> Go to <u>SEC-35, "Diagnosis Procedure"</u>.
- NO >> INSPECTION END

Diagnosis Procedure

1.PERFORM INITIALIZATION

Perform initialization using CONSULT-III. Reregister all Intelligent Keys. For initialization and registration of Intelligent Key, refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS". Can the system be initialized and can the engine be started with reregistered Intelligent Key?

YES >> INSPECTION END NO >> GO TO 2. 2.CHECK SELF-DIAGNOSIS RESULT 1. Perform "Self-diagnosis result" of BCM using CONSULT-III. 2. Erase DTC.

3. Perform DTC Confirmation Procedure. Refer to <u>SEC-169, "DTC Inspection Priority Chart"</u>. <u>Is DTC detected?</u>

YES >> GO TO 3.

NO >> INSPECTION END

3.REPLACE BCM

- 1. Replace BCM. Refer to <u>BCS-82, "Removal and Installation"</u>.
- 2. Perform initialization using CONSULT-III.

For initialization, refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".

Can the system be initialized and can the engine be started with reregistered Intelligent Key?

- YES >> INSPECTION END
- NO >> GO TO 4.

4.REPLACE ECM

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INFOID:000000005037590

INFOID:000000005037591

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B2192 ID DISCORD, IMMU-ECM

< DTC/CIRCUIT DIAGNOSIS >

- 1. Replace ECM. Refer to <u>EC-15</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special <u>Repair Requirement"</u>.
- 2. Perform initialization using CONSULT-III. For initialization, refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".

Can the system be initialized and can the engine be started with reregistered Intelligent Key?

YES >> INSPECTION END NO >> GO TO 5.

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 $5. {\sf check intermittent incident}$

Refer to GI-34, "Intermittent Incident".

>> INSPECTION END

B2193 CHAIN OF ECM-IMMU

Description

BCM performs the ID verification with ECM that allows the engine to start. Start the engine if the ID is successfully verified. 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 B2193 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-39, "DTC Logic".
- If DTC B2193 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-40, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2193	CHAIN OF ECM-BCM	Inactive communication between ECM and BCM	 Harness or connectors (The CAN communication line is open or shorted) BCM ECM
	RMATION PROCED	URE	
1.PERFORM	I DTC CONFIRMATIO	N PROCEDURE	
Selector IDo not de	ion switch ON under th lever is in the P or N po epress brake pedal elf-diagnosis result" us		
Is DTC detect	ted?	0	
	o to <u>SEC-37, "Diagnos</u> NSPECTION END	sis Procedure".	
Diagnosis	Procedure		INFOID:000000005037594
1. REPLACE	BCM		
		. "Removal and Installation".	
	nitialization using CON ization, refer to "CONS	SULT-III.	5".
Does the engineer of the the engine	<u>ine start?</u> NSPECTION END		
NO >> G	60 TO 2.		
2.REPLACE	ECM		
Replace ECM Repair Requir		DDITIONAL SERVICE WHEN REPLACI	NG CONTROL UNIT : Specia
>> II	SPECTION END		

Revision: 2009 March

INFOID:000000005037592

INFOID:000000005037593

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B2195 ANTI-SCANNING

Description

INFOID:000000005037595

[WITH INTELLIGENT KEY SYSTEM]

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

INFOID:000000005037596

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.
- Selector lever is in the P or N position
- Do not depress brake pedal
- 2. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

YES >> Refer to SEC-38. "Diagnosis Procedure".

NO >> INSPECTION END.

Diagnosis Procedure

1.CHECK SELF-DIAGNOSIS RESULT-1

- 1. Perform "Self-diagnosis result" of BCM using CONSULT-III.
- 2. Erase DTC.
- 3. Perform DTC Confirmation Procedure. Refer to SEC-38, "DTC Logic".

Is DTC 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 <u>BCS-82. "Removal and Installation"</u>.

3.CHECK SELF-DIAGNOSIS RESULT-2

- 1. Obtain the customers approval to remove unspecified accessory part related to engine start, and then remove it.
- 2. Perform "Self-diagnosis result" of BCM using CONSULT-III.
- 3. Erase DTC.
- Perform DTC Confirmation Procedure. Refer to <u>SEC-38, "DTC Logic"</u>.
- Is DTC detected?
- YES >> Replace BCM. Refer to <u>BCS-82, "Removal and Installation"</u>.
- NO >> INSPECTION END

B2196 DONGLE UNIT

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS > **B2196 DONGLE UNIT** А Description INFOID:000000005116324 BCM performs ID verification between dongle unit. В When verification result is OK, BCM permits cranking. DTC Logic INEOID:000000005116325 DTC DETECTION LOGIC NOTE: If DTC B2196 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to D BCS-39, "DTC Logic". If DTC B2196 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-40, "DTC Logic". Ε Trouble diagnosis DTC No. DTC detecting condition Possible cause name • Dongle unit The ID verification results between BCM B2196 DONGLE NG · Harness or connectors and dongle unit is NG. (Dongle unit circuit is open or shorted.) DTC CONFIRMATION PROCEDURE 1.PERFORM DTC CONFIRMATION PROCEDURE Н 1. Turn ignition switch ON under the following conditions. Selector lever is in the P or N position Do not depress brake pedal 2. Turn ignition switch OFF. Turn ignition switch ON under the following conditions. 3. Selector lever is in the P or N position Do not depress brake pedal Check "Self-diagnosis result" using CONSULT-III. 4. Is the DTC detected?

YES >> Refer to SEC-39, "Diagnosis Procedure".

NO >> INSPECTION END.

Diagnosis Procedure

1.PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Reregister all mechanical keys. Refer to "CONSULT-III Operation 1 Manual NATS-IVIS/NVIS".

2. Start the engine.

Dose the engine start?

YES >> INSPECTION END

NO >> GO TO 2.

2.CHECK DONGLE UNIT CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect BCM connector and dongle unit connector.

Check continuity between BCM harness connector and dongle unit harness connector. 3.

BCM		Dongle unit		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M68	24	M75	7	Existed

Check continuity between BCM harness connector and ground. 4

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B2196 DONGLE UNIT

< DTC/CIRCUIT DIAGNOSIS >

В	CM		Continuity
Connector	Terminal	Ground	Continuity
M68	24		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK DONGLE UNIT GROUND CIRCUIT

Check continuity between dongle unit harness connector and ground.

Dong	le unit		Continuity	
Connector	Connector Terminal		Continuity	
M75	1		Existed	

Is the inspection result normal?

YES >> Replace dongle unit.

NO >> Repair or replace harness.

B2198 NATS ANTENNA AMP.

Description

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

DTC Logic

DTC DETECTION LOGIC

	Trouble diagnosis name	DTC detecting condition	Possible cause
B2198	NATS ANTENNA AMP.	Inactive communication between NATS antenna amp. and BCM.	Harness or connectorsNATS antenna amp.BCM
	MATION PROCEDU	RE	
1. PERFORM	DTC CONFIRMATION	PROCEDURE 1	
	Key backside is contac elf-diagnosis result" usin	ted to push-button ignition switch. g CONSULT-III.	
Is DTC detecte			
	o to <u>SEC-41, "Diagnosis</u> O TO 2.		
2.perform	DTC CONFIRMATION	PROCEDURE 2	
	push-button ignition sw elf-diagnosis result" usin		
YES >> G	o to <u>SEC-41, "Diagnosis</u> SPECTION END	s Procedure".	
Diagnosis F	Procedure		INFOID:00000000503
1. CHECK FU	SE		
Check that the	following IPDM E/R fus	se is not blown.	
	Signal name	Fuse N	0.
	Battery power supply	43	

2.CHECK NATS ANTENNA AMP. POWER SUPPLY

1. Turn ignition switch OFF.

2. Disconnect NATS antenna amp. connector.

3. Check voltage between NATS antenna amp. harness connector and ground.

(-	+)			•
NATS ante	enna amp.	(—)	Voltage (V) (Approx.)	Р
Connector	Terminal			
M26	1	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

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INFOID:000000005037583

INEOID:000000005037584

B2198 NATS ANTENNA AMP.

< DTC/CIRCUIT DIAGNOSIS >

3.CHECK NATS ANTENNA AMP. POWER SUPPLY CIRCUIT

1. Disconnect IPDM E/R connector.

2. Check continuity between IPDM E/R harness connector and NATS antenna amp. connector.

IPDM E/R		NATS antenna amp.		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
E14	45	M26	1	Existed	

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

IPDN	/I E/R		Continuity
Connector	Connector Terminal		Continuity
E14	45		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to <u>PCS-35. "Removal and Installation"</u>.

NO >> Repair or replace harness.

4.CHECK NATS ANTENNA AMP. OUTPUT SIGNAL 1

1. Connect NATS antenna amp. connector.

2. Disconnect BCM connector.

3. Check voltage between BCM harness connector and ground.

(+) BCM		()	Voltage (V) (Approx.)
Connector	Terminal		
M68	21	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 5.

5.CHECK NATS ANTENNA AMP. OUTPUT SIGNAL CIRCUIT 1

1. Disconnect NATS antenna amp. connector.

2. Check continuity between BCM harness connector and NATS antenna amp. connector.

В	CM	NATS ant	enna amp.	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M68	21	M26	2	Existed

3. Check continuity between BCM harness connector and ground.

BC	CM		Continuity
Connector	Connector Terminal		Continuity
M68	21		Not existed

Is the inspection result normal?

YES >> Replace NATS antenna amp.. Refer to <u>SEC-196, "Removal and Installation"</u>.

NO >> Repair or replace harness.

6.CHECK NATS ANTENNA AMP. COMMUNICATION SIGNAL

1. Connect BCM connector.

2. Check voltage between BCM harness connector and ground using analog tester.

B2198 NATS ANTENNA AMP.

< DTC/CIRCUIT DIAGNOSIS >

BCM (C) Conduction (Approx.) Connector Terminal Intelligent Key backside is contacted to push-button ignition switch, turn ig- nition switch ON. Just after pressing push-button ign ton switch. Pointer of analog tester should move. Ne inspection result normal? S >> GO TO 7. S >> Replace NATS antenna amp. Refer to SEC-196, "Removal and Installation". S Check voltage between BCM harness connector and ground. (-) Voltage (V) (Approx.) Voltage (V) (Approx.) Connector Terminal (-) Voltage (V) (Approx.) Voltage (V) (Approx.) Connector Terminal (-) Voltage (V) (Approx.) Voltage (V) (Approx.) Connector Terminal (-) Voltage (V) (Approx.) Continuity M68 25 Ground Battery voltage Disconnect NATS antenna amp. connector. Continuity Continuity M68 25 M26 3 Existed Connector Terminal Connector Continuity M68 25 M26 3 Existed Check continuity between BCM harness connector and groun	(+		_				Voltage (V)	
M68 21 Ground Intelligent Key backside is contacted to push-button ignition switch, turn ig- nition switch ON. Just after pressing push-button ignition switch. Pointer of analog tester should move. M68 21 Ground Intelligent Key backside is contacted upush-button ignition switch. Turn ig- nition switch. Pointer of analog tester should move. Just after pressing push-button ignition switch. Pointer of analog tester should move. M68 Disconnect BCM connector. Check voltage between BCM harness connector and ground. Voltage (V) (Approx.) Cennector Terminal (-) Voltage (V) (Approx.) Voltage (V) (Approx.) Connector Terminal (-) Voltage (V) (Approx.) Voltage (V) (Approx.) Connector Terminal (-) Voltage (V) (Approx.) Voltage (V) (Approx.) Connector Terminal Connector Continuity Existed Check continuity between BCM harness connector and NATS antenna amp. connector. Continuity Continuity M68 25 M26 3 Existed Check continuity between BCM harness connector and ground. So > Replace NATS antenna amp. Refer to <u>SEC-196. "Removal and Installation".</u> Or >> Repair or replace harness. Continuity <td>BC</td> <td>CM</td> <td>()</td> <td></td> <td>Condition</td> <td colspan="2">Voltage (V) (Approx.)</td>	BC	CM	()		Condition	Voltage (V) (Approx.)		
0 >> Replace NATS antenna amp. Refer to SEC-196. "Removal and Installation". CHECK NATS ANTENNA AMP. OUTPUT SIGNAL 2 Disconnect BCM connector. Check voltage between BCM harness connector and ground. (+) BCM (-) Voltage (V) (Approx.) Connector Terminal M68 25 Go >> Go TO 9. O >> Go TO 9. O >> Go TO 9. O >> Go TO 8. CHECK NATS ANTENNA AMP. OUTPUT SIGNAL CIRCUIT 2 Disconnect NATS antenna amp. connector. Check continuity between BCM harness connector and NATS antenna amp. connector. Connector Terminal Connector Ter			Ground	to push-butte	on ignition switch, turn ig-	g- tion switch. Pointer of analog tester		
S >> GO TO 7. >> >> Replace NATS antenna amp. Refer to SEC-196. "Removal and Installation". CHECK NATS ANTENNA AMP. OUTPUT SIGNAL 2 Disconnect BCM connector. Check voltage between BCM harness connector and ground. (+) BCM (-) Voltage (V) (Approx.) M68 25 Ground Battery voltage he inspection result normal? ES SS > GO TO 9. O >> GO TO 8. CHECK NATS ANTENNA AMP. OUTPUT SIGNAL CIRCUIT 2 Disconnect NATS antenna amp. connector. Check continuity between BCM harness connector and NATS antenna amp. connector. Check continuity between BCM harness connector and ground. ECM NATS antenna amp. Continuity M68 25 M26 3 Existed Check continuity between BCM harness connector and ground. Existed Continuity M68 25 M26 3 Existed Check continuity between BCM harness connector and ground. Continuity Continuity M68 25 M26 3 Existed Check continuity between BCM harness connector and ground. <t< td=""><td>ne inspection</td><td>result norma</td><td> ?</td><td></td><td></td><td></td><td></td></t<>	ne inspection	result norma	?					
CHECK NATS ANTENNA AMP. OUTPUT SIGNAL 2 Disconnect BCM connector. Check voltage between BCM harness connector and ground. (+) Voltage (V) Connector Terminal M68 (-) Voltage (V) (Approx.) Connector Terminal Connector NATS antenna amp. connector. Connector Disconnect NATS antenna amp. connector. Continuity between BCM harness connector and NATS antenna amp. connector. Continuity Connector Terminal Continuity	•		<u></u>					
Disconnect BCM connector. Check voltage between BCM harness connector and ground. (+) Voltage (V) (Approx.) BCM (-) Voltage (V) (Approx.) M68 25 Ground Battery voltage he inspection result normal? ES > GO TO 9. So CO TO 9. So CO TO 9. So CO TO 9. So CO TO 8. CHECK NATS ANTENNA AMP. OUTPUT SIGNAL CIRCUIT 2 Disconnect NATS antenna amp. connector. Check continuity between BCM harness connector and NATS antenna amp. connector. Continuity Connector Terminal Connector Continuity M68 25 M26 3 Existed Check continuity between BCM harness connector and ground. Existed Continuity M68 25 M26 3 Existed Check continuity between BCM harness connector and ground. Existed Not existed M68 25 M26 3 Existed Connector Terminal Ground Continuity Not existed he inspection result normal? ES > Replace NATS antenna amp. Refer to SEC-196, "Removal and Installation". O >> Repair or replace harness. O >> Replair or replace harness. <t< td=""><td>) >> Rep</td><td>lace NATS a</td><td>ntenna amp. R</td><td>efer to <u>SEC</u></td><td>-196, "Removal and</td><td>Installatio</td><td><u>n"</u>.</td></t<>) >> Rep	lace NATS a	ntenna amp. R	efer to <u>SEC</u>	-196, "Removal and	Installatio	<u>n"</u> .	
Check voltage between BCM harness connector and ground. (+) Voltage (V) (Approx.) Connector Terminal (-) Voltage (V) (Approx.) M68 25 Ground Battery voltage the inspection result normal? ES >> GO TO 9. O >> GO TO 9. O >> GO TO 9. O >> GO TO 9. OUTPUT SIGNAL CIRCUIT 2 Disconnect NATS antenna amp. connector. Check continuity between BCM harness connector and NATS antenna amp. connector. Check continuity between BCM harness connector and NATS antenna amp. Continuity Gennector Terminal Continuity M68 25 M26 3 Existed Check continuity between BCM harness connector and ground. Existed Continuity M68 25 M26 3 Existed Connector Terminal Ground Continuity M68 25 M26 3 Existed Check continuity between BCM harness connector and ground. Secondary Not existed M68 25 M26 3 Existed Connector Terminal Ground <th< td=""><td>CHECK NAT</td><td>S ANTENNA</td><td>AMP. OUTPU</td><td>T SIGNAL 2</td><td>2</td><td></td><td></td></th<>	CHECK NAT	S ANTENNA	AMP. OUTPU	T SIGNAL 2	2			
BCM (-) Voltage (V) (Approx.) M68 25 Ground Battery voltage he inspection result normal? ES >> G O 19. Battery voltage CHECK NATS ANTENNA AMP. OUTPUT SIGNAL CIRCUIT 2 Disconnect NATS antenna amp. connector. Check continuity between BCM harness connector and NATS antenna amp. connector. Continuity Connector Terminal Connector Continuity Connector Terminal Continuity Continuity M68 25 M26 3 Existed Connector Terminal Ground Continuity Continuity M68 25 M26 3 Existed Check continuity between BCM harness connector and ground. Continuity Not existed M68 25 M26 3 Existed Connector Terminal Ground Continuity M68 25 M26 Not existed Not existed he inspection result normal? ES >> Replace NATS antenna amp. Refer to SEC-196, "Removal and Installation". O >> Repair or replace				connector ar	nd ground.			
BCM (-) (Approx.) M68 25 Ground Battery voltage the inspection result normal? ES S GO TO 9. So GO TO 9. So GO TO 9. IO >> GO TO 8. .CHECK NATS ANTENNA AMP. OUTPUT SIGNAL CIRCUIT 2 Disconnect NATS antenna amp. connector. Check continuity between BCM harness connector and NATS antenna amp. connector. BCM NATS antenna amp. Continuity Connector Terminal Connector Terminal M68 25 M26 3 Existed Check continuity between BCM harness connector and ground. Continuity Continuity M68 25 M26 3 Existed Check continuity between BCM harness connector and ground. Continuity Continuity M68 25 M26 3 Existed Check continuity between BCM harness connector and ground. Not existed Not existed M68 25 M26 3 Existed Connector Terminal Ground Continuity M68 25 Condition		(+)					
ConnectorTerminalM6825GroundBattery voltagethe inspection result normal?////'ES>> GO TO 9.//IO>> GO TO 8CHECK NATS ANTENNA AMP. OUTPUT SIGNAL CIRCUIT 2Disconnect NATS antenna amp. connector.Check continuity between BCM harness connector and NATS antenna amp.ConnectorTerminalConnectorTerminalConnectorTerminalM6825M263EXMContinuityConnectorTerminalM6825M6825ConnectorTerminalGroundContinuityConnectorTerminalConnectorTerminalConnectorTerminalConnectorTerminalConnectorTerminalConnectorTerminalConnectorTerminalConnectorTerminalConnectorTerminalConnectorTerminalConnectorTerminalConnectorTerminalConnectorTerminalConnectorSEC-196, "Removal and Installation".IO>> Repair or replace harnessCHECK NATS ANTENNA AMP. COMMUNICATION SIGNALConnect BCM connector.Check voltage between BCM harness connector and ground using analog tester.(+)ConditionBCMConditionConnectorTerminal(+)ConditionBCMCondition(+)Cond		BC	М		(-)			
the inspection result normal? 'ES >> GO TO 9. IO >> GO TO 8. CHECK NATS ANTENNA AMP. OUTPUT SIGNAL CIRCUIT 2 Disconnect NATS antenna amp. connector. Check continuity between BCM harness connector and NATS antenna amp. connector. Connector Terminal Connector Terminal Continuity Connector Terminal Connector and ground. Check continuity between BCM harness connector and ground. Connector Terminal Connector and ground. Connector Terminal Connector and ground. Continuity Connector Terminal Connector. Continuity Connector Terminal Connector and ground installation". IO >> Repair or replace harness. CHECK NATS ANTENNA AMP. COMMUNICATION SIGNAL Connect BCM connector. Check voltage between BCM harness connector and ground using analog tester. (+) (-) Condition Voltage (v) (Approx.) Connector Terminal Intelligent Key backside is contacted Just after pressing push-button ignition switch, turn ignition switch, Pointer of analog tester.	Conne	ector	Termir	nal			(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
FES >> GO TO 9. IO >> GO TO 9. IO >> GO TO 8. CHECK NATS ANTENNA AMP. OUTPUT SIGNAL CIRCUIT 2 Disconnect NATS antenna amp. connector. Check continuity between BCM harness connector and NATS antenna amp. connector. Connector Terminal Connector Terminal Continuity	M6	8	25		Ground Battery voltage		Battery voltage	
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the inspection result normal? ES >> Replace NATS antenna amp. Refer to SEC-196, "Removal and Installation". IO >> Repair or replace harness. CHECK NATS ANTENNA AMP. COMMUNICATION SIGNAL COnnect BCM connector. Connect BCM connector. Check voltage between BCM harness connector and ground using analog tester. (+) (-) Condition Voltage (V) (Approx.) Connector Terminal Intelligent Key backside is contacted to push-button ignition switch, turn ig- Just after pressing push-button ign to switch. Pointer of analog tester	Check contin Connecto M68 Check contin	BCM BCM or nuity between BC	Terminal 25 n BCM harness	s connector Conn M: s connector	NATS antenna amp. ector Ter 26 and ground.	minal	- Continuity Existed	
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(+) Output BCM (-) Connector Terminal M68 25 Ground Intelligent Key backside is contacted to push-button ignition switch, turn ig-tion switch. Pointer of analog tester	Check contin Connecto M68 Check contin Conne M6 he inspection ES >> Rep D >> Rep CHECK NATS	BCM BCM or nuity between BC BC BC BC BC BC BC BC BC BC	Terminal 25 n BCM harness M Termin 25 M I? ntenna amp. R harness. AMP. COMML	efer to <u>SEC</u>	NATS antenna amp. ector Ter 26 and ground. Ground	minal	- Continuity Existed Continuity Not existed	
BCM (-) Condition Voltage (V) (Approx.) Connector Terminal Intelligent Key backside is contacted to push-button ignition switch, turn ig- tion switch. Pointer of analog tester	Check contin Connecto M68 Check contin Connect M6 M6 M6 M6 M6 M6 M6 M6 M6 M6 M6 M6 M6	BCM BCM or nuity between BC ector 8 result norma lace NATS an air or replace S ANTENNA M connector.	Terminal 25 n BCM harness M Termin 25 M 12 ntenna amp. R harness. AMP. COMML	s connector Conn M: s connector nal efer to <u>SEC</u> JNICATION	NATS antenna amp. ector Ter 26 and ground. Ground	minal 3 Installatio	- Continuity Existed Continuity Not existed	
BCM (-) Condition (Approx.) Connector Terminal Intelligent Key backside is contacted to push-button ignition switch, turn ig-tion switch. Pointer of analog tester Just after pressing push-button ign to push-button ignition switch, turn ig-tion switch. Pointer of analog tester	Check contin Connecto M68 Check contin Connect M6 M6 M6 M6 M6 M6 M6 M6 M6 M6 M6 M6 M6	BCM BCM or nuity between BC ector 8 result norma lace NATS an air or replace S ANTENNA M connector.	Terminal 25 n BCM harness M Termin 25 M 12 ntenna amp. R harness. AMP. COMML	s connector Conn M: s connector nal efer to <u>SEC</u> JNICATION	NATS antenna amp. ector Ter 26 and ground. Ground	minal 3 Installatio	- Continuity Existed Continuity Not existed	
Connector Terminal Intelligent Key backside is contacted Just after pressing push-button ign to push-button ignition switch, turn ig- M68 25 Ground Intelligent Key backside is contacted to push-button ignition switch, turn ig- Just after pressing push-button ign tion switch. Pointer of analog tester	Check contin Connecto M68 Check contin Connect M6 M6 M6 M6 M6 M6 M6 M6 M6 M6 M6 M6 M6	BCM BCM or nuity between BC ector 8 result norma lace NATS and air or replace S ANTENNA M connector. ge between E	Terminal 25 n BCM harness M Termin 25 M 12 ntenna amp. R harness. AMP. COMML	s connector Conn M: s connector nal efer to <u>SEC</u> JNICATION	NATS antenna amp. ector Ter 26 and ground. Ground	minal 3 Installatio	Continuity Existed Continuity Not existed	
M68 25 Ground to push-button ignition switch, turn ig- tion switch. Pointer of analog tester	Check contin Connecto M68 Check contin Connec M6 me inspection ES >> Rep D >> Rep D >> Rep CHECK NATS Connect BC Check voltag	BCM BCM or nuity between BC BC BC BC BC BC BC BC BC BC	Terminal 25 n BCM harness M Termin 25 M I? ntenna amp. R harness. AMP. COMML 3CM harness o	s connector Conn M: s connector nal efer to <u>SEC</u> JNICATION	NATS antenna amp. ector Ter 26 and ground. Ground SIGNAL and ground using ana	minal 3 Installatio	Continuity Existed Continuity Not existed n".	
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NO >> Replace NATS antenna amp. Refer to <u>SEC-196. "Removal and Installation"</u>.

10.CHECK NATS ANTENNA AMP. GROUND CIRCUIT

B2198 NATS ANTENNA AMP.

< DTC/CIRCUIT DIAGNOSIS >

1. Disconnect NATS antenna amp. connector.

2. Check continuity between NATS antenna amp. harness connector and ground.

NATS ant	enna amp.		Continuity
Connector	Terminal	Ground	Continuity
M68	4		Existed

Is the inspection result normal?

YES >> GO TO 11.

NO >> Repair or replace harness.

11. CHECK INTERMITTENT INCIDENT

Refer to GI-34, "Intermittent Incident".

>> INSPECTION END

B2013 STEERING LOCK UNIT

Description

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

DTC Logic

DTC DETECTION LOGIC

	Trankla dia mania mana		Dessible serves
DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2013	ID DISCORD BCM-S/L	The ID verification results between BCM and steering lock unit are NG.	Steering lock unit
TC CONFIF	MATION PROCEDURE	E	
1.PERFORM	DTC CONFIRMATION P	ROCEDURE	
 Lock steer Press the 	ring. push-button ignition switc	h	
	elf-diagnosis result" using		
Is DTC detecte			
	o to <u>SEC-45, "Diagnosis F</u> SPECTION END	<u>rocedure"</u> .	
Diagnosis F	Procedure		INFOID:00000000503760
1. PERFORM	INITIALIZATION		
Perform initiali	zation using CONSULT-III	Departies Menual NATE N/IE/N//IE"	
Does steering		Operation Manual NATS-IVIS/NVIS".	
YES >> IN	SPECTION END		
	O TO 2. STEERING LOCK UNIT		
	teering lock unit.		
2. Perform in	itialization using CONSU	LT-III. III Operation Manual NATS-IVIS/NVIS".	
Does steering			
	SPECTION END O TO 3.		
3.CHECK INT	TERMITTENT INCIDENT		
Refer to <u>GI-34</u>	, "Intermittent Incident".		
~~ IN	SPECTION END		
~> IN			

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С

INFOID:000000005037598

INFOID:000000005037599

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B2014 CHAIN OF STRG-IMMU

Description

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

DTC Logic

INFOID:000000005037602

INFOID:000000005037601

DTC DETECTION LOGIC

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

- YES >> Go to <u>SEC-46. "Diagnosis Procedure"</u>.
- NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000005037603

1. CHECK STEERING LOCK UNIT POWER SUPPLY

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

	(+) Steering lock unit		Con	dition	Voltage (V) (Approx.)	
Connector	Terminal				(TT - 7	
M12	7	Ground	Ignition switch	OFF or ACC	Battery voltage	
1117	1	Ground	Ignition Switch	ON	0	

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK STEERING LOCK UNIT POWER SUPPLY CIRCUIT

1. Disconnect BCM connector.

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

Steering	lock unit	B	CM	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M12	7	M71	95	Existed

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

B2014 CHAIN OF STRG-IMMU

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

	Stee	ring lock unit			Continuity
Co	onnector		Terminal	Ground	
	M12		7		Not existed
ES >> R O >> R	epair or repl	I. Refer to <u>B</u> lace harness	CS-82, "Removal ROUND CIRCUI	and Installation". T	
ck continu	uity between	steering loc	k unit and ground	d.	
	Stee	ring lock unit			Orationity
Co	onnector		Terminal	Ground	Continuity
	M12		5 6		Existed
S >> G	ion result no iO TO 4. epair or repl	rmal? lace harness	·.		
Connect	steering lock	unit connec	OMMUNICATION tor and BCM con ring lock unit har		round.
(+					Voltage (V)
Steering	lock unit	(-)	C	Condition	
Connector	Terminal				
				Lock status	12
M12	2	Ground	Steering lock unit	Lock or unlock	(V) 15 10 50 50 MKIA0066GB
				For 15 seconds after unlock	12
				15 seconds or later after unlock.	0
Steeri he inspecti ES >> R O >> G CHECK ST Disconne	G TO 5. TEERING LO	ked : rmal? ring lock unit DCK UNIT C	Ignition switch i		
	-				
0.000	Steering loo		0	BCM Torm	Continuity
Conne	ector	Terminal	Conn	nector Term	Inal

Revision: 2009 March

M12

M71

94

2

Existed

B2014 CHAIN OF STRG-IMMU

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

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

Steering	lock unit		Continuity
Connector	Terminal	Ground	Continuity
M12	2		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-82, "Removal and Installation"</u>.

NO >> Repair or replace harness.

B2555 STOP LAMP

Description

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

DTC Logic

INFOID:000000005037605

INFOID:000000005037606

INFOID:000000005037604

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DTC DETECTION LOGIC

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

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Depress the brake pedal and wait 1 second or more.
- 2. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

1.CHECK STOP LAMP SWITCH INPUT SIGNAL 1

1. Turn ignition switch OFF.

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

	(+) CM	()	Voltage (V)	SEC	
Connector			(Approx.)		
M71	105	Ground	Battery voltage	·	

Is the inspection normal?

- YES >> GO TO 2.
- NO-1 >> Check 10 A fuse [No. 7, located in the fuse block (J/B)].
- NO-2 >> Check harness for open or short between BCM and fuse.

2.CHECK STOP LAMP SWITCH POWER SUPPLY CIRCUIT

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

(•	(+)			0
Stop lan	np switch	()	Voltage (V) (Approx.)	
Connector	Terminal			Р
E115	1	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Check harness for open or short to stop lamp switch.

 ${\it 3.}$ CHECK STOP LAMP SWITCH INPUT SIGNAL 2

B2555 STOP LAMP

< DTC/CIRCUIT DIAGNOSIS >

1. Connect stop lamp switch connector.

2. Check voltage between BCM harness connector and ground.

	+) CM	(–) Condition		Condition	
Connector	Terminal				(Approx.)
M68		Ground	Brake pedal	Depressed	Battery voltage
MOO	9	Ground	Blake pedal	Not depressed	0

Is the inspecting result normal?

YES >> Replace BCM. Refer to <u>BCS-82, "Removal and Installation"</u>.

NO >> GO TO 4.

4.CHECK STOP LAMP SWITCH CIRCUIT

1. Check continuity between stop lamp switch harness connector and BCM harness connector.

Stop lamp switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	Continuity
E115	2	M68	9	Existed

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

Stop lan	Stop lamp switch		Continuity
Connector	Terminal	Ground	Continuity
E115	2		Not existed

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

5.CHECK STOP LAMP SWITCH

Refer to SEC-50, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace stop lamp switch. Refer to <u>BR-17</u>, "Exploded View".

Ó.CHECK INTERMITTENT INCIDENT

Refer to GI-34, "Intermittent Incident".

>> INSPECTION END

Component Inspection

1.CHECK STOP LAMP SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect stop lamp switch connector.
- 3. Check continuity between stop lamp switch terminals.

Stop lamp switch		Condition		Continuity	
Ten	Terminal		Condition		
1	2	Brake pedal	Not depressed	Not existed	
I	2	brake pedal	Depressed	Existed	

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace stop lamp switch. Refer to <u>BR-17, "Exploded View"</u>.

SEC-50

B2556 PUSH-BUTTON IGNITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

B2556 PUSH-BUTTON IGNITION SWITCH

Description

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

DTC Logic

INFOID:000000005037609

INEOID:000000005037610

INFOID:000000005037608

DTC DETECTION LOGIC

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine and wait 100 seconds or more.
- 2. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-51, "Diagnosis Procedure".
- NO >> INSPECTION END

Diagnosis Procedure

1. CHECK PUSH-BUTTON IGNITION SWITCH INPUT SIGNAL

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

(-	+)			SEC
Push-button i	gnition switch	()	Voltage (V) (Approx.)	
Connector	Terminal			
M101	8	Ground	12	L

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT

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

0	Continuity	СМ	B	ignition switch	Push-button
	Continuity	Terminal	Connector	Terminal	Connector
	Existed	100	M71	8	M101
P	-	-			

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

Push-button ignition switch			Continuity	
Connector	Terminal	Ground	Continuity	
M101	8		Not existed	

Is the inspection result normal?

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B2556 PUSH-BUTTON IGNITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

- YES >> Replace BCM. Refer to <u>BCS-82, "Removal and Installation"</u>.
- NO >> Repair or replace harness.

$\mathbf{3}$.check push-button ignition switch ground circuit

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

Push-button i	Push-button ignition switch		Continuity
Connector	Terminal	Ground	Continuity
M101	4		Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4.CHECK PUSH-BUTTON IGNITION SWITCH

Refer to SEC-52, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace push-button ignition switch. Refer to PCS-146, "Removal and Installation".

5.CHECK INTERMITTENT INCIDENT

Refer to GI-34, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:000000005037611

1. CHECK PUSH-BUTTON IGNITION SWITCH

1. Turn ignition switch OFF.

2. Disconnect push-button ignition switch connector.

3. Check continuity between push-button ignition switch terminals.

Push-button	Push-button ignition switch		Condition		
Terr	minal	Conduction		Continuity	
1	Q	Push-button ignition	Pressed	Existed	
4	0	switch	Not pressed	Not existed	

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace push-button ignition switch. Refer to PCS-146. "Removal and Installation".

B2557 VEHICLE SPEED

Description

BCM receives 2 vehicle speed signals via CAN communication. 1 signal is transmitted by the "combination 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 <u>BCS-39, "DTC Logic"</u>.
- If DTC B2557 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-40, "DTC Logic".

DTC No.	Self-diagnosis name	DTC detecting condition	Possible causes	
B2557	VEHICLE SPEED	 BCM detects the following difference between the vehicle speed signal from "combination meter" and the one from "ABS actuator and electric unit" for 10 seconds continuously. One is 10 km/h (6.2 MPH) or more and the other is 4 km/ h (2.5 MPH) or less 	 Combination meter ABS actuator and electric unit (control unit) 	F
DTC CON	FIRMATION PROC	CEDURE		
1.PERFO	RM DTC CONFIRM	ATION PROCEDURE	ŀ	Η
2. Check Is DTC dete	"Self-diagnosis resu	icle speed of 10 km/h (6.2 MPH) or more and wait It" using CONSULT-III.	10 seconds or more.	I
	INSPECTION END			J
Diagnosi	s Procedure		INFOID:000000005037614	
1.снеск	DTC WITH "ABS AG	CTUATOR AND ELECTRIC UNIT (CONTROL UNI	T)"	EC
	•	sing CONSULT-III. Refer to <u>BRC-86, "DTC Index"</u> .		
•	ection result normal?		L	Ĺ
	• GO TO 2. • Repair or replace th	ne malfunctioning parts.		
•	DTC WITH "COMBI	•	Ν	1
		sing CONSULT-III. Refer to <u>MWI-62, "DTC Index"</u> .		VI
	ection result normal?	-		
-	GO TO 3.		Ν	N
•	• •	ne malfunctioning parts.		
	INTERMITTENT IN		(С
Refer to <u>GI</u>	-34, "Intermittent Inc	ident".		
>>	INSPECTION END	,	F	Ρ

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INFOID:000000005037612

B2601 SHIFT POSITION

Description

BCM confirms the shift position with the following 4 signals.

- Selector lever
- Transmission range switch
- P position signal from IPDM E/R (CAN)
- P position signal from TCM (CAN)

DTC Logic

INFOID:000000005037619

INFOID:000000005037618

[WITH INTELLIGENT KEY SYSTEM]

DTC DETECTION LOGIC

NOTE:

- If DTC B2601 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-39, "DTC Logic"</u>.
- If DTC B2601 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-40, "DTC Logic"</u>.
- If DTC B2601 is displayed with DTC B2603, first perform the trouble diagnosis for DTC B2603. Refer to <u>SEC-54, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2601	SHIFT POSITION	When there is a difference between P range signal from CVT shift selector and shift position signal from IPDM E/R	 Harness or connectors (CVT shift selector circuit is open or shorted) CVT shift selector (detention switch) BCM CAN communication malfunction between BCM and IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions and wait 2 seconds or more.

- Selector lever is in the P or N position
- Do not depress brake pedal
- 2. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

YES >> Go to <u>SEC-54, "Diagnosis Procedure"</u>.

NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000005037620

1.CHECK CVT SHIFT SELECTOR POWER SUPPLY

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

(+) CVT shift selector (detention switch)		()	Voltage (V) (Approx.)	
Connector	Terminal			
M58	7	Ground	12	

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK CVT SHIFT SELECTOR POWER SUPPLY CIRCUIT

B2601 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

- 1. Disconnect BCM connector.
- Check continuity between CVT shift selector (detention switch) harness connector and BCM harness connector.

CVT shift selector	(detention switch)	B	CM	Continuity	В
Connector	Terminal	Connector	Terminal	Continuity	
M58	7	M71	104	Existed	-

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

CVT shift selector	(detention switch)		Continuity	
Connector	Terminal	Ground	Continuity	
M58	7		Not existed	

Is the inspection result normal?

YES >> Replace BCM. Refer to	BCS-82, "Removal and Installation"
------------------------------	------------------------------------

NO >> Repair or replace harness.

3.CHECK CVT SHIFT SELECTOR CIRCUIT (BCM)

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

Check continuity between CVT shift selector (detention switch) harness connector and BCM harness connector.

CVT shift selector	(detention switch)	BCM		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
M58	8	M68	37	Existed	

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

CVT shift selector (detention switch) Connector Terminal			Continuity	
Connector	Terminal	Ground	Continuity	1
M58	8		Not existed	J

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

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

Check continuity between CVT shift selector (detention switch) harness connector and IPDM E/R harness connector.

CVT shift selector	(detention switch)	IPDI	M E/R	Continuity	M
Connector	Terminal	Connector	Terminal	Continuity	
M58	8	E17	64	Existed	N

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

5. CHECK CVT SHIFT SELECTOR (DETENTION SWITCH)

Refer to SEC-56, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace CVT shift selector. Refer to <u>TM-204</u>, "Removal and Installation".

6.CHECK INTERMITTENT INCIDENT

Refer to GI-34, "Intermittent Incident".

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B2601 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

>> INSPECTION END

Component Inspection

INFOID:000000005037621

[WITH INTELLIGENT KEY SYSTEM]

$1. {\sf CHECK} \; {\sf CVT} \; {\sf SHIFT} \; {\sf SELECTOR} \; ({\sf DETENTION} \; {\sf SWITCH})$

1. Turn ignition switch OFF.

2. Disconnect CVT shift selector connector.

3. Check continuity between CVT shift selector (detention switch) terminals.

CVT shift selecto	CVT shift selector (detention switch) Terminal		Condition	
Te				
7	0	Selector lever	P position	Not existed
/	o	Selector level	Other than above	Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace CVT shift selector. Refer to <u>TM-204</u>, "Removal and Installation".

B2602 SHIFT POSITION

Description

BCM confirms the shift position with the following 4 signals.

- 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 B2602 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-39, "DTC Logic"</u>.
- If DTC B2602 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-40. "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 the P position Vehicle speed is 4 km/h (2.5 MPH) or more Ignition switch is in the ON position 	 Harness or connectors (CVT shift selector circuit is open or shorted) CVT shift selector (detention switch) BCM 	(

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine under the following conditions and wait 10 seconds or more.
- Selector lever is in the P or N position
- Do not depress brake pedal
- 2. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

1. CHECK DTC WITH "ABS ACTUATOR AND ELECTRIC UNIT"

Check "Self-diagnosis result" using CONSULT-III. Refer to <u>BRC-86, "DTC Index"</u>. Is the inspection result normal?

NO >> Repair or replace the malfunctioning parts.

2.CHECK CVT SHIFT SELECTOR POWER SUPPLY

1. Turn ignition switch OFF.

- 2. Disconnect CVT shift selector (detention switch) connector.
- 3. Check voltage between CVT shift selector (detention switch) harness connector and ground.

	+)		
CVT shift selecto	CVT shift selector (detention switch)		Voltage (V) (Approx.)
Connector	Terminal		
M58	7	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4.

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B2602 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

NO >> GO TO 3.

3. CHECK CVT SHIFT SELECTOR POWER SUPPLY CIRCUIT

- 1. Disconnect BCM connector.
- Check continuity between CVT shift selector (detention switch) harness connector and BCM harness connector.

CVT shift selector	lector (detention switch) BCM Continuity		BCM	
Connector	Terminal	Connector	Terminal	Continuity
M58	7	M71	104	Existed

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

CVT shift selector	(detention switch)		Continuity
Connector	Terminal	Ground	Continuity
M58	7		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-82, "Removal and Installation"</u>.

NO >> Repair or replace harness.

CHECK CVT SHIFT SELECTOR CIRCUIT

- 1. Disconnect BCM connector and IPDM E/R connector.
- Check continuity between CVT shift selector (detention switch) harness connector and BCM harness connector.

CVT shift selector	(detention switch)	BCM		BCM Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
M58	8	M68	37	Existed	

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

CVT shift selector	CVT shift selector (detention switch)		Continuity
Connector	Terminal	Ground	Continuity
M58	8		Not existed

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

5.CHECK CVT SHIFT SELECTOR (DETENTION SWITCH)

Refer to SEC-58, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace CVT shift selector. Refer to <u>TM-204, "Removal and Installation"</u>.

6.CHECK INTERMITTENT INCIDENT

Refer to GI-34, "Intermittent Incident".

>> INSPECTION END

Component Inspection

1.CHECK CVT SHIFT SELECTOR (DETENTION SWITCH)

1. Turn ignition switch OFF.

- 2. Disconnect CVT shift selector connector.
- 3. Check continuity between CVT shift selector (detention switch) terminals.

SEC-58

B2602 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

	CVT shift selector	(detention switch)	0		Oracita	A
	Tern	ninal	Con	dition	Continuity	
	7	8	Selector lever	P position	Not existed	
	1	0	Selector level	Other than above	Existed	E
Is the in	spection result	normal?				
YES NO	>> INSPECTIC >> Replace C\	ON END /T shift selector. Refe	er to <u>TM-204, "Remo</u>	val and Installation".		C
						Γ
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B2603 SHIFT POSITION STATUS

Description

BCM confirms the shift position with the following 4 signals.

- 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 B2603 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-39, "DTC Logic"</u>.
- If DTC B2603 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-40, "DTC Logic"</u>.
- If DTC B2603 is displayed with DTC B2601, first perform the trouble diagnosis for DTC B2601. Refer to <u>SEC-54, "DTC Logic"</u>.

DTC No.	Self-diagnosis name	DTC detecting condition	Possible causes
B2603	SHIFT POSI STATUS	 BCM detects the following status when ignition switch is in the ON position. Transmission range switch: approx. 0 V CVT shift selector (detention switch): approx. 0 V 	 Harness or connector (CVT shift selector circuit is open or shorted) Harness or connectors (Transmission renge switch circuit is open or shorted) CVT shift selector (detention switch) Transmission range switch BCM IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

- 1. Turn ignition switch ON under the following conditions and wait 1 second or more.
- Selector lever is in the P or N position
- Do not depress brake pedal
- 2. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-60. "Diagnosis Procedure".
- NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE 2

- 1. After step 1 of DTC confirmation procedure, shift selector lever to a position other than P or N
- 2. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

1.INSPECTION START

Perform inspection in accordance with procedure that confirms DTC.

Which procedure confirms DTC?

DTC confirmation procedure 1>>GO TO 2.

DTC confirmation procedure 2>>GO TO 7.

SEC-60

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< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Check voltage		+)	nge switch	namess conn	ector and groun	u.
		range switch		()		Voltage (V)
Connect		Termin	al		, 	(Approx.)
		1		Grou	Ind	Battery voltage
the inspection re	esult norm					g.
ES >> GO TO O >> GO TO CHECK TRANS	O 3. SMISSION		CH POWE	R SUPPLY CI	RCUIT	
tor.		en transmission	range swit	ch harness co		DM E/R harness cor
Connector		Terminal	Conr	nector	Terminal	- Continuity
F21		1	E	15	59	Existed
Connect		sembly Termin 1	al	Ground		Continuity Not existed
F21						
the inspection revealed to the inspection reveal	10 A fuse r or replace NPUT SIG witch OFF mission ra witch ON.	No. 56, locate e harness. NAL nge switch con	nector.			
the inspection re YES >> Check NO >> Repai CHECK BCM II . Turn ignition s . Connect trans . Turn ignition s	x 10 A fuse r or replace NPUT SIG witch OFF mission ra witch ON.	e (No. 56, locate e harness. NAL	nector.			
the inspection revealed to the inspection revealed to the inspection revealed to the revealed to the inspection of the i	(10 A fuse r or replace NPUT SIG witch OFF mission ra witch ON. between (+)	No. 56, locate e harness. NAL nge switch con	nector. onnector a	nd ground.	Condition	Voltage (V)
the inspection re YES >> Check NO >> Repai CHECK BCM II Turn ignition s Connect trans Turn ignition s Check voltage	(10 A fuse r or replace NPUT SIG witch OFF mission ra witch ON. between (+) BCM	No. 56, locate e harness. NAL nge switch con	nector.	nd ground.	Condition	Voltage (V) (Approx.)
the inspection re YES >> Check NO >> Repai • CHECK BCM II Turn ignition s Connect trans Turn ignition s Check voltage	x 10 A fuse r or replace NPUT SIG witch OFF mission ra witch ON. between (+) BCM	ninal	nector. onnector a	nd ground.	P or N posit	(Approx.)
the inspection re ES >> Check IO >> Repai CHECK BCM II Turn ignition s Connect trans Turn ignition s Check voltage Connector	(10 A fuse r or replace NPUT SIG witch OFF mission ra witch ON. between (+) BCM Terr	e (No. 56, locate e harness. NAL nge switch con BCM harness c	nector. onnector a (–)	nd ground.	P or N posit	(Approx.)

SEC-61

< DTC/CIRCUIT DIAGNOSIS >

Transmission range switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	Continuity
F21	2	M71	102	Existed

4. Check continuity between transmission range switch harness connector and ground.

Tra	Transmission range switch			Continuity
Connector		Terminal	Ground	Continuity
F21		2		Not existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

6.CHECK TRANSMISSION RANGE SWITCH

Refer to SEC-63, "Component Inspection (Transmission Range Switch)".

Is the inspection result normal?

YES >> GO TO 12.

NO >> Replace transaxle assembly. Refer to <u>TM-223, "Exploded View"</u>.

7.CHECK CVT SHIFT SELECTOR POWER SUPPLY

1. Turn ignition switch OFF.

- 2. Disconnect CVT shift selector (detention switch) connector.
- 3. Check voltage between CVT shift selector (detention switch) harness connector and ground.

(+) CVT shift selector (detention switch)		()	Voltage (V) (Approx.)	
Connector	Terminal		() () () () () () () () () ()	
M58	7	Ground	12	

Is the inspection result normal?

YES >> GO TO 9.

NO >> GO TO 8.

8.CHECK CVT SHIFT SELECTOR POWER SUPPLY CIRCUIT

- 1. Disconnect BCM connector.
- Check continuity between CVT shift selector (detention switch) harness connector and BCM harness connector.

CVT shift selector	(detention switch)	B	СМ	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M58	7	M71	104	Existed

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

CVT shift selector	(detention switch)		Continuity
Connector	Terminal	Ground	Continuity
M58	7		Not existed

Is the inspection result normal?

- YES >> Replace BCM. Refer to <u>BCS-82, "Removal and Installation"</u>.
- NO >> Repair or replace harness.

9.CHECK CVT SHIFT SELECTOR CIRCUIT (BCM)

- 1. Disconnect BCM connector and IPDM E/R connector.
- Check continuity between CVT shift selector (detention switch) harness connector and BCM harness connector.

SEC-62

< DTC/CIRCUIT DIAGNOSIS >

0	r (detention switch)	0	BCM	Continuity
Connector	Terminal	Connector	Terminal	
M58	8	M68	37	Existed
. Check continuity be	etween CVT shift sele	ector (detention s	switch) harness con	nector and ground.
CVT shift s	elector (detention switch)			
Connector	Termina	al	Ground	Continuity
M58	8			Not existed
the inspection result	normal?			
YES >> GO TO 10.				
•	eplace harness.			
0.CHECK CVT SHI				
•	en CVT shift selecto	or (detention sw	itch) harness conne	ector and IPDM E/R harnes
onnector.				
CVT shift selector	r (detention switch)		IPDM E/R	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M58	8	E17	64	Existed
the inspection result YES >> GO TO 12. NO >> Replace C 2.CHECK INTERMI refer to <u>GI-34, "Intermi</u> >> INSPECTIO Component Inspection .CHECK TRANSMIS	VT shift selector. Refe TTENT INCIDENT <u>ittent Incident"</u> . ON END ction (Transmissi	ion Range S		tion". INFOID:00000000515948
. Check continuity be	n OFF. ission range switch co etween transmission i mission range switch			
	Terminal		Condition	Continuity
			P or N position	Existed
	2		Other than above	1
1				Not existed

< DTC/CIRCUIT DIAGNOSIS >

- 1. Turn ignition switch OFF.
- 2. Disconnect CVT shift selector connector.
- 3. Check continuity between CVT shift selector (detention switch) terminals.

CVT shift selector	(detention switch)	Con	dition	Continuity
Terr	minal	Con		Continuity
7	0	Selector lever	P position	Not existed
	0	Selector level	Other than above	Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace CVT shift selector. Refer to TM-204, "Removal and Installation".

• If DTC B2604 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-40, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2604	PNP/CLUTCH SW	 The following states are detected while ignition switch is ON. There is park/neutral position signal input but shift position signal input (CAN) from TCM is other than P or N There is not park/neutral position signal input but shift position signal input (CAN) from TCM is P or N 	 Harness or connectors (Transmission range switch circuit is open or shorted) Transmission range switch BCM IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions and wait 1 second or more.
- Selector lever is in the P or N position
- Do not depress brake pedal

< DTC/CIRCUIT DIAGNOSIS >

2. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

- YES >> Go to <u>SEC-65. "Diagnosis Procedure"</u>.
- NO >> INSPECTION END

Diagnosis Procedure

1. CHECK TRANSMISSION RANGE SWITCH POWER SUPPLY

- 1. Turn ignition switch OFF.
- 2. Disconnect transmission range switch connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between transmission range switch harness connector and ground.

(+)			0
Transmissior	range switch	()	Voltage (V) (Approx.)	
Connector	Terminal			Р
F21	1	Ground	Battery voltage	-

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK TRANSMISSION RANGE SWITCH POWER SUPPLY CIRCUIT

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SEC-65

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B2604 PNP SWITCH

< DTC/CIRCUIT DIAGNOSIS >

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

Transmissior	Transmission range switch		IPDM E/R		
Connector	Terminal	Connector	Terminal	Continuity	
F21	1	E15	59	Existed	

4. Check continuity between transmission range switch harness connector and ground.

Transmissior	n range switch		Continuity
Connector	Terminal	Ground	Continuity
F21	1		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to <u>PCS-35, "Removal and Installation"</u>.

NO >> Repair or replace harness.

3. CHECK BCM INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Connect transmission range switch connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between BCM harness connector and ground.

	(+) BCM				Voltage (V) (Approx.)
Connector	Terminal				
M71	102	Ground Selector lever		P or N position	Battery voltage
	102	Ground	Selector level	Other than above	0

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-82, "Removal and Installation"</u>.

NO >> GO TO 4.

CHECK BCM INPUT SIGNAL CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect transmission range switch connector.

3. Check continuity between transmission range switch harness connector and BCM harness connector.

Transmissior	n range switch	B	BCM	
Connector	Terminal	Connector	Terminal	Continuity
F21	2	M71	102	Existed

4. Check continuity between transmission range switch harness connector and ground.

Transmission	range switch		Continuity
Connector	Terminal	Ground	Continuity
F21	2		Not existed

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

5.CHECK TRANSMISSION RANGE SWTICH

Refer to SEC-67, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 6.

B2604 PNP SWITCH

[WITH INTELLIGENT KEY SYSTEM]

1.CHECK TRANSMISSION RANGE SWITCH 1. Turn ignition switch OFF. 2. Disconnect transmission range switch connector. 3. Check continuity between transmission range switch terminals.				LLIGENT KEY SYSTEM]
Refer to GI-34, "Intermittent Incident". >> INSPECTION END Component Inspection 1. CHECK TRANSMISSION RANGE SWITCH 1. Turn ignition switch OFF. 2. Disconnect transmission range switch connector. 3. Check continuity between transmission range switch terminals.	place transaxle as	sembly. Refer to <u>T</u>	M-223, "Exploded View".	
>> INSPECTION END Component Inspection Information Section Information Section Information Section Component Inspection Information Component Inspection Comp	ERMITTENT INCI	DENT		
Component Inspection INFORMATION CONTROL 1. CHECK TRANSMISSION RANGE SWITCH Information switch OFF. 1. Turn ignition switch OFF. Information switch OFF. 2. Disconnect transmission range switch connector. Information switch off. 3. Check continuity between transmission range switch terminals. Information switch off.	"Intermittent Incide	<u>ent"</u> .		
Component Inspection INFORMATION CONTROL 1. CHECK TRANSMISSION RANGE SWITCH Information switch OFF. 1. Turn ignition switch OFF. Information switch OFF. 2. Disconnect transmission range switch connector. Information switch off. 3. Check continuity between transmission range switch terminals. Information switch off.				
 CHECK TRANSMISSION RANGE SWITCH Turn ignition switch OFF. Disconnect transmission range switch connector. Check continuity between transmission range switch terminals. Transmission range switch				
 Turn ignition switch OFF. Disconnect transmission range switch connector. Check continuity between transmission range switch terminals. 	Inspection			INFOID:000000005155071
 Disconnect transmission range switch connector. Check continuity between transmission range switch terminals. Transmission range switch	NSMISSION RAM	IGE SWITCH		
Condition Continuity	transmission rang inuity between tra	nsmission range s		
		Switch	Condition	Continuity
Terminal P or N position Existed	Terminal		P or N position	Eviatod
1 2 .				
Other than above Not existed Is the inspection result normal?	1	2	•	

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B2605 PNP SWITCH

Description

BCM confirms the shift position with the following 4 signals.

- 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 <u>BCS-39, "DTC Logic"</u>.
- If DTC B2605 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-40. "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2605	PNP/CLUTCH SW	When ignition switch is ON, N range signal input and shift position signal (CAN) input from IPDM E/ R do not match.	 Harness or connectors (Transmission range switch circuit is open or shorted) Transmission range switch IPDM E/R BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions and wait 1 second or more.
- Selector lever is in the P or N position
- Do not depress brake pedal
- 2. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

1.CHECK IPDM E/R INPUT SIGNAL

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

	+) M E/R	(-)	Con	dition	Voltage (V) (Approx.)	
Connector	Terminal					
E15	47	Ground	Solootor lovor	P or N position	Battery voltage	
EIS	47 Ground Selector lever	Other than above	0			

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to <u>PCS-35, "Removal and Installation"</u>.

NO >> GO TO 2.

2.CHECK IPDM E/R INPUT SIGNAL CIRCUIT

1. Turn ignition switch OFF.

INFOID:000000005037632

INFOID:000000005037633

B2605 PNP SWITCH

< DTC/CIRCUIT DIAGNOSIS >

2. Disconnect BCM connector.

E15 47 M71 102 Existed continuity between IPDM E/R harness connector and ground. IPDM E/R Continuity	IPDM	E/R	BC	Μ	Quatinuitu
IPDM E/R harness connector and ground. IPDM E/R Continuity Connector Terminal Ground Continuity E15 47 Not existed ection result normal? • Replace BCM. Refer to BCS-82, "Removal and Installation". • Replace BCM. Refer to BCS-82, "Removal and Installation".	Connector	Terminal	Connector	Terminal	Continuity
IPDM E/R Ground Continuity Connector Terminal Ground Continuity E15 47 Not existed ection result normal? Replace BCM. Refer to BCS-82, "Removal and Installation". Replace BCM. Refer to BCS-82, "Removal and Installation".	E15	47	M71	102	Existed
Connector Terminal Ground Continuity E15 47 Not existed ection result normal? Replace BCM. Refer to BCS-82, "Removal and Installation". Section and Installation	eck continuity bet	ween IPDM E/R ha	rness connector and g	round.	
Connector Terminal Ground Continuity E15 47 Not existed ection result normal? Replace BCM. Refer to BCS-82, "Removal and Installation". Section and Installation		IPDM E/R			
ection result normal? • Replace BCM. Refer to <u>BCS-82, "Removal and Installation"</u> .	Connector	Termin	al C	Ground	Continuity
Replace BCM. Refer to <u>BCS-82, "Removal and Installation"</u> .	E15	47			Not existed

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B2608 STARTER RELAY

Description

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

DTC Logic

INFOID:000000005037642

INFOID:000000005037641

[WITH INTELLIGENT KEY SYSTEM]

DTC DETECTION LOGIC **NOTE**:

- If DTC B2608 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-39, "DTC Logic".
- If DTC B2608 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-40, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2608	STARTER RELAY	BCM outputs starter motor relay OFF but IPDM E/ R receives starter motor relay ON signal.	 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.
- Selector lever is in the P or N position
- Do not depress brake pedal
- 2. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-70. "Diagnosis Procedure".
- NO >> INSPECTION END

Diagnosis Procedure

1.CHECK DTC WITH IPDM E/R

Check "Self-diagnosis result" using CONSULT-III. Refer to PCS-33, "DTC Index".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CHECK BCM POWER SUPPLY CIRCUIT

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

(+) BCM					Voltage (V)	
		(—)	Condition		Voltage (V) (Approx.)	
Connector	Terminal					
M71	97	Ground	Selector lever	N or P position	12	
	97	Ground	Selector level	Other than above	0	

Is the measurement value within the specification?

YES >> GO TO 4.

NO >> GO TO 3.

3.CHECK STARTER RELAY CIRCUIT

B2608 STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

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

IPDM E/R		BCM			Quatinuitu
Connector	Terminal	Connector		Terminal	Continuity Existed
E13	30	M71		97	
Check continuity be	tween IPDM E/R har	ness connecto	r and ground	1.	
IPDM E/R					Continuity
Connector	Termina	al	Ground		Continuity
E13	30				Not existed
CHECK INTERMITT	_				
to <u>GI-34, "Intermi</u>					
>> INSPECTIO)N END				

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B2609 STEERING STATUS

Description

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

DTC Logic

INFOID:000000005037645

DTC DETECTION LOGIC

NOTE:

- If DTC B2609 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-39, "DTC Logic"</u>.
- If DTC B2609 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-40, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2609	S/L STATUS	Combination of steering lock state switch and steering unlock state switch is not normal or steer- ing lock (or unlock) state that BCM recognizes is different from combination of steering lock state switch/ steering unlock state switch.	 Harness or connectors (Steering lock unit circuit is open or shorted) Steering lock unit BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE-1

- 1. Press the push-button ignition switch and wait 1 second or more under the following conditions.
- Selector lever is in the P or N position
- Do not depress brake pedal
- 2. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-72, "Diagnosis Procedure".
- NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE-2

1. Turn ignition switch ON.

- 2. Turn ignition switch OFF.
- 3. Press driver side door switch and wait 1second or more.
- 4. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

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

NO >> INSPECTION END

Diagnosis Procedure

1.INSPECTION START

Perform inspection in accordance with procedure that confirms DTC.

Which procedure confirms DTC?

DTC confirmation procedure 1>>GO TO 2.

DTC confirmation procedure 2>>GO TO 4.

2.CHECK IPDM E/R INPUT SIGNAL

1. Turn ignition switch OFF.

2. Check voltage between IPDM E/R harness connector and ground.

INFOID:000000005037646

B2609 STEERING STATUS

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

	+)	-			Voltage (V)
Connector	M E/R	()	Cond	lition	(Approx.)
Connector	Terminar		-	Lock	0
	65		-	Unlock	Battery voltage
E17		Ground	Steering lock unit	Lock	Battery voltage
	68		-	Unlock	0
IO >> GO TO CHECK IPDM E	e IPDM E/R. Refe	L CIRCUIT	emoval and Installat	<u>ion"</u> .	
			nnector and steering	lock unit harne	ess connector.
	IPDM E/R		Steering lock unit		Continuity
Connector	Termina	I Co	nnector	Terminal	
E17	65 68		M12	3	Existed
Check continuit	IPDM E/R	E/R harness cor	nnector and ground.		
Connecto		Terminal	Ground		Continuity
E17		65	Ground		Not existed
		68			
NO >> Repair CHECK BCM IN Turn ignition sw	e steering lock un or replace harnes PUT SIGNAL	S.	and ground.		
	.)	1			
(+)	. (_)	Cond	lition	Voltage (V)
(+) CM Terminal	()	Cond	lition	Voltage (V) (Approx.)
(CM Terminal	()	Cond	lition	
(Br Connector	СМ				(Approx.)
(CM Terminal 107	(–) Ground	Cond Steering lock unit	Lock	(Approx.)
(Br Connector	CM Terminal			Lock Unlock	(Approx.) 0 Battery voltage
Connector M71 the inspection res	CM Terminal 107 108 sult normal?	- Ground		Lock Unlock Lock	(Approx.) 0 Battery voltage Battery voltage

B2609 STEERING STATUS

< DTC/CIRCUIT DIAGNOSIS >

E	BCM		Steering lock unit	
Connector	Terminal	Connector	Terminal	Continuity
M71	107	M12	3	Existed
1017 1	108		8	Existed

3. Check continuity between BCM harness connector and ground.

В	СМ		Continuity	
Connector	Connector Terminal		Continuity	
 M71	107	Ground	Not existed	
1417 1	108		NOT EXISTED	

Is the inspection result normal?

YES >> Replace steering lock unit.

NO >> Repair or replace harness.

B260B STEERING LOCK UNIT

< DTC/CIRCUIT DIAGNOSIS >

B260B STEERING LOCK UNIT

Description

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

DTC Logic

INFOID:000000005037648

INFOID:000000005037647

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B260B	STEERING LOCK UNIT	BCM detects malfunctioning of steering lock unit be- fore steering unlocking.	Steering lock unit	D
	RMATION PROCEDURE			E
1.PERFORM	I DTC CONFIRMATION PR	ROCEDURE		
 Turn igniti Press fror 	ion switch ON. ion switch OFF. nt door switch (driver side). elf-diagnosis result" using (CONSULT-III.		F
	<u>ed?</u> o to <u>SEC-75, "Diagnosis P</u> ISPECTION END	rocedure".		G
Diagnosis I	Procedure		INFOID:000000005037649	H
	ON START			I
 Check "Se Touch "EF 				
	DTC Confirmation Procedur -75, "DTC Logic".	е.		J
Is DTC detect YES >> R				SE
				L

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[WITH INTELLIGENT KEY SYSTEM]

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B260C STEERING LOCK UNIT

Description

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

DTC Logic

INFOID:000000005037651

INFOID:000000005037652

INFOID:000000005037650

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260C	STEERING LOCK UNIT	BCM detects malfunctioning of steering lock unit be- fore steering locking.	Steering lock unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Turn ignition switch OFF.
- 3. Press front door switch (driver side).
- 4. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

- YES >> Go to <u>SEC-76, "Diagnosis Procedure"</u>.
- NO >> INSPECTION END

Diagnosis Procedure

1.INSPECTION START

- 1. Turn ignition switch ON.
- 2. Check "Self-diagnosis result" using CONSULT-III.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure. See <u>SEC-76, "DTC Logic"</u>.

Is DTC detected?

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

B260D STEERING LOCK UNIT

< DTC/CIRCUIT DIAGNOSIS >

B260D STEERING LOCK UNIT

Description

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

DTC Logic

INFOID:000000005037654

INFOID:000000005037653

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260D	STEERING LOCK UNIT	BCM detects malfunctioning of steering lock unit after steering locking.	Steering lock unit
TC CONFI	RMATION PROCEDU	RE	
.PERFORM	I DTC CONFIRMATION	PROCEDURE	
	tion switch ON. tion switch OFF.		
. Press fro	nt door switch (driver side elf-diagnosis result" usin		
<u>s DTC detec</u>			
	So to <u>SEC-77, "Diagnosis</u> NSPECTION END	Procedure".	
Diagnosis	Procedure		INFOID:0000000050376
.INSPECTI	ON START		
	tion switch ON. elf-diagnosis result" usin	a CONSULT-III.	
5. Touch "E	RASE".	-	
	DTC Confirmation Proced -77, "DTC Logic".	dure.	
s DTC detec	-		
YES >> F	Replace steering lock unit		
NO >> II	NSPECTION END		

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B260F ENGINE STATUS

Description

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

DTC Logic

INFOID:000000005037657

INFOID:000000005037656

DTC DETECTION LOGIC

NOTE:

- If DTC B260F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-39, "DTC Logic"</u>.
- If DTC B260F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-40, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260F	ENG STATE SIG LOST	BCM has not yet received 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.
- Selector lever is in the P or N position
- Do not depress brake pedal
- 2. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-78, "Diagnosis Procedure".
- NO >> INSPECTION END

Diagnosis Procedure

1.INSPECTION START

- 1. Turn ignition switch ON.
- 2. Check "Self-diagnosis result" using CONSULT-III.
- 3. Touch "ERASE".
- Perform DTC Confirmation Procedure. See <u>SEC-78, "DTC Logic"</u>.

Is the DTC B260F displayed again?

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

2.REPLACE ECM

Replace ECM. Refer to <u>EC-15</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special <u>Repair Requirement"</u>.

>> INSPECTION END

INFOID:000000005037658

B2612 STEERING STATUS

< DTC/CIRCUIT DIAGNOSIS >

B2612 STEERING STATUS

Description

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

DTC Logic

INFOID:000000005037670

INFOID:000000005037669

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DTC DETECTION LOGIC

NOTE:

- If DTC B2612 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-39, "DTC Logic"</u>.
- If DTC B2612 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-40, "DTC Logic"</u>.

DTC No.	Self-diagnosis name	DTC detecting condition	Possible causes	
B2612	S/L STATUS	The following 2 state signals are different. Steering lock state recognition of BCM Steering lock state signal from IPDM E/R 	 Harness or connectors (Steering lock unit circuit is open or short- ed) Steering lock unit BCM 	
DTC CON	FIRMATION PROCE	EDURE		
1.PERFO	RM DTC CONFIRMAT	ION PROCEDURE-1		
SelectorDo not	or lever is in the P or N depress brake pedal "Self-diagnosis result"		econd or more.	
	> Go to <u>SEC-79, "Diag</u> > GO TO 2.	nosis Procedure".		
	SO TO 2. RM DTC CONFIRMAT			
 Turn ig Turn ig Press of 	nition switch ON. nition switch OFF. door switch. "Self-diagnosis result"			
Is DTC det	-			
	> Go to <u>SEC-79, "Diag</u> > INSPECTION END	nosis Procedure".		
Diagnosi	s Procedure		INFOID:00000000503767	1
1.INSPEC	TION START			
		e with procedure that confirms DTC.		•
DTC conf	cedure confirms DTC? irmation procedure 1> irmation procedure 2>			
•	IPDM E/R INPUT SIG			
1. Turn ig	nition switch OFF.	I E/R harness connector and ground.		-

B2612 STEERING STATUS

< DTC/CIRCUIT DIAGNOSIS >

(+) IPDM E/R		(-)	Condition		Voltage (V) (Approx.)	
Connector	Terminal				(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
	05	Ground	Steering lock unit	Lock	0	
F 47	65			Unlock	Battery voltage	
E17	<u></u>	Ground		Lock	Battery voltage	
	68			Unlock	0	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-35, "Removal and Installation".

NO >> GO TO 3.

3.CHECK IPDM E/R INPUT SIGNAL CIRCUIT

1. Disconnect IPDM E/R connector and steering lock unit connector.

2. Check continuity between IPDM E/R harness connector and steering lock unit harness connector.

IPD	M E/R	Steering	lock unit	Continuity	
Connector	Terminal	Connector Terminal		Continuity	
E17	65	M12	3	Existed	
	68	10112	8	LAISteu	

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

IPD	M E/R		Continuity
Connector	Terminal	Ground	Continuity
E17	65	Ground	Not existed
	68		NUL EXISIEU

Is the inspection result normal?

YES >> Replace steering lock unit.

NO >> Repair or replace harness.

4.CHECK BCM INPUT SIGNAL

1. Turn ignition switch OFF.

2. Check voltage between BCM harness connector and ground.

	(+) BCM Connector Terminal		Condition		Voltage (V) (Approx.)
Connector					(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	M71	- Ground	Steering lock unit	Lock	0
1474				Unlock	Battery voltage
1017-1				Lock	Battery voltage
	108			Unlock	0

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-82, "Removal and Installation"</u>.

5. CHECK BCM INPUT SIGNAL CIRCUIT

1. Disconnect BCM connector and steering lock unit connector.

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

B2612 STEERING STATUS

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

BO	M	Steering	lock unit	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M71	107	M12	3	Existed
	108	INITZ	8	Existed
Check continuity be	tween BCM harness	connector and grour	nd.	
	BCM			Orationity
Connector	Termina	al	Ground	Continuity
M71	107			Not existed
	108			
<u>he inspection result r</u> ES >> Replace ste				
O >> Repair or re	place harness.			

B2619 BCM

Description

INFOID:000000005037675

[WITH INTELLIGENT KEY SYSTEM]

BCM (Body Control Module) controls the various electrical components. It inputs the information required to the control from CAN communication and the signal received from each switch and sensor.

DTC Logic

INFOID:000000005037676

INFOID:000000005037677

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	liagnosis name DTC detecting condition	
B2619	BCM	There is a difference between power supply output to steering lock unit and steering lock unit F/B result.	BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions and wait 1 second or more.
- Selector lever is in the P or N position
- Do not depress brake pedal
- 2. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

1.INSPECTION START

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

Is DTC detected?

- YES >> Replace BCM. Refer to <u>BCS-82, "Removal and Installation"</u>.
- NO >> INSPECTION END

B26E9 STEERING STATUS

Description

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

DTC Logic

INFOID:000000005037664

INFOID:000000005037663

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DTC DETECTION LOGIC

•	DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	D
-	B26E9	LOCK MALFUNC- TION	BCM activates steering lock but steering state that BCM recognizes is unlock.	Steering lock unit	E
DT	C CONFI	RMATION PROC	EDURE		
1.	PERFORM	I DTC CONFIRMA	TION PROCEDURE		F
1. 2. 3. 4. 5.	Turn ignit Press dri Turn ignit	tion switch ON. tion switch OFF. ver side door switch tion switch ON. self-diagnosis result	n. " using CONSULT-III.		G
Y			iagnosis Procedure".		Η
Di	agnosis	Procedure		INFOID:000000005037665	
1.	INSPECTI	ON START			
1. 2.	Check "S		" using CONSULT-III.		J
3. 4.		RASE . DTC Confirmation F SEC-83, "DTC Logi			SE
Y		ted? Replace steering loc NSPECTION END	k unit.		L
					M
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B26EF STEERING LOCK RELAY

Description

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

DTC Logic

INFOID:000000005153217

INFOID:000000005153218

INFOID:000000005153216

DTC DETECTION LOGIC

NOTE:

- If DTC B26EF is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-39, "DTC Logic"</u>.
- If DTC B26EF is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-40, "DTC Logic"</u>.
- If DTC B26EF is displayed with DTC B2612, first perform the trouble diagnosis for DTC B2612. Refer to <u>SEC-79, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26EF	STRG LCK RELAY OFF	BCM requests to turn steering lock relay in IPDM E/ R ON but BCM cannot receive steering lock relay ON signal from IPDM E/R via CAN communication within 2 seconds.	 Harness or connector (Steering lock unit circuit is open or short) Steering lock unit IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions and wait 1 second or more.
- Selector lever is in the P or N position
- Do not depress brake pedal
- 2. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-84, "Diagnosis Procedure".
- NO >> INSPECTION END

Diagnosis Procedure

1.CHECK STEERING LOCK UNIT POWER SUPPLY

Check voltage between steering lock unit harness connector and ground.

	+) J lock unit	(-)	Condition		Voltage (V) (Approx.)
Connector	Terminal				
			Ignition switch OFF	A few seconds after opening the driver door	Battery voltage
M12	1	Ground	Ignition switch LOCK	Press the push-button ignition switch	Battery voltage
			Ignition switch	ACC or ON	0

Is the inspection normal?

YES >> Replace steering lock unit.

NO >> GO TO 2.

2.CHECK STEERING LOCK RELAY CIRCUIT

1. Disconnect IPDM E/R connector and steering lock unit connector.

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

SEC-84

B26EF STEERING LOCK RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Connector Terminal Connector Terminal E14 42 M12 1 Check continuity IPDM E/R harness connector and ground. IPDM E/R Ground IPDM E/R Liptometer Ground E14 42 Ground	IPD
Check continuity IPDM E/R harness connector and ground. IPDM E/R Connector Terminal Ground E14 42	Connector
IPDM E/R Ground Connector Terminal E14 42	E14
Connector Terminal Ground E14 42 Image: Connector in the second in the se	Check continuity If
E14 42	
	Connector
ne inspection result normal?	E14
	YES >> Replace IF

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B26F0 STEERING LOCK RELAY

Description

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

DTC Logic

INFOID:000000005153220

INFOID:000000005153221

INFOID:000000005153219

DTC DETECTION LOGIC

NOTE:

- If DTC B26F0 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-39, "DTC Logic"</u>.
- If DTC B26F0 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-40, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26F0	STRG LCK RELAY ON	BCM requests to turn steering lock relay in IPDM E/ R OFF but BCM cannot receive steering lock relay OFF signal from IPDM E/R via CAN communication within 2 seconds.	 Harness or connector (Steering lock unit circuit is open or short cir- cuit) IPDM E/R BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions and wait 2 seconds or more.
- Selector lever is in the P or N position
- Do not depress brake pedal
- 2. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-86. "Diagnosis Procedure".
- NO >> INSPECTION END

Diagnosis Procedure

1.CHECK DTC WITH IPDM E/R

Check "Self-diagnosis result" using CONSULT-III. Refer to PCS-33, "DTC Index".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CHECK INTERMITTENT INCIDENT

Refer to GI-34, "Intermittent Incident".

>> INSPECTION END

B26F3 STARTER CONTROL RELAY

< DTC/CIRCUIT DIAGNOSIS >

B26F3 STARTER CONTROL RELAY

Description

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

DTC Logic

INFOID:000000005038540

INFOID:000000005038539

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DTC DETECTION LOGIC

NOTE:

- If DTC B26F3 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-39, "DTC Logic"</u>.
- If DTC B26F3 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-40, "DTC Logic".

B26F3 START CONT RLY ON BCM requests IPDM E/R to turn starter motor con- trol relay OFF but starter motor control relay OFF IPDM E/R state signal is not transmitted from IPDM E/R.	DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
	B26F3	START CONT RLY ON	•		

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn the power supply position to start under the following conditions and wait 1 second or more.
 Selector lever is in the P or N position
 Do not depress brake pedal
 2. Check "Self-diagnosis result" using CONSULT-III.
 <u>Is DTC detected?</u>
 YES >> Go to <u>SEC-87, "Diagnosis Procedure"</u>.
 NO >> INSPECTION END
 Diagnosis Procedure
 J. CHECK DTC WITH IPDM E/R
- SEC

 Check "Self-diagnosis result" using CONSULT-III. Refer to PCS-33. "DTC_Index".

 Is the inspection result normal?

 YES
 >> GO TO 2.

 NO
 >> Repair or replace the malfunctioning part.

 2.CHECK INTERMITTENT INCIDENT

 Refer to GI-34. "Intermittent Incident".

 >> INSPECTION END
 - 0

[WITH INTELLIGENT KEY SYSTEM]

B26F4 STARTER CONTROL RELAY

Description

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

DTC Logic

INFOID:000000005153238

INFOID:000000005153237

DTC DETECTION LOGIC

- NOTE:
- If DTC B26F4 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-39, "DTC Logic"</u>.
- If DTC B26F4 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-40, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26F4	START CONT RELAY OFF	BCM requests IPDM E/R to turn starter motor control relay ON but starter motor control relay ON state signal is not transmitted from IPDM E/R.	 Harness or connector (Transmission range switch circuit is open or short). IPDM E/R BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions and wait 1 second or more.
- Selector lever is in the P or N position
- Do not depress brake pedal
- 2. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

1.CHECK IPDM E/R INPUT SIGNAL

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

	(+) M E/R	()	Condition		(–) Condition		Voltage (V) (Approx.)
Connector	Terminal				(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
E15	47	Ground	Selector lever	P or N position	Battery voltage		
E15	47	Ground	Selector level	Other than above	0		

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to PCS-35. "Removal and Installation".
- NO >> GO TO 2.
- **2.**CHECK IPDM E/R INPUT SIGNAL CIRCUIT
- 1. Turn ignition switch OFF.
- 2. Disconnect BCM connector.
- 3. Check continuity between BCM harness connector and IPDM E/R harness connector.

SEC-88

INFOID:000000005153239

[WITH INTELLIGENT KEY SYSTEM]

B26F4 STARTER CONTROL RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

В	СМ	IPE	DM E/R	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M71	102	E15	47	Existed
Check continuity b	etween BCM harness	s connector and grou	und.	
	BCM			Continuity
Connector	Termina	al	Ground	Continuity
M71	102		_	Not existed
	<u>normal?</u> CM. Refer to <u>BCS-82.</u> eplace harness.	, "Removal and Inst	allation".	
ES >> Replace B O >> Repair or r	CM. Refer to <u>BCS-82.</u>	, "Removal and Inst	<u>allation"</u> .	
	CM. Refer to <u>BCS-82.</u>	<u>, "Removal and Inst</u>	<u>allation"</u> .	
	CM. Refer to <u>BCS-82.</u>	<u>, "Removal and Inst</u>	<u>allation"</u> .	

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B26F5 STEERING LOCK STATUS SWITCH

< DTC/CIRCUIT DIAGNOSIS >

B26F5 STEERING LOCK STATUS SWITCH

Description

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

DTC Logic

INFOID:000000005038546

INFOID:000000005038545

DTC DETECTION LOGIC

NOTE:

- If DTC B210A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-39, "DTC Logic"</u>.
- If DTC B210A is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-40. "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26F5	STRG LCK STS SW	When BCM performs steering lock request to IPDM E/R, steering lock state signal from IPDM E/R is already in lock state.	 Harness or connectors (Steering lock unit status switch circuit is open or shorted) Steering lock unit IPDM E/R BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE-1

- 1. Turn ignition switch ON under the following conditions and wait 1 second or more.
- Selector lever is in the P or N position
- Do not depress brake pedal
- 2. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

YES >> Go to SEC-90, "Diagnosis Procedure".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE-2

- 1. Turn ignition switch ON.
- 2. Turn ignition switch OFF.
- 3. Press driver side door switch and wait 1 second or more.
- 4. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

1.INSPECTION START

Perform inspection in accordance with procedure that confirms DTC.

Which procedure confirms DTC?

DTC confirmation procedure 1>>GO TO 2.

DTC confirmation procedure 2>>GO TO 4.

2. CHECK IPDM E/R INPUT SIGNAL

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

INFOID:000000005038547

B26F5 STEERING LOCK STATUS SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

	+)	_					Voltage (V)	
	M E/R	_	(-)	C	Condition		(Approx.)	
Connector	Terminal							
	65	Ground				_ock	0	
E17			Steering lock ur	nit 🚽	nlock	Battery voltage		
	68					_ock nlock	Battery voltage	
the inspection res	sult normal?				0		0	
	e IPDM E/R. Refe	er to PCS	3-35. "Rer	moval and Insta	allation".			
0 >> GO TO								
CHECK IPDM E	R INPUT SIGNA	L CIRCL	ЛТ					
	M E/R connector							
Check continuit	y between IPDM	E/R harr	ness conn	nector and stee	ring lock u	nit harn	ess connector.	
	IPDM E/R			Steering lock	unit			
Connector	Termina	al	Con	nector	Terminal		Continuity	
.	65				3		– •	
E17	E17 68		M	112	8		Existed	
Check continuit	y between IPDM	E/R harı	ness conr	nector and grou	nd.			
				-				
	IPDM E/R			Ground –			Continuity Not existed	
Connector		Termina						
E17		65 68						
the inspection res	sult pormal?	00						
	e steering lock ur	nit.						
	or replace harnes	SS.						
CHECK BCM IN	•	SS.						
CHECK BCM IN	PUT SIGNAL							
CHECK BCM IN	PUT SIGNAL		nnector a	nd ground.				
CHECK BCM IN Turn ignition sw Check voltage I	PUT SIGNAL /itch OFF. petween BCM ha		nnector a	nd ground.				
CHECK BCM IN Turn ignition sw Check voltage I	PUT SIGNAL	rness co			Condition		Voltage (V)	
CHECK BCM IN Turn ignition sw Check voltage I	PUT SIGNAL vitch OFF. between BCM ha	rness co	nnector a (-)		Condition		Voltage (V) (Approx.)	
CHECK BCM IN Turn ignition sw Check voltage I (Be	PUT SIGNAL vitch OFF. between BCM ha +) CM Terminal	rness co				_ock		
CHECK BCM IN Turn ignition sw Check voltage I (G Connector	PUT SIGNAL vitch OFF. petween BCM ha +) CM	rness co	()	(_ock	(Approx.)	
CHECK BCM IN Turn ignition sw Check voltage I (Be	PUT SIGNAL vitch OFF. between BCM ha +) CM Terminal 107	rness co			lit U		(Approx.) 0 Battery voltage	
CHECK BCM IN Turn ignition sw Check voltage I (G Connector	PUT SIGNAL vitch OFF. between BCM ha +) CM Terminal	rness co	()	(it	nlock	(Approx.)	
CHECK BCM IN Turn ignition sw Check voltage I (G Connector	PUT SIGNAL vitch OFF. between BCM ha +) CM Terminal 107 108	rness co	()	(it	nlock ₋ock	(Approx.) 0 Battery voltage Battery voltage	
CHECK BCM IN Turn ignition sw Check voltage I (Br Connector M71 the inspection res ES >> Replace	PUT SIGNAL vitch OFF. between BCM ha +) CM Terminal 107 108 <u>sult normal?</u> e BCM. Refer to J	rness co	(–) round	Steering lock ur	it U	nlock ₋ock	(Approx.) 0 Battery voltage Battery voltage	
CHECK BCM IN Turn ignition sw Check voltage I (Connector M71 the inspection res ES >> Replace O >> GO TO	PUT SIGNAL vitch OFF. between BCM ha +) CM Terminal 107 108 sult normal? e BCM. Refer to 5.	rness co Gr BCS-82.	(–) round	Steering lock ur	it U	nlock ₋ock	(Approx.) 0 Battery voltage Battery voltage	
CHECK BCM IN Turn ignition sw Check voltage I (Connector M71 the inspection res ES >> Replace O >> GO TO CHECK BCM IN	PUT SIGNAL vitch OFF. between BCM ha +) CM Terminal 107 108 sult normal? e BCM. Refer to 5.	rness co Gr BCS-82.	(–) round <u>"Remova</u>	Steering lock ur	it U	nlock ₋ock	(Approx.) 0 Battery voltage Battery voltage	

B26F5 STEERING LOCK STATUS SWITCH IOSIS > [WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

E	BCM	Steering	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
M71	107	M12	3	Existed
1017 1	108	IVITZ	8	LAISIEU

3. Check continuity between BCM harness connector and ground.

В	СМ		Continuity
Connector	Terminal	Ground	Continuity
M71	107	Ground	Not existed
IVI7 1	108		NUL EXISIEU

Is the inspection result normal?

YES >> Replace steering lock unit.

NO >> Repair or replace harness.

B26F7 BCM

Description

BCM (Body Control Module) controls the various electrical components. It inputs the information required to В the control from CAN communication and the signal received from each switch and sensor.

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26F7	BCM	Inside key antenna output circuit in BCM is malfunctioning.	BCM
TC CONFI	RMATION PROCEDUF	RE	
.PERFORM	1 DTC CONFIRMATION	PROCEDURE	
	or request switch. elf-diagnosis result" using	g CONSULT-III.	
YES >> G	io to <u>SEC-94, "Diagnosis</u> NSPECTION END	Procedure".	
iagnosis l	Procedure		INFOID:0000000050385
.INSPECTI	ON START		
. Check "So . Touch "Ef	-	-	
	DTC Confirmation Procec - <u>94, "DTC Logic"</u> . red?	dure.	
YES >> R		CS-82, "Removal and Installation".	

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INFOID:000000005038548

INFOID:000000005038549

B26F8 BCM

Description

INFOID:000000005038616

[WITH INTELLIGENT KEY SYSTEM]

BCM (Body Control Module) controls the various electrical components. It inputs the information required to the control from CAN communication and the signal received from each switch and sensor.

DTC Logic

INFOID:000000005038617

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26F8	BCM	When BCM turns starter motor control replay in IPDM E/R ON, input from feedback circuit does not match.	BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press push-button ignition switch under the following conditions and wait 1 second or more.

- Selector lever is in the P or N position
- Do not depress brake pedal
- 2. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

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

NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000005038618

1.INSPECTION START

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

Is DTC detected?

- YES >> Replace BCM. Refer to <u>BCS-82, "Removal and Installation"</u>.
- NO >> INSPECTION END

B26FC KEY REGISTRATION

Description

When door request switch or push-button ignition switch is pressed, BCM verifies Intelligent Key that is regis-В tered to the vehicle. If verification result is OK, door lock, door unlock, and engine start are allowed.

DTC Logic

INFOID:000000005037667

INFOID:000000005037666

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B26FC	KEY REGISTRA- TION	Intelligent Key that does not match the vehicle is registered.	Improper registration operationIntelligent KeyBCM	
TC CONFI	RMATION PROC	EDURE		
.PERFORM	I DTC CONFIRMA	TION PROCEDURE		
For initia NVIS".	ization and registra	CONSULT-III. Reregister all Intelligent Keys ation of Intelligent Key, refer to "CONSULT " using CONSULT-III.		
<u>s DTC detec</u> YES >> 0	•			
iagnosis	Procedure		INFOID:000000005037668	
REPLACE	INTELLIGENT KE	Y		
. Perform	initialization using	matches the vehicle. CONSULT-III. For initialization, refer to	"CONSULT-III Operation Manual	
NATS-IV Check "S DTC detec	elf-diagnosis result	" using CONSULT-III.		9
YES >> F		r to <u>BCS-82, "Removal and Installation"</u> .		

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B2108 STEERING LOCK RELAY

Description

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

DTC Logic

INFOID:000000005037686

INFOID:000000005037687

INFOID:000000005037685

DTC DETECTION LOGIC

NOTE:

If DTC B2108 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-39, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2108	STRG LCK RELAY ON	When comparing steering lock state switches 1 and 2, a malfunction is detected for 1 second.	IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions and wait 1 second or more.
- Selector lever is in the P or N position
- Do not depress brake pedal
- 2. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

1.CHECK STEERING LOCK RELAY

Check voltage between IPDM E/R harness connector and ground.

(+) IPDM E/R		()		Condition		
Connector	Terminal	•				
			Ignition switch OFF	A few seconds after opening the driver door	Battery voltage	
E14	42	Ground	Ignition switch LOCK	Press the push-button ignition switch	Battery voltage	
			Ignition switch	ACC or ON	0	

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace IPDM E/R. Refer to <u>PCS-35, "Removal and Installation"</u>.

2. CHECK INTERMITTENT INCIDENT

Refer to GI-34, "Intermittent Incident".

>> INSPECTION END

B2109 STEERING LOCK RELAY

< DTC/CIRCUIT DIAGNOSIS >

B2109 STEERING LOCK RELAY

Description

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

DTC Logic

INFOID:000000005037689

INFOID:000000005037688

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DTC DETECTION LOGIC

NOTE:

- If DTC B2109 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-39, "DTC Logic"</u>.
- When IPDM E/R power supply voltage is low (Approx. 7 8 V for about 1 second), the DTC B2109 may be detected.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B2109	STRG LCK RELAY OFF	When comparing steering lock state switches 1 and 2, a malfunction is detected for 1 second.	 Harness or connector (Power supply circuit) IPDM E/R Battery 	F

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

Press push-button ignition switch under the following conditions and wait 1 second or more.
 Selector lever is in the P or N position
 Do not depress brake pedal
 Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure INFOID:000000005037690 SEC 1.CHECK POWER SUPPLY CIRCUIT Check IPDM E/R power supply circuit. Refer to SEC-111, "IPDM E/R (INTELLIGENT POWER DISTRIBUTION L MODULE ENGINE ROOM) : Diagnosis Procedure". Is the inspection result normal? YES >> GO TO 2. Μ NO >> Repair or replace the malfunctioning part. 2.CHECK FUSE Turn ignition switch OFF. 1. Ν Check 10 A fuse (No. 44, located in IPDM E/R). 2. Is the inspection result normal? YES >> Replace IPDM E/R. Refer to PCS-35, "Removal and Installation". >> Replace the blown fuse after repairing the affected circuit if a fuse is blown. NO

Revision: 2009 March

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B210A STEERING LOCK UNIT

Description

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

DTC Logic

INFOID:000000005037692

INFOID:000000005037691

DTC DETECTION LOGIC

NOTE:

If DTC B210A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-39, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210A	STRG LCK STATE SW	When comparing steering lock state switches 1 and 2, input malfunctions of ON/OFF and others are simultaneously detected continuously for 1 second.	

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE-1

- 1. Press push-button ignition switch under the following conditions and wait 1 second or more.
- Selector lever is in the P or N position
- Do not depress brake pedal
- 2. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

- YES >> Go to SEC-98, "Diagnosis Procedure".
- NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE-2

- 1. Turn ignition switch ON.
- 2. Turn ignition switch OFF.
- 3. Press driver side door switch and wait 1 second or more.
- 4. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

YES >> Go to <u>SEC-98, "Diagnosis Procedure"</u>. NO >> INSPECTION END

Diagnosis Procedure

1.INSPECTION START

Perform inspection in accordance with procedure that confirms DTC.

Which procedure confirms DTC?

DTC confirmation procedure 1>>GO TO 2.

DTC confirmation procedure 2>>GO TO 4.

- 2. CHECK IPDM E/R INPUT SIGNAL
- 1. Turn ignition switch OFF.
- 2. Check voltage between IPDM E/R harness connector and ground.

INF0ID:000000005037693

B210A STEERING LOCK UNIT

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

וחסן	+) M E/R		(-)		ondition		Voltage (V)	
Connector	Terminal		(-)		Condition		(Approx.)	
					L	ock	0	
	65				Ur	lock	Battery voltage	
E17		G	Bround	Steering lock un	t L	ock	Battery voltage	
	68				Ur	lock	0	
>> GO TO HECK IPDM E	e IPDM E/R. F 3. /R INPUT SIG	NAL CIRC	UIT	moval and Insta	llation".			
				unit connector. nector and steer	ing lock ur	it harne	ss connector.	
	IPDM E/R			Steering lock u	Init		Continuity	
Connector	Ter	minal	Con	nector	Terminal		Continuity	
E17		65	N	112	3		Existed	
		68			8			
Check continuit	-	DM E/R hai	ness conr	nector and grou	nd.			
	IPDM E/R			-			Continuity	
Connector	r	Termina	al	Groun	d			
E17		65 68		-			Not existed	
•								
	e steering locl or replace hai PUT SIGNAL /itch OFF.	ness.	onnector a	nd ground.				
S >> Replace >>> Repair CHECK BCM IN Turn ignition sw Check voltage I	e steering locl or replace hai PUT SIGNAL /itch OFF.	ness.	onnector a				Voltage (V/)	
S >> Replace >>> Repair CHECK BCM IN Turn ignition sw Check voltage I	e steering locl or replace har PUT SIGNAL vitch OFF. between BCM +)	ness.	onnector a (-)		ondition		Voltage (V) (Approx.)	
S >> Replace >> Repair CHECK BCM IN Turn ignition sw Check voltage I	e steering locl or replace har PUT SIGNAL /itch OFF. between BCM +) CM	ness.				ock		
S >> Replace >> Repair CHECK BCM IN Turn ignition sw Check voltage I (Connector	e steering locl or replace har PUT SIGNAL vitch OFF. between BCM +)	harness co	()	с	L	ock lock	(Approx.)	
S >> Replace >>> Repair CHECK BCM IN Turn ignition sw Check voltage I	e steering locl or replace har PUT SIGNAL /itch OFF. between BCM +) CM Terminal 107	harness co			t		(Approx.) 0 Battery voltage	
S >> Replace >> Repair CHECK BCM IN Turn ignition sw Check voltage I (Connector	e steering locl or replace har PUT SIGNAL /itch OFF. between BCM +) CM	harness co	()	с	t	lock	(Approx.) 0 Battery voltage	
S >> Replace >> Repair HECK BCM IN Furn ignition sw Check voltage I (Connector	e steering loci or replace hai PUT SIGNAL /itch OFF. between BCM +) CM Terminal 107 108	harness co	()	с	t	lock ock	(Approx.) 0 Battery voltage Battery voltage	

B210A STEERING LOCK UNIT

< DTC/CIRCUIT DIAGNOSIS >

E	BCM	Steering	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
M71	107	M12	3	Existed
	108	IVI I Z	8	Existed

3. Check continuity between BCM harness connector and ground.

B	BCM		Continuity	
Connector	Connector Terminal			
M71	107	Ground	Not existed	
W17 1	108		NOT EXISTED	

Is the inspection result normal?

YES >> Replace steering lock unit.

NO >> Repair or replace harness.

B210B STARTER CONTROL RELAY

Description

Starter control relay, integrated in IPDM E/R, permits the starter relay operation when in the N or P position and the steering is locked or unlocked. It is installed parallel to 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 <u>BCS-</u> <u>39, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	I
B210B	START CONT RLY ON	 When comparing the following items, a malfunction is detected for 1 second or more. Starter motor relay ON signal (CAN) from BCM Starter motor control relay conditions of contact side and coil side Transmission range switch input 	IPDM E/R	
	RMATION PROCED	URE		(
PERFORM	DTC CONFIRMATIO	N PROCEDURE		
		e following conditions and wait 1 second o	r more.	ŀ
	ever is in the P or N po press brake pedal	DSITION		
Check "Se	elf-diagnosis result" us	ing CONSULT-III.		
DTC detect				
	o to <u>SEC-101, "Diagno</u> ISPECTION END	osis Procedure".		
iagnosis I	Procedure		INFOID:000000005037696	
•				
INSPECTIO	ON START			S
	on switch ON. elf-diagnosis result" for	PIPDM E/R using CONSULT-III.		
Touch "EF	RASE".	-		
	TC Confirmation Proc 101, "DTC Logic".	edure.		
DTC detect				
		er PCS-35, "Removal and Installation".		
10 >> IN	ISPECTION END			

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INFOID:000000005037694

INFOID:000000005037695

B210C STARTER CONTROL RELAY

Description

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

DTC Logic

INFOID:000000005037698

INFOID:000000005037699

INFOID:000000005037697

DTC DETECTION LOGIC

NOTE:

- If DTC B210C is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-39, "DTC Logic"</u>.
- When IPDM E/R power supply voltage is low (Approx. 7 8 V for about 1 second), the DTC B210C may be detected.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210C	START CONT RLY OFF	 When comparing the following items, a malfunction is detected for 1 second or more. Starter motor relay ON signal (CAN) from BCM Starter motor control relay conditions of contact side and coil side 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 1 second or more.
- Selector lever is in the P or N position
- Do not depress brake pedal
- 2. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

1.INSPECTION START

- 1. Turn ignition switch ON.
- 2. Check "Self-diagnosis result" for IPDM E/R using CONSULT-III.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure. See <u>SEC-102, "DTC Logic"</u>.

Is DTC detected?

- YES >> Replace IPDM E/R. Refer to PCS-35. "Removal and Installation".
- NO >> INSPECTION END

B210D STARTER RELAY

Description

Located in IPDM E/R, the starter relay runs the starter motor. The starter relay is turned ON by the BCM when the ignition switch is in the 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 <u>BCS-</u> <u>39, "DTC Logic"</u>.

	Trouble diagnosis name	DTC detecting condition	Possible cause
B210D	STARTER RELAY ON	 When comparing the following items, a malfunction is detected for 1 second or more. Starter motor relay ON signal (CAN) from BCM Starter motor control relay conditions of contact side and coil side Transmission range switch input 	IPDM E/R
C CONFI	RMATION PROCEDUR	E	
PERFORM	I DTC CONFIRMATION F	PROCEDURE	
		ollowing conditions and wait for 1 second or m	ore.
Do not de	ever is in the P or N posit press brake pedal elf-diagnosis result" using ed?		
ES >> G	io to <u>SEC-103, "Diagnosis</u> NSPECTION END	s Procedure".	
agnosis	Procedure		INFOID:00000000503770
INSPECTI	ON START		
		DM E/R using CONSULT-III.	
Check "S Touch "El Perform I See <u>SEC</u>	elf-diagnosis result" for IF RASE". DTC Confirmation Proced <u>-103, "DTC Logic"</u> .	-	
Check "S Touch "El Perform I See <u>SEC</u> DTC detect	elf-diagnosis result" for IF RASE". DTC Confirmation Proced <u>-103, "DTC Logic"</u> . <u>red?</u>	ure.	
Check "S Touch "El Perform I See <u>SEC</u> <u>DTC detect</u> ES >> R	elf-diagnosis result" for IF RASE". DTC Confirmation Proced <u>-103, "DTC Logic"</u> . <u>red?</u>	-	
Check "S Touch "El Perform I See <u>SEC</u> <u>DTC detect</u> ES >> R	elf-diagnosis result" for IF RASE". DTC Confirmation Proced <u>-103. "DTC Logic"</u> . <u>ed?</u> eplace IPDM E/R. Refer	ure.	

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INFOID:000000005037700

INFOID:000000005037701

B210E STARTER RELAY

Description

INFOID:000000005037703

[WITH INTELLIGENT KEY SYSTEM]

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

DTC Logic

INFOID:000000005037704

DTC DETECTION LOGIC

NOTE:

- If DTC B210E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-39, "DTC Logic"</u>.
- If DTC B210E is displayed with DTC B2605, first perform the trouble diagnosis for DTC B2605. Refer to <u>SEC-68, "DTC Logic"</u>.
- When IPDM E/R power supply voltage is low (Approx. 7 8 V for about 1 second), the DTC B210F may be detected.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210E	STARTER RELAY OFF	 When comparing the following items, a malfunction is detected for 1 second or more. Starter motor relay ON signal (CAN) from BCM Starter motor control relay conditions of contact side and coil side Transmission range switch input 	 Harness or connector (Starter relay circuit is open or short) IPDM E/R Battery BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions and wait 1 second or more.
- Selector lever is in the P or N position
- Do not depress brake pedal
- 2. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000005037705

1.CHECK STARTER RELAY OUTPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM connector.
- 3. Turn ignition switch ON.
- 4. Depress brake pedal.
- 5. Check voltage between BCM harness connector and ground.

	+) CM	(–) Condition		Condition		
Connector	Terminal				(Approx.)	
M71	97	Ground	P or N position		Battery voltage	
	57	Ground	Selector level	Other than above	0	

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-82, "Removal and Installation"</u>.

NO >> GO TO 2.

2.CHECK STARTER RELAY OUTPUT SIGNAL CIRCUIT

1. Turn ignition switch OFF.

B210E STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

2. Disconnect IPDM E/R connector. Check continuity between BCM harness connector and IPDM E/R harness connector. 3. А IPDM E/R BCM Continuity Terminal Terminal Connector Connector В M71 97 E13 30 Existed Check continuity between BCM harness connector and ground. 4. С BCM Continuity Connector Terminal Ground D M71 97 Not existed Is the inspection result normal? YES >> Replace IPDM E/R. Refer to PCS-35, "Removal and Installation". Е NO >> Repair or replace harness. F Н J SEC L Μ Ν 0

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B210F PNP/CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

B210F PNP/CLUTCH INTERLOCK SWITCH

Description

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

- Transmission range switch
- Shift position signal from BCM (CAN)

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B210F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-39, "DTC Logic"</u>.
- If DTC B210F is displayed with DTC B2603, first perform the trouble diagnosis for DTC B2603. Refer to <u>SEC-60, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210F	INTER LOCK/PNP SW ON	There is a difference between input from transmis- sion range switch and shift position signal from BCM.	 Harness or connectors (Transmission range switch circuit is open or shorted) Transmission range switch IPDM E/R BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions and wait 1 second or more.
- Selector lever is in the P or N position
- Do not depress brake pedal
- 2. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

1.CHECK IPDM E/R INPUT SIGNAL

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

	+) // E/R	()	Condition		Condition		Voltage (V) (Approx.)
Connector	Terminal	*			(
E15	47	Ground	Selector lever		Battery voltage		
E15	+7	Ground	Selector level	Other than above	0		

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to <u>PCS-35. "Removal and Installation"</u>.

NO >> GO TO 2.

- **2.**CHECK IPDM E/R SIGNAL CIRCUIT SHORT
- 1. Disconnect transmission range switch connector.
- 2. Check continuity between IPDM E/R harness connector and ground.

SEC-106

INFOID:0000000005037707

INFOID:000000005037706

INFOID:000000005037708

B210F PNP/CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

(-			
IPDN		(-)	Voltage (V) (Approx.)
Connector	Terminal		
E15	47	Ground	0
the inspection result normative YES >> Replace IPDM E NO >> Repair or replace	<u>al?</u> /R. Refer to <u>PCS-35, "Rei</u> e harness.	moval and Installation".	

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B2110 PNP/CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B2110 PNP/CLUTCH INTERLOCK SWITCH

Description

INFOID:000000005037709

INFOID:000000005037710

INFOID:000000005037711

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

- Transmission range switch
- Shift position signal from BCM (CAN)

DTC Logic

DTC DETECTION LOGIC

NOTE:

If DTC B2110 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-39, "DTC Logic"</u>.

DTC No.	No. Trouble diagnosis DTC detecting condition		Possible cause
B2110	INTER LOCK/PNP SW	There is a difference between input from transmis- sion range switch and shift position signal from BCM.	 Harness or connectors (Transmission range switch circuit is open or shorted) Transmission range switch IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn the ignition switch ON under the following conditions and wait 1 second or more.
- Selector lever is in the P or N position
- Do not depress brake pedal
- 2. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

- YES >> Go to <u>SEC-108</u>, "Diagnosis Procedure".
- NO >> INSPECTION END

Diagnosis Procedure

1.CHECK IPDM E/R INPUT SIGNAL

1. Turn ignition switch OFF.

2. Disconnect IPDM E/R connector.

3. Turn ignition switch ON.

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

·	(+) IPDM E/R		Condition		Voltage (V) (Approx.)	
Connector	Terminal				(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
E15	47	Ground	P or N position		Battery voltage	
215	47		Selector lever	Other than above	0	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to <u>PCS-35, "Removal and Installation"</u>.

NO >> GO TO 2.

2.CHECK IPDM E/R INPUT SIGNAL CIRCUIT

1. Turn ignition switch OFF.

- 2. Disconnect transmission range switch connector.
- Check continuity between transmission range switch harness connector and IPDM E/R harness connector.

SEC-108

B2110 PNP/CLUTCH INTERLOCK SWITCH < DTC/CIRCUIT DIAGNOSIS > [WITH INTELLIGENT KEY SYSTEM]

IPDM E/R Transmission range switch А Continuity Connector Terminal Connector Terminal F21 2 E15 59 Existed В 4 Check continuity between transmission range switch harness connector and ground. Transmission range switch Continuity Connector Terminal Ground F21 2 Not existed Is the inspection result normal? D YES >> GO TO 3. NO >> Repair or replace harness. 3.CHECK TRANSMISSION RANGE SWITCH POWER SUPPLY Ε 1. Connect IPDM E/R connector. 2. Turn ignition switch ON. 3. Check voltage between transmission range switch harness connector and ground. (+)Voltage (V) Transmission range switch (-) (Approx.) Connector Terminal F21 1 Ground Battery voltage Н Is the inspection result normal? >> GO TO 5. YES NO >> GO TO 4. ${f 4.}$ CHECK TRANSMISSION RANGE SWITCH POWER SUPPLY CIRCUIT 1. Turn ignition switch OFF. Disconnect IPDM E/R connector. 2. Check continuity between transmission range switch harness connector and IPDM E/R harness connec-3. tor. SEC IPDM E/R Transmission range switch Continuity Connector Terminal Terminal Connector F21 E15 1 59 Existed 4. Check continuity between transmission range switch harness connector and ground. M Transmission range switch Continuity Connector Terminal Ground F21 1 Not existed Ν Is the inspection result normal? YES >> Replace IPDM E/R. Refer to PCS-35, "Removal and Installation". NO >> Repair or replace harness. **5.**CHECK TRANSMISSION RANGE SWTICH Refer to SEC-110, "Component Inspection". Ρ Is the inspection result normal? YES >> GO TO 6. NO >> Replace transaxle assembly. Refer to TM-223, "Exploded View". **O.**CHECK INTERMITTENT INCIDENT

Refer to GI-34, "Intermittent Incident".

B2110 PNP/CLUTCH INTERLOCK SWITCH OSIS > [WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

>> INSPECTION END

Component Inspection

INFOID:000000005155072

1. CHECK TRANSMISSION RANGE SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect transmission range switch connector.
- 3. Check continuity between transmission range switch terminals.

Transmission	Transmission range switch Terminal		Continuity
Terr			Continuity
1	1 2	P or N position	Existed
I		Other than above	Not existed

Is the inspection result normal?

- YES >> INSPECTION END
- NO >> Replace transaxle assembly. Refer to <u>TM-223, "Exploded View"</u>.

< DTC/CIRCUI			LY AND G	ROUND CIRCUIT [WITH INTELLIGENT KEY SYSTEM]	
POWER S BCM			ID CIRCL	ЯΠ	7
BCM : Diagr	nosis Proced	dure		INFOID:00000005153869	2
1.CHECK FUS	SE AND FUSIB	LE LINK)
Check that the	following fuse a	nd fusible link a	are not blown	C	2
	Signal nar	ne		Fuse and fusible link No.	
	Battery power	supply		G)
Is the fuse fusir	Ia?			8	
	blace the blowr wn. TO 2.		e link after rep	airing the affected circuit if a fuse or fusible link is $^{\sf E}$	
 Turn ignitio Disconnect 	n switch OFF. BCM connecto age between BC	ors.	nnector and g	round.	3
	Terminals		_	— H	-
	+) CM	(-)	Voltage (Approx.)		
Connector	Terminal			1	
M70	70 57	Ground	Battery voltag	 e	1
Is the measurer YES >> GC NO >> Rep 3. CHECK GRO	TO 3. pair harness or	connector.		SE	EC
Check continuit	y between BCN	I harness conn	ector and gro	und.	_
BC Connector	Terminal	Ground	Continuity	N	Л
M70 Does continuity	67 exist?		Existed	—	
YES >> INS NO >> Rej	SPECTION END pair harness or	connector.	R DISTRIE	NUTION MODULE ENGINE ROOM)	1
IPDM E/R (I agnosis Pro		IT POWER	DISTRIBL	TION MODULE ENGINE ROOM) : Di-)
1.CHECK FUS	SES AND FUSI	BLE LINK		P)
Check that the	following IPDM	E/R fuses or fu	isible links are	not blown.	

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Signal name	Fuses and fusible link No.
	C
Battery power supply	D
	J

Is the fuse fusing?

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

NO >> GO TO 2.

2. CHECK POWER SUPPLY CIRCUIT

1. Turn the ignition switch OFF.

2. Disconnect IPDM E/R connector.

3. Check voltage between IPDM E/R harness connector and the ground.

Terminals			
(+)		(-)	Voltage (Approx.)
IPDM E/R		(-)	(Approx.)
Connector	Terminal		
E9	1	Ground	
E9	2		Battery voltage
E10	8		

Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair the harness or connector.

3. CHECK GROUND CIRCUIT

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

IPDM E/R			Continuity
Connector	Terminal	Ground	Continuity
E11	9		Existed
E12	19		Existed

Does continuity exist?

YES >> INSPECTION END

NO >> Repair the harness or connector.

SECURITY INDICATOR LAMP

< DTC/CIRCUIT DIAGNOSIS >

SECURITY INDICATOR LAMP

Description

- Security indicator lamp is located on combination meter.
- NVIS (Nissan Vehicle Immobilizer System) and vehicle security system conditions are indicated by blink or illumination of security indicator lamp.

Component Function Check

1.CHECK FUNCTION

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

Test	item	Descri	ption
	ON		Illuminates
THEFT IND	OFF	Security indicator lamp	Does not illuminate
the inspection result norm	al?		
YES >> INSPECTION E			
	"Diagnosis Procedure".		
iagnosis Procedure			INFOID:00000000503
.CHECK SECURITY INDI	CATOR LAMP POWER SI	JPPLY CIRCUIT	
. Turn ignition switch OFF			
. Disconnect combination	meter connector.	, I I	
. Check voltage between	combination meter harnes	s connector and ground.	
(+)		
Combina	tion meter	()	Voltage (V) (Approx.)
Connector	Terminal		(, , , , , , , , , , , , , , , , , , ,
M34	27	Ground	Battery voltage
s the inspection result norm	<u>al?</u>		
YES >> GO TO 2. NO-1 >> Check 10 A fuse	[No. 12] logotod in the fu	a block (I/D)]	
	e [No. 13, located in the fus or open or short between	combination meter and fuse	9.
CHECK SECURITY INDI	CATOR LAMP SIGNAL		
. Connect combination me			
. Disconnect BCM connect	ctor.		
. Check voltage between	BCM harness connector a	nd ground.	
(+)		
B	CM	()	Voltage (V) (Approx.)
Connector	Terminal		(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
M68	23	Ground	Battery voltage
the inspection result norm	al?		
	Refer to <u>BCS-82, "Remova</u>	l and Installation".	
NO >> GO TO 3.			
CHECK SECURITY INDI	CATOR LAMP CIRCUIT		

1. Disconnect combination meter connector.

2. Check continuity between combination meter harness connector and BCM harness connector.

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INFOID:000000005037724

INFOID:000000005037725

SECURITY INDICATOR LAMP

< DTC/CIRCUIT DIAGNOSIS >

Combina	tion meter	BCM Connector Terminal		Continuity	
Connector	Terminal				
M34	18	M68	23	Existed	

3. Check continuity between combination meter harness connector and ground.

Combina	tion meter		Continuity	
Connector Terminal		Ground	Continuity	
M34	18		Not existed	

Is the inspection result normal?

YES >> Replace combination meter. Refer to <u>MWI-97, "Removal and Installation"</u>.

NO >> Repair or replace harness.

HORN FUNCTION

[WITH INTELLIGENT KEY SYSTEM]

HORN FUNCTIO					
	N				
Description					INFOID:000000005153
Perform answer-back for	r each operation with	۱ horn.			
Component Functi	on Check				INFOID:000000005153
1.CHECK FUNCTION					
			(F TEOT" mode usin		
 Perform "VEHICLE \$ Check the horn operation operation operations and the second s	SECURITY HORN" i ration.	n ine ACTIV	E IEST mode usin		-111.
	Test item			Description	
VEHICLE SECURITY HO	ORN ON		Horn	Sounds	(for 20 ms)
Is the operation normal? YES >> Horn functio NO >> Go to <u>SEC-</u> Diagnosis Procedu	on is OK. 115. "Diagnosis Proc	<u>edure"</u> .			INF0ID:000000005153
1.CHECK HORN FUNC	CTION				
2.CHECK IPDM E/R PC 1. Disconnect IPDM E/	/R connector. een IPDM E/R harne (+)				Voltage (V)
	IPDM E/R		(-)		vollage (v)
					(Approx.)
Connector E13	Termina 34	al		D	(Approx.)
E13	34	al	Ground	Ba	
E13 Is the inspection result n YES >> Replace IPE NO >> GO TO 3. 3.CHECK IPDM E/R PO 1. Disconnect horn rela	34 Normal? DM E/R. Refer to <u>PC</u> OWER SUPPLY CIR	S-65, "Remov CUIT	Ground val and Installation".		(Approx.)
E13 Is the inspection result n YES >> Replace IPE NO >> GO TO 3. 3.CHECK IPDM E/R PO 1. Disconnect horn rela	34 DM E/R. Refer to PC OWER SUPPLY CIR ay connector. tween IPDM E/R har	S-65, "Remov CUIT	Ground val and Installation".		(Approx.) attery voltage
E13 Is the inspection result n YES >> Replace IPE NO >> GO TO 3. 3.CHECK IPDM E/R PC 1. Disconnect horn rela 2. Check continuity bet IPDM Connector	34 <u>aormal?</u> DM E/R. Refer to <u>PC</u> OWER SUPPLY CIR ay connector. tween IPDM E/R har E/R Terminal	S-65, "Remove CUIT rness connect	Ground val and Installation". tor and horn relay har Horn relay	arness conne	(Approx.)
E13 Is the inspection result n YES >> Replace IPE NO >> GO TO 3. 3.CHECK IPDM E/R PC 1. Disconnect horn rela 2. Check continuity bet IPDM Connector E13	34 aormal? DM E/R. Refer to PC OWER SUPPLY CIR ay connector. tween IPDM E/R har E/R Terminal 34	S-65, "Remove CUIT rness connect Connect E5	Ground val and Installation". tor and horn relay ha Horn relay tor Termin	arness conne	(Approx.) attery voltage
E13 Is the inspection result n YES >> Replace IPE NO >> GO TO 3. 3.CHECK IPDM E/R PC 1. Disconnect horn rela 2. Check continuity bet IPDM Connector E13	34 <u>aormal?</u> DM E/R. Refer to <u>PC</u> OWER SUPPLY CIR ay connector. tween IPDM E/R har E/R Terminal	S-65, "Remove CUIT rness connect Connect E5	Ground val and Installation". tor and horn relay ha Horn relay tor Termin	arness conne	(Approx.) attery voltage ector. Continuity
E13 Is the inspection result n YES >> Replace IPE NO >> GO TO 3. 3.CHECK IPDM E/R PC 1. Disconnect horn rela 2. Check continuity bet IPDM Connector E13	34 aormal? DM E/R. Refer to PC OWER SUPPLY CIR ay connector. tween IPDM E/R har E/R Terminal 34	S-65, "Remove CUIT rness connect Connect E5	Ground val and Installation". tor and horn relay ha Horn relay tor Termin	arness conne	(Approx.) attery voltage ector. Continuity Existed
E13 Is the inspection result n YES >> Replace IPE NO >> GO TO 3. 3.CHECK IPDM E/R PC 1. Disconnect horn rela 2. Check continuity bet IPDM Connector E13	34 <u>aormal?</u> DM E/R. Refer to <u>PC</u> OWER SUPPLY CIR ay connector. tween IPDM E/R har E/R Terminal 34 tween IPDM E/R har	S-65, "Remove CUIT Thess connect Connect E5 Thess connect	Ground val and Installation". tor and horn relay ha Horn relay tor Termin	arness conne	(Approx.) attery voltage ector. Continuity

YES >> GO TO 4.

NO >> Repair or replace harness.

< DTC/CIRCUIT DIAGNOSIS >

4. CHECK INTERMITTENT INCIDENT

>> INSPECTION END

HEADLAMP FUNCTION

[WITH INTELLIGENT KEY SYSTEM]

	ΓΙΟΝ		
Description			INFOID:000000005153929
Headlamp lighting when veh	icle security system is alar	m phase.	
Component Function (Check		INFOID:000000005153930
1. CHECK FUNCTION			
 Perform "HEAD LAMP(H Check headlamp operation 	H)" in the "ACTIVE TEST" ion.	mode using CONSULT-III.	
Test	item	Desc	ription
HEAD LAMP (HI)	ON	HEADLAMP (HI)	Lighting Does not lighting
YES >> INSPECTION E	ND		
NO >> Refer to <u>SEC-11</u>	7, "Diagnosis Procedure".		INFOID:000000005153931
	-		INFOID:000000005153931

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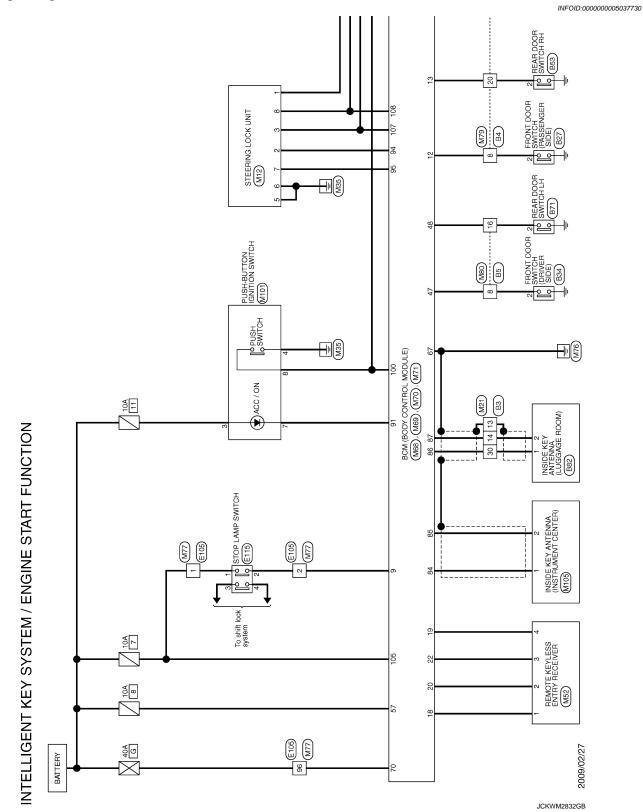
< DTC/CIRCUIT DIAGNOSIS >

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

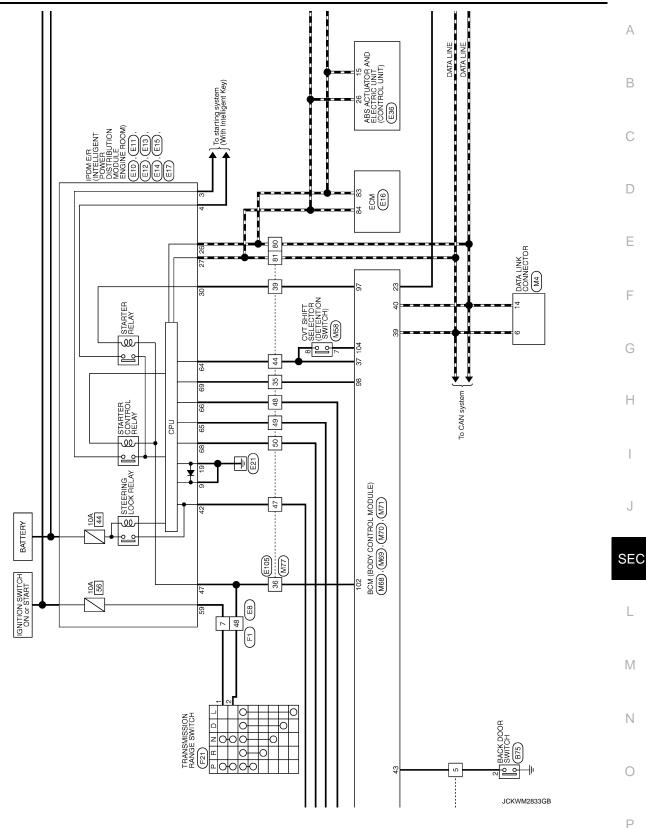
INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

Wiring Diagram - INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION -

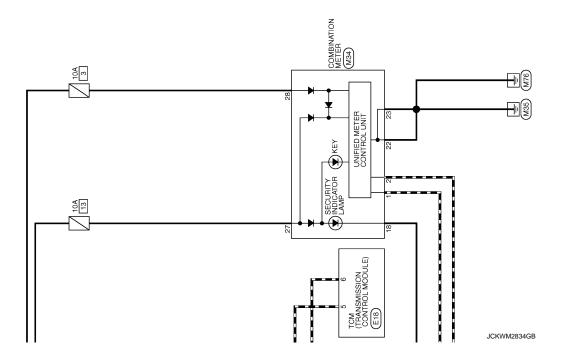


< DTC/CIRCUIT DIAGNOSIS >

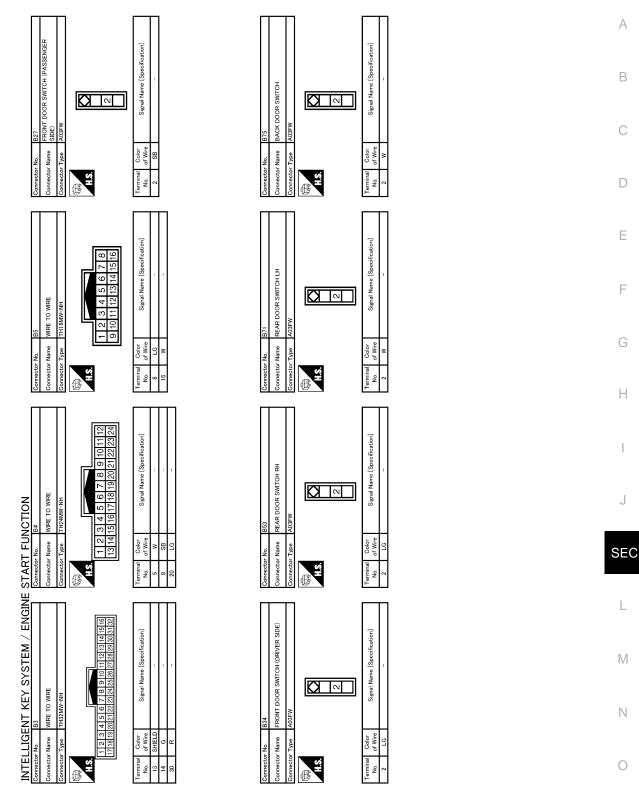
[WITH INTELLIGENT KEY SYSTEM]



Revision: 2009 March



INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION < DTC/CIRCUIT DIAGNOSIS > [WITH INTELLIGENT KEY SYSTEM]



JCKWM2835GB

Ρ

Signal Name [Specification]

Color of Wire

erminal No.

Signal Name [Specification]

Color of Wire

Terminal No. 42

Signal Name [Specification]

Color Mire

srmina[:] No.

Signal Name [Specification]

Color of Wire B/W

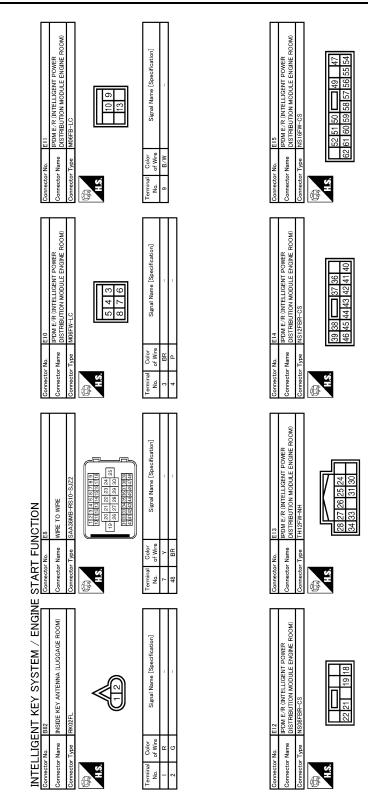
Terminal No. 19 ß

30

ВR

47

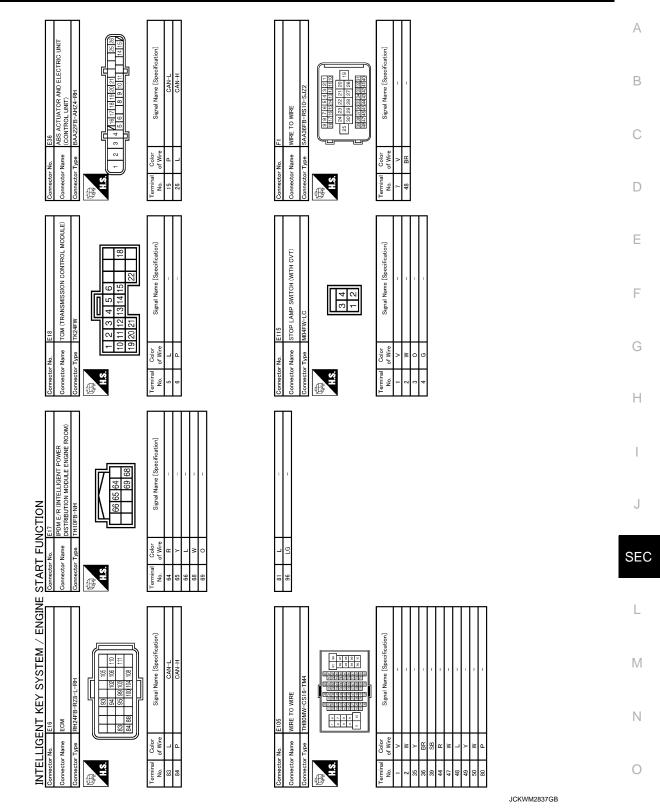
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JCKWM2836GB

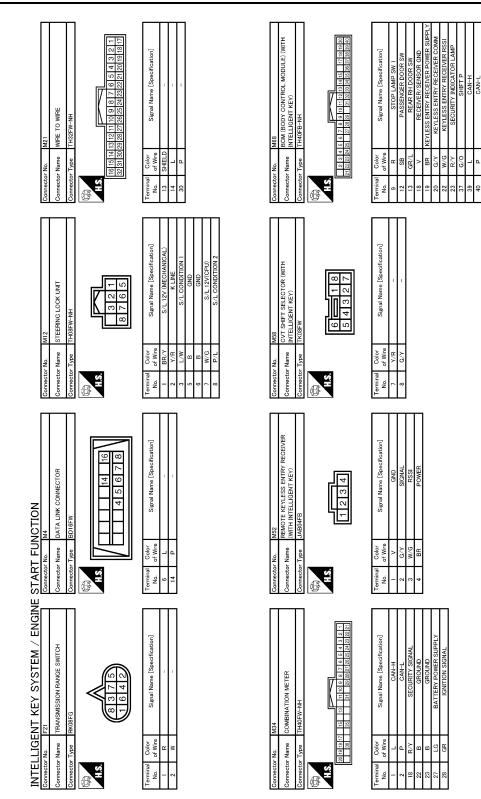
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[WITH INTELLIGENT KEY SYSTEM]



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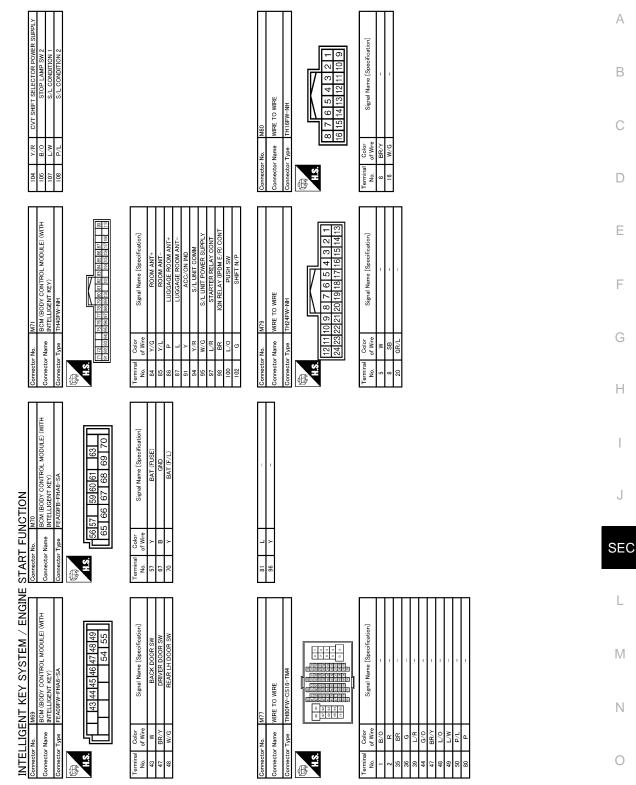
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JCKWM2838GB

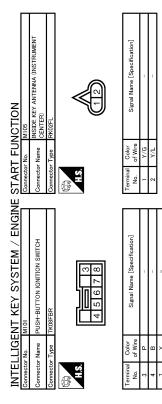
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[WITH INTELLIGENT KEY SYSTEM]

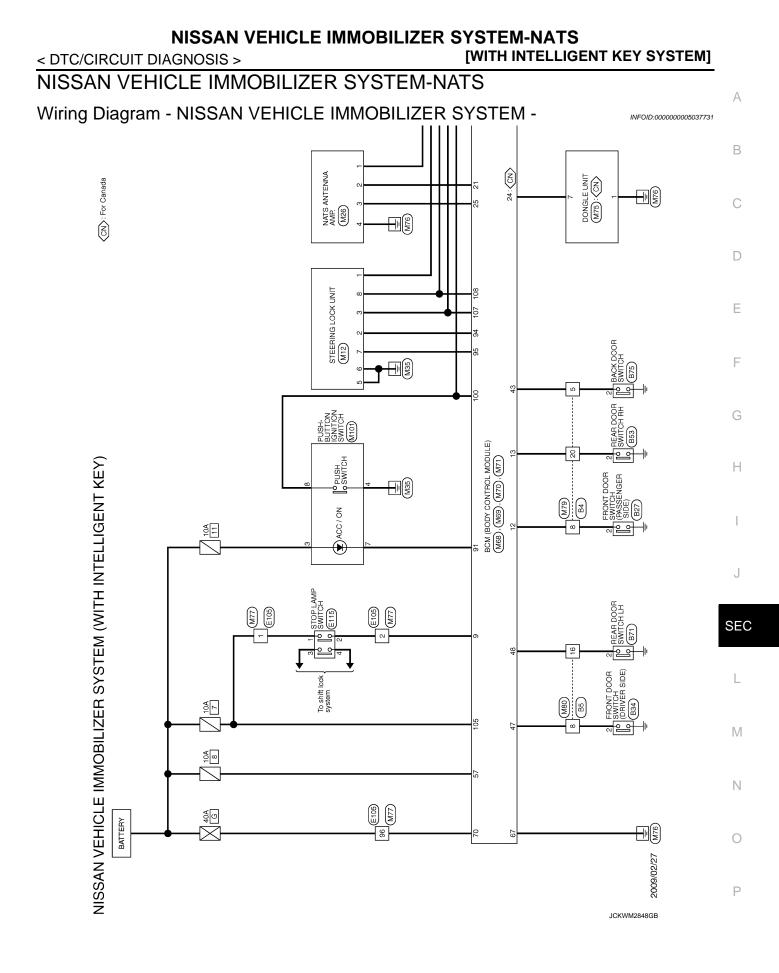


JCKWM2839GB

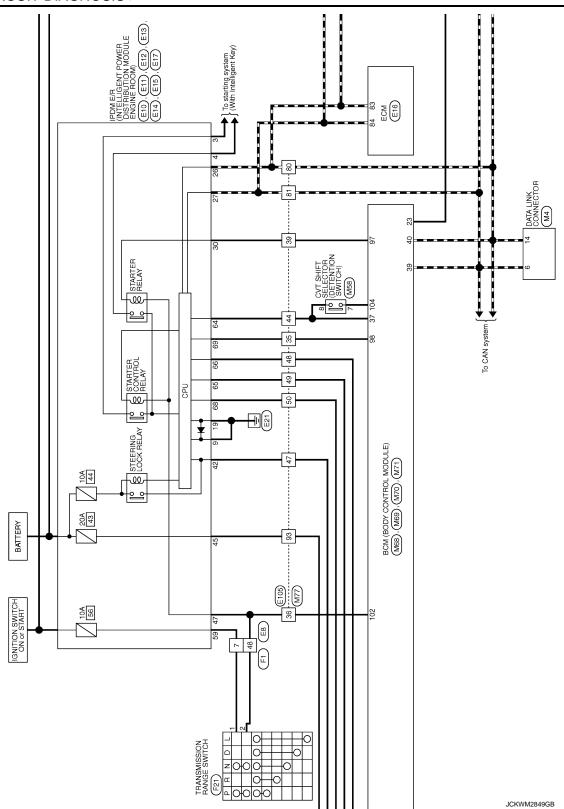
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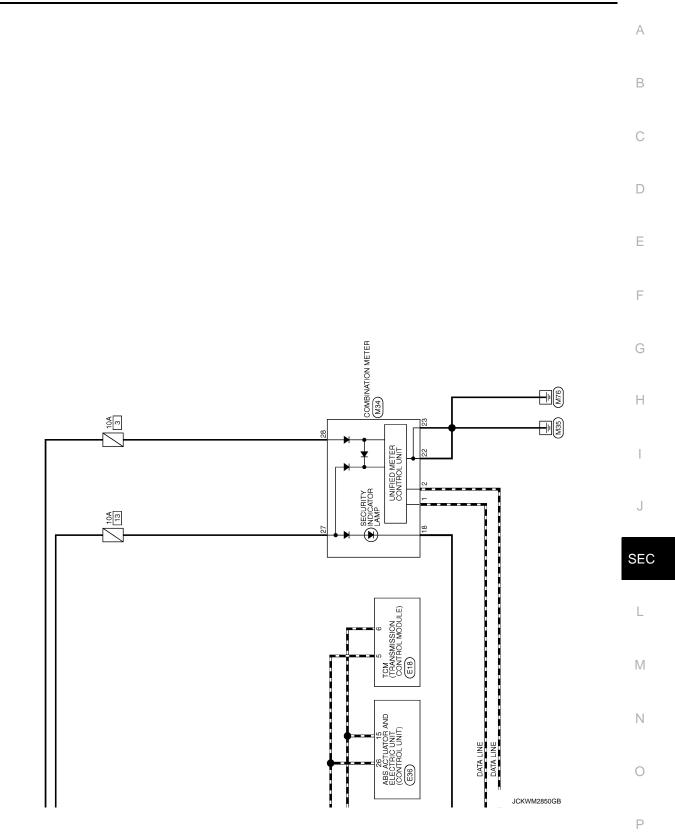


JCKWM2840GB



< DTC/CIRCUIT DIAGNOSIS >





< DTC/CIRCUIT DIAGNOSIS >

Signal Name [Specification]

Color of Wire

Prmir No.

cation]

Signal Name [Specif

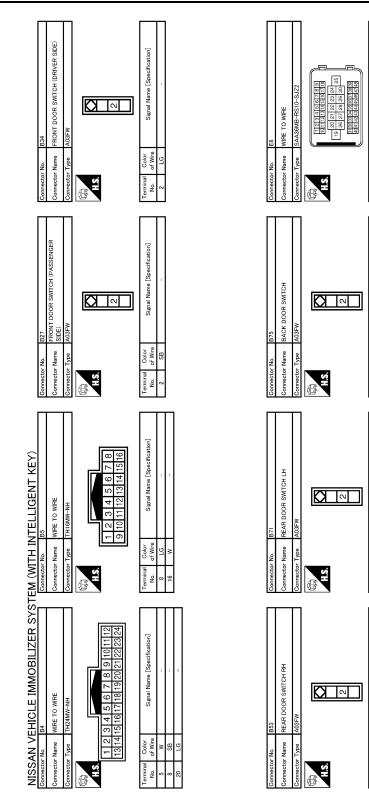
Terminal No.

Signal Name [Specification]

irming No.

Signal Name [Specification]

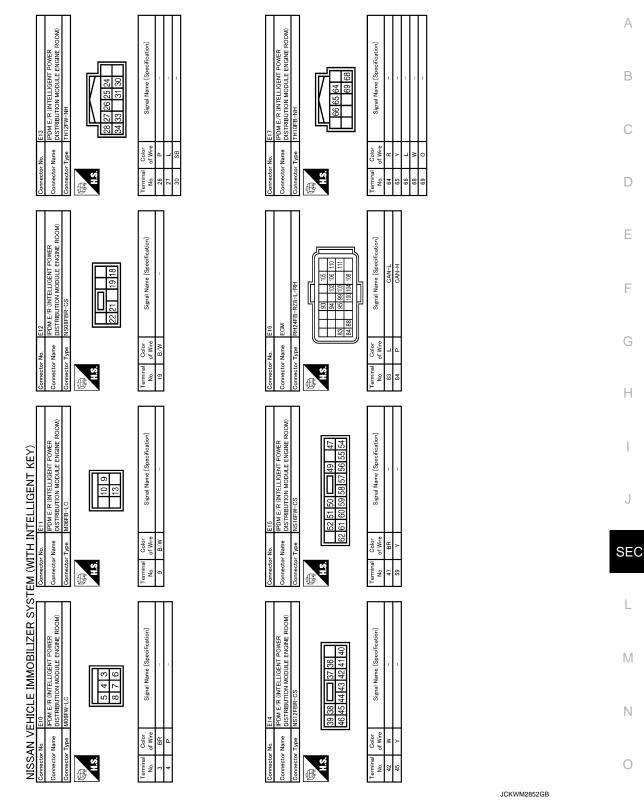
erminal No.



JCKWM2851GB

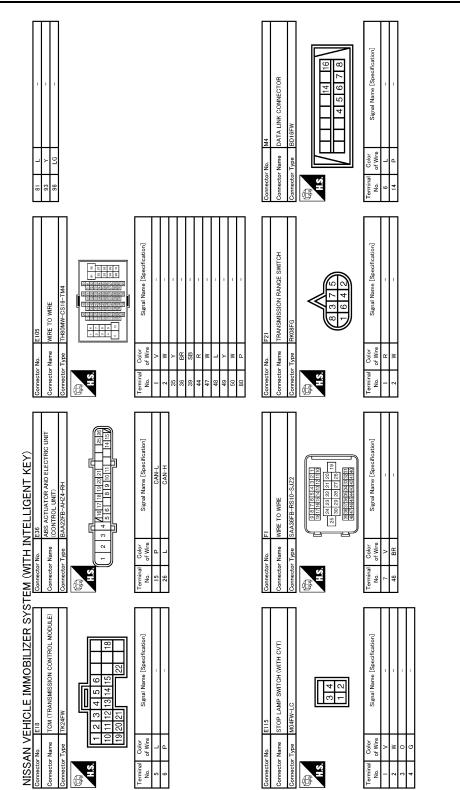
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[WITH INTELLIGENT KEY SYSTEM]



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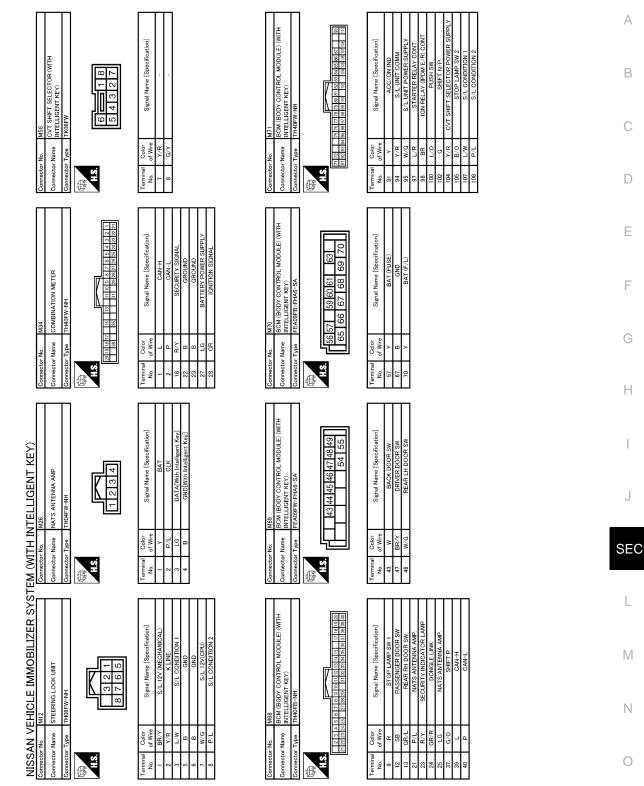
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JCKWM2853GB

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[WITH INTELLIGENT KEY SYSTEM]

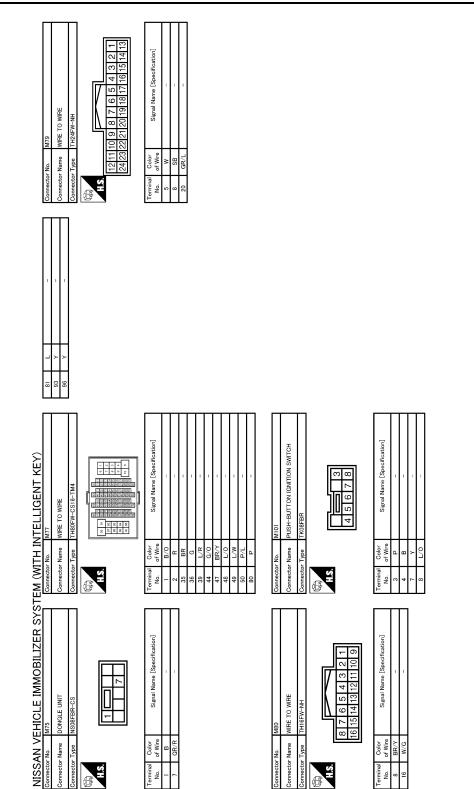


JCKWM2854GB

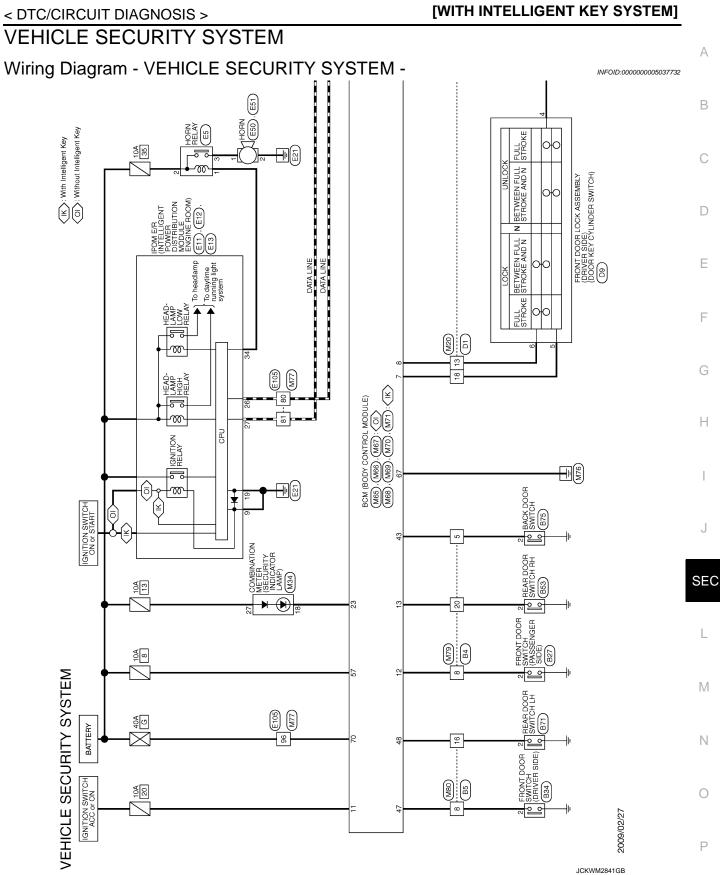
Ρ

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS (MITH INTELLIGENT KEY SYSTEM)

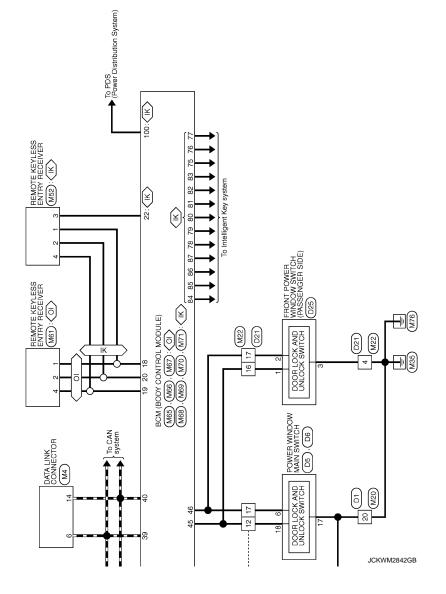
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JCKWM2855GB



Revision: 2009 March

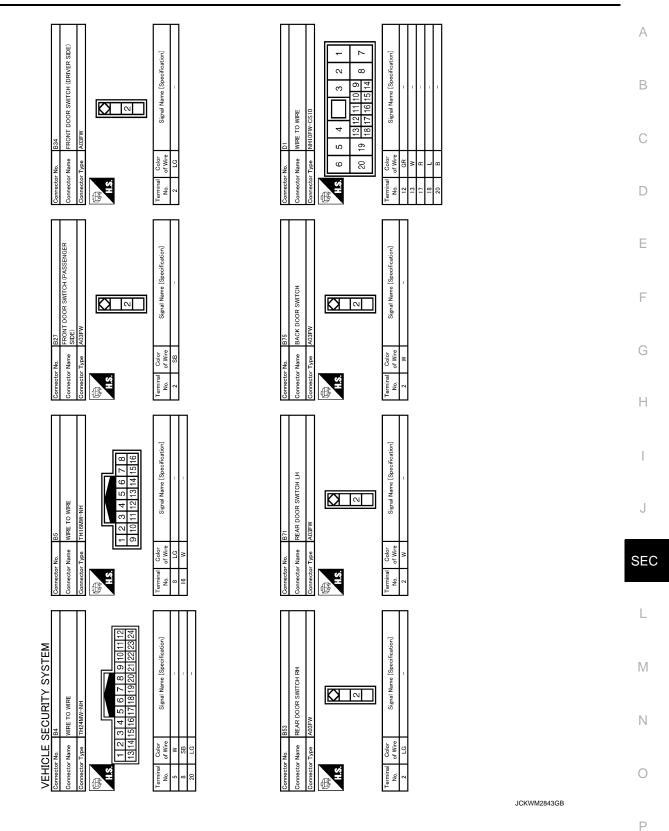




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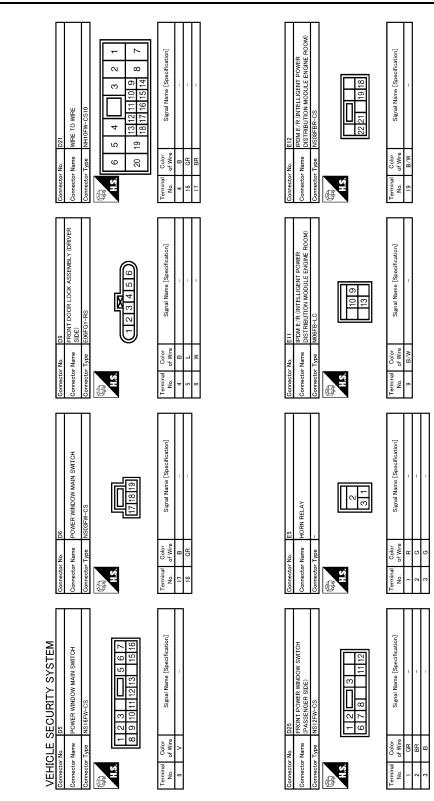
VEHICLE SECURITY SYSTEM

[WITH INTELLIGENT KEY SYSTEM]



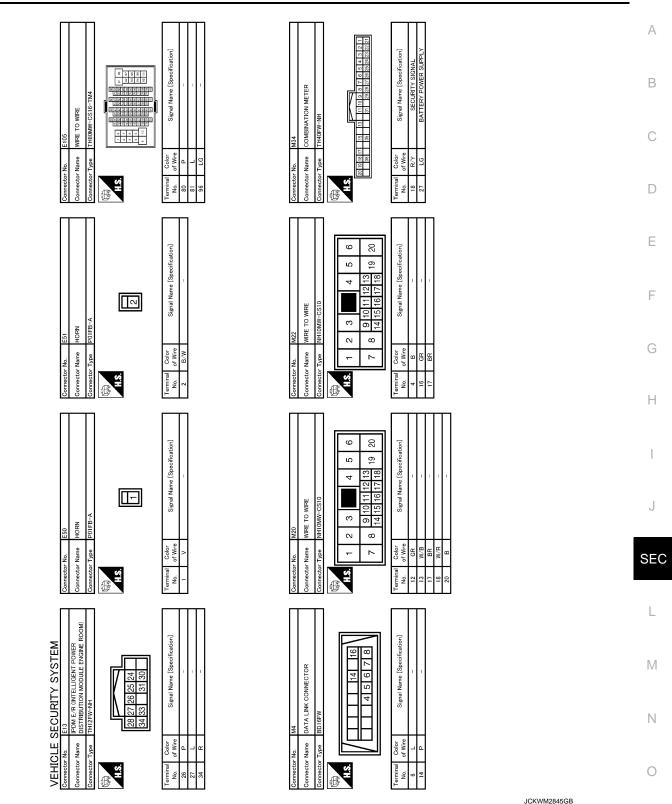
Revision: 2009 March

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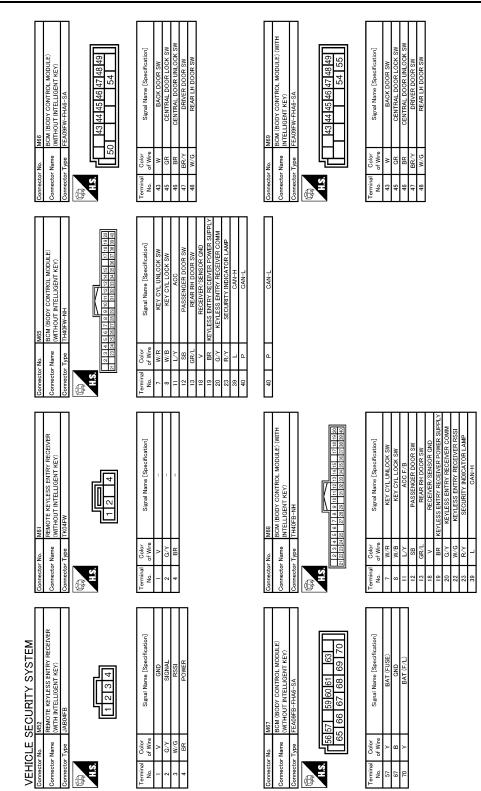
JCKWM2844GB

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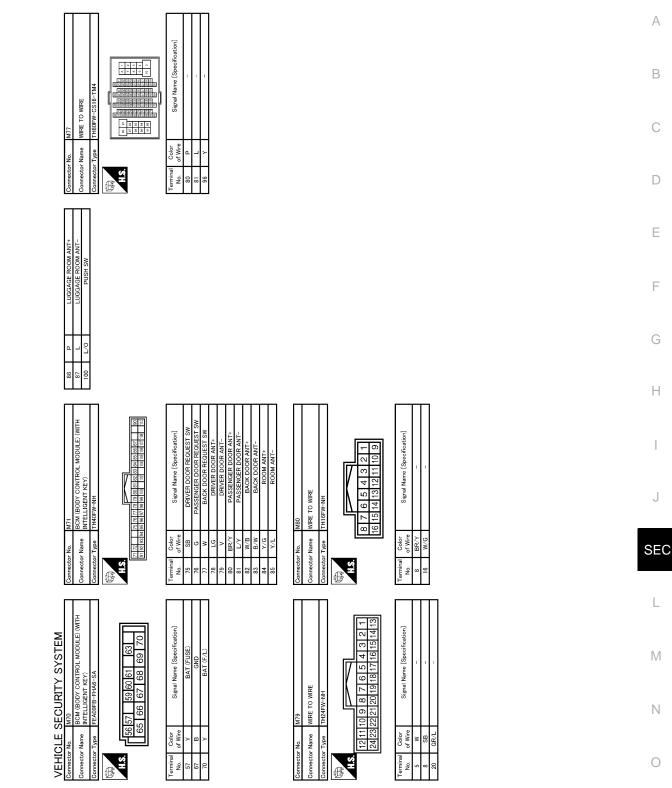
< DTC/CIRCUIT DIAGNOSIS >



JCKWM2846GB

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]



[WITH INTELLIGENT KEY SYSTEM]

ECU DIAGNOSIS INFORMATION BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000005183596

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

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
FR WASHER SW	Front washer switch ON	On
FR WIPER INT	Other than front wiper switch INT/AUTO	Off
	Front wiper switch INT/AUTO	On
FR WIPER STOP	Front wiper is not in STOP position	Off
FR WIFER STOP	Front wiper is in STOP position	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position
RR WIPER ON	Other than rear wiper switch ON	Off
	Rear wiper switch ON	On
RR WIPER INT	Other than rear wiper switch INT	Off
	Rear wiper switch INT	On
	Rear washer switch OFF	Off
RR WASHER SW	Rear washer switch ON	On
	Rear wiper is in STOP position	Off
KK WFER STOP	Rear wiper is not in STOP position	On
TURN SIGNAL R	Other than turn signal switch RH	Off
TORN SIGNAL IN	Turn signal switch RH	On
TURN SIGNAL L	Other than turn signal switch LH	Off
TORN SIGNAL L	Turn signal switch LH	On
TAIL LAMP SW	Other than lighting switch 1ST and 2ND	Off
TAIL LAWIF SVV	Lighting switch 1ST or 2ND	On
HI BEAM SW	Other than lighting switch HI	Off
	Lighting switch HI	On
HEAD LAMP SW 1	Other than lighting switch 2ND	Off
	Lighting switch 2ND	On
HEAD LAMP SW 2	Other than lighting switch 2ND	Off
TIEAD EANIT SVV 2	Lighting switch 2ND	On
PASSING SW	Other than lighting switch PASS	Off
	Lighting switch PASS	On
AUTO LIGHT SW	Other than lighting switch AUTO	Off
	Lighting switch AUTO	On
FR FOG SW	Front fog lamp switch OFF	Off
	Front fog lamp switch ON	On

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status	
DOOR SW-DR	Driver door closed	Off	
DOOR 3W-DR	Driver door opened	On	_
DOOR SW-AS	Passenger door closed	Off	-
DOOR SW-AS	Passenger door opened	On	
DOOR SW-RR	Rear RH door closed	Off	_
DOOR SW-RR	Rear RH door opened	On	(
	Rear LH door closed	Off	
DOOR SW-RL	Rear LH door opened	On	_
	Back door closed	Off	_
DOOR SW-BK	Back door opened	On	_
	Other than power door lock switch LOCK	Off	_
CDL LOCK SW	Power door lock switch LOCK	On	
	Other than power door lock switch UNLOCK	Off	-
CDL UNLOCK SW	Power door lock switch UNLOCK	On	
	Other than driver door key cylinder LOCK position	Off	
KEY CYL LK-SW	Driver door key cylinder LOCK position	On	(
	Other than driver door key cylinder UNLOCK position	Off	
KEY CYL UN-SW	Driver door key cylinder UNLOCK position	On	-
	Hazard switch is OFF	Off	_
HAZARD SW	Hazard switch is ON	On	-
	Rear window defogger switch OFF	Off	_
REAR DEF SW	Rear window defogger switch ON	On	_
TR/BD OPEN SW	NOTE: The item is indicated, but not monitored.	Off	
TRNK/HAT MNTR	NOTE: The item is indicated, but not monitored.	Off	_
	Blower fan OFF	Off	S
FAN ON SIG	Blower fan ON	On	_
	Air conditioner OFF (A/C switch indicator OFF)	Off	_
AIR COND SW	Air conditioner ON (A/C switch indicator ON)	On	_
	LOCK button of the key is not pressed	Off	_
RKE-LOCK	LOCK button of the key is pressed	On	-
	UNLOCK button of the key is not pressed	Off	_
RKE-UNLOCK	UNLOCK button of the key is pressed	On	_
	BACK DOOR OPEN button of the key is not pressed	Off	-
RKE-TR/BD	BACK DOOR OPEN button of the key is pressed	On	_
	PANIC button of the key is not pressed	Off	-
RKE-PANIC	PANIC button of the key is pressed	On	- `
	LOCK/UNLOCK button of the key is not pressed and held simultaneously	Off	_
RKE-MODE CHG	LOCK/UNLOCK button of the key is pressed and held simultaneously	On	_
	Bright outside of the vehicle	Close to 5 V	_
OPTI SEN (DTCT)	Dark outside of the vehicle	Close to 0 V	_
	Bright outside of the vehicle (Lighting switch AUTO)	Close to 5 V	_
OPTI SEN (FILT)	Dark outside of the vehicle (Lighting switch AUTO)	Close to 1.50 V	

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
OPTICAL SENSOR	NOTE: The item is indicated, but not monitored.	Off
RAIN SENSOR	NOTE: The item is indicated, but not monitored.	Off
REQ SW -DR	Driver door request switch is not pressed	Off
	Driver door request switch is pressed	On
REQ SW -AS	Passenger door request switch is not pressed	Off
	Passenger door request switch is pressed	On
REQ SW -RR	NOTE: The item is indicated, but not monitored.	Off
REQ SW -RL	NOTE: The item is indicated, but not monitored.	Off
REQ SW -BD/TR	Back door request switch is not pressed	Off
	Back door request switch is pressed	On
PUSH SW	Push-button ignition switch (push switch) is not pressed	Off
	Push-button ignition switch (push switch) is pressed	On
CLUCH SW	NOTE: The item is indicated, but not monitored.	Off
BRAKE SW 1	The brake pedal is not depressed	Off
	The brake pedal is depressed	On
BRAKE SW 2	The brake pedal is depressed when No. 7 fuse is blown	Off
	The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is normal	On
DETE/CANCL SW	Selector lever in P position	Off
	Selector lever in any position other than P	On
SFT PN/N SW	Selector lever in any position other than P and N	Off
	Selector lever in P or N position	On
S/L -LOCK	Steering is locked	Off
	Steering is unlocked	On
S/L -UNLOCK	Steering is unlocked	Off
	Steering is locked	On
S/L RELAY-F/B	Steering is unlocked	Off
	Steering is locked	On
UNLK SEN -DR	Driver door is locked	Off
	Driver door is unlocked	On
PUSH SW -IPDM	Push-button ignition switch (push-switch) is not pressed	Off
	Push-button ignition switch (push-switch) is pressed	On
IGN RLY1 -F/B	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On
DETE SW -IPDM	Selector lever in any position other than P	Off
	Selector lever in P position	On
SFT PN -IPDM	Selector lever in any position other than P and N	Off
	Selector lever in P or N position	On
SFT P -MET	Selector lever in any position other than P	Off
	Selector lever in P position	On

< ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
SFT N -MET	Selector lever in any position other than N	Off
	Selector lever in N position	On
	Engine stopped	Stop
ENCINE STATE	While the engine stalls	Stall
ENGINE STATE	At engine cranking	Crank
	Engine running	Run
S/L LOCK-IPDM	Steering is locked	Off
	Steering is unlocked	On
	Steering is unlocked	Off
S/L UNLK-IPDM	Steering is locked	On
S/L RELAY-REQ	Steering is unlocked	Off
5/L RELAT-REQ	Steering is locked	On
VEH SPEED 1	While driving	Equivalent to speed- ometer reading
VEH SPEED 2	While driving	Equivalent to speed- ometer reading
	Driver door is locked	LOCK
DOOR STAT-DR	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door is unlocked	UNLOCK
	Passenger door is locked	LOCK
DOOR STAT-AS	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door is unlocked	UNLOCK
	Steering is locked	Reset
ID OK FLAG	Steering is unlocked	Set
	The engine start is prohibited	Reset
PRMT ENG STRT	The engine start is permitted	Set
PRMT RKE STRT	NOTE: The item is indicated, but not monitored.	Reset
RKE OPE COUN1	During the operation of the key	Operation frequency of the key
RKE OPE COUN2	NOTE: The item is indicated, but not monitored.	_
	The key ID that the key slot receives is not recognized by any key ID reg- istered to BCM.	Yet
CONFRM ID ALL	The key ID that the key slot receives is recognized by any key ID registered to BCM.	Done
	The key ID that the key slot receives is not recognized by the fourth key ID registered to BCM.	Yet
CONFIRM ID4	The key ID that the key slot receives is recognized by the fourth key ID reg- istered to BCM.	Done
	The key ID that the key slot receives is not recognized by the third key ID registered to BCM.	Yet
CONFIRM ID3	The key ID that the key slot receives is recognized by the third key ID reg- istered to BCM.	Done
	The key ID that the key slot receives is not recognized by the second key ID registered to BCM.	Yet
CONFIRM ID2	The key ID that the key slot receives is recognized by the second key ID registered to BCM.	Done

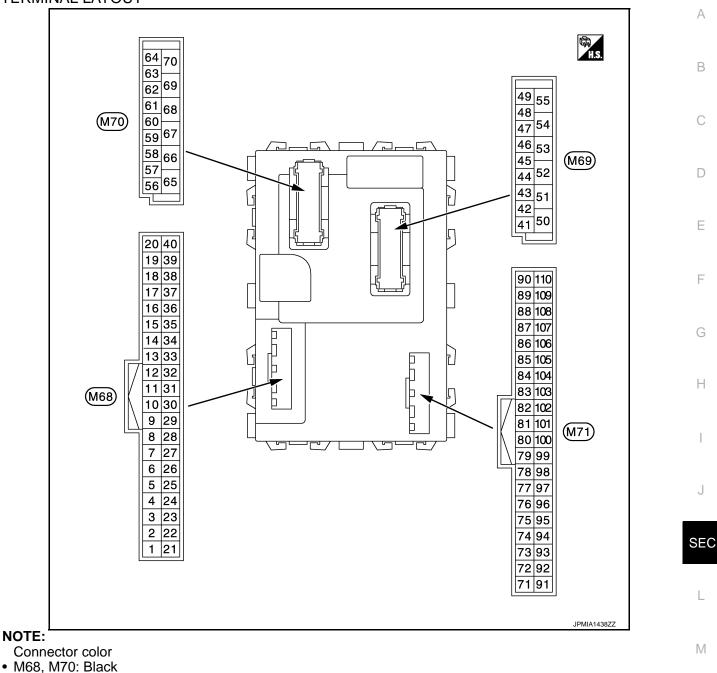
< ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
CONFIRM ID1	The key ID that the key slot receives is not recognized by the first key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the first key ID reg- istered to BCM.	Done
NOT REGISTERED	BCM detects registered key ID, or BCM does not detect key ID.	ID OK
NOT REGISTERED	BCM detects non-registration key ID.	ID NG
	The ID of fourth key is not registered to BCM	Yet
TP 4	The ID of fourth key is registered to BCM	Done
	The ID of third key is not registered to BCM	Yet
TP 3	The ID of third key is registered to BCM	Done
	The ID of second key is not registered to BCM	Yet
TP 2	The ID of second key is registered to BCM	Done
	The ID of first key is not registered to BCM	Yet
TP 1	The ID of first key is registered to BCM	Done
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 REGST FL1	ID of front LH tire transmitter is registered	Done
ID REGST FLT	ID of front LH tire transmitter is not registered	Yet
ID REGST FR1	ID of front RH tire transmitter is registered	Done
	ID of front RH tire transmitter is not registered	Yet
ID REGST RR1	ID of rear RH tire transmitter is registered	Done
ID REGOT KRT	ID of rear RH tire transmitter is not registered	Yet
ID REGST RL1	ID of rear LH tire transmitter is registered	Done
ID REGOLALI	ID of rear LH tire transmitter is not registered	Yet
	Tire pressure indicator OFF	Off
WARNING LAMP	Tire pressure indicator ON	On
	Tire pressure warning alarm is not sounding	Off
BUZZER	Tire pressure warning alarm is sounding	On

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

TERMINAL LAYOUT



• M69, M71: White

PHYSICAL VALUES

SEC-147

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Revision: 2009 March

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

	nal No.					Value		
(Wire +	color) –	Signal name	Input/ Output	Condition		(Approx.)		
					All switch OFF	0 V		
					Turn signal switch RH			
					Lighting switch HI	(V) 15		
2 (BR/W) Ground	Combination switch	Input	Combination switch (Wiper intermit-	Lighting switch 1ST	10 5 0 ++10ms +КІВ4958Ј 1.0 V			
			tent dial 4)	tent dial 4)	Lighting switch 2ND	(V) 10 5 0 ++10 ms JPMA0342JP 2.0 V		
			switch Input	Combination switch (Wiper intermit-	All switch OFF	0 V		
					Turn signal switch LH	4 0		
		ound Combination switch			Lighting switch PASS	(V) 15		
3 (GR)	Ground				Lighting switch 2ND	10 5 0 ++10ms PKIB4958J 1.0 V		
	tent dial 4)							Front fog lamp switch ON
					All switch OFF	0 V		
4 (L/Y) Ground				Front wiper switch LO				
					Front wiper switch MIST	(V) 15 10 5		
	0	Combination switch		Combination switch	Front wiper switch INT			
	Ground	Ground INPUT 3	input	(Wiper intermit- tent dial 4)	Lighting switch AUTO	0 ••••10ms ••••10ms PKiB4958J 1.0 V		

< ECU DIAGNOSIS INFORMATION >

Imput Conduction (Approx.) + - Signal name Output (Approx.) + - Combination (Approx.) C - Combination switch Input Combination (Approx.) - Combination Output Combination (Approx.) - Combination Combination (Approx.) C - Combination Combination C <td< th=""><th></th><th>nal No.</th><th>Description</th><th></th><th></th><th></th><th>\/-\</th><th></th></td<>		nal No.	Description				\/-\																
5 (G) Ground Combination switch INPUT 2 Input Combination Switch Combination (Wiper intermittent dial 4) Input Prot washer switch (Wiper intermittent dial 4) Input Prot washer Prot washer switch (Wiper intermittent dial 4) Input Prot washer Prot washer (Wiper intermittent dial 4) Input Prot washer Prot washer Prot washer Prot washer (Wiper intermittent dial 4) Input Prot washer Prot		e color) _	Signal name			Condition	Value (Approx.)	А															
5 (G) Ground Combination switch INPUT 2 Input Combination switch Combi						(Wiper intermittent dial 4)	0 V	В															
5 (C) Ground Combination switch INPUT 2 Input Combination switch Combi						(Wiper intermittent dial 4) Rear washer ON		С															
6 (L/R) Combination switch Input Combination switch Combination switch Input Combination switch All switch OFF (Wiper intermittent dial 4) 0 V H 6 (L/R) Ground Combination switch Input Combination switch All switch OFF (Wiper intermittent dial 4) 0 V H 7 Miper intermittent dial 4) 0 V H Front wiper switch HI (Wiper intermittent dial 4) 0 V H 8 Miper intermittent dial 3 0 V H Front wiper switch HI (Wiper intermittent dial 4) 0 V H 9 Miper intermittent dial 3 0 V H Front wiper switch HI (Wiper intermittent dial 3) Input Sec 10 Viper intermittent dial 3 0 V H H H H 10 Viper intermittent dial 3 Input Combination Any of the condition below with all switch OFF N N N 10 N N N N N N N N 10 N N N N N N N N 10 N N N <td>5 (G)</td> <td rowspan="2"></td> <td>Input</td> <td></td> <td>with all switch OFFWiper intermittent dial 1Wiper intermittent dial 5</td> <td></td> <td>D</td>	5 (G)		Input		with all switch OFFWiper intermittent dial 1Wiper intermittent dial 5		D																
6 (L/R) Ground Combination switch INPUT 1 Input Combination switch All switch OFF (Wiper intermittent dial 4) 0 V H 6 (L/R) Ground Combination switch INPUT 1 Input Combination switch Any of the condition below with all switch OFF (Wiper intermittent dial 2) V) H 6 (L/R) Ground Combination INPUT 1 Input Combination switch Any of the condition below with all switch OFF (Wiper intermittent dial 2) V) Input Sec 6 (L/R) Ground Combination INPUT 1 Input Combination switch Any of the condition below with all switch OFF (Wiper intermittent dial 2) V) Input M Any of the condition below with all switch OFF (Wiper intermittent dial 6) V) N N N 0 Any of the condition below with all switch OFF (Wiper intermittent dial 6) V) N N	(0)			ownorr	• wiper intermittent diar 6		Ε																
6 (L/R) Combination switch INPUT 1 Input Combination switch All switch OFF (Wiper intermittent dial 4) 0 V H All switch OFF (Wiper intermittent dial 4) 0 V H Front wiper switch HI (Wiper intermittent dial 4) 0 V H Wiper intermittent dial 3 1.0 V SEC 1.0 V N H Wiper intermittent dial 1 N Wiper intermittent dial 2 N Wiper intermittent dial 2 N N N																							
6 (L/R) Ground Combination switch INPUT 1 Input Combination switch Combination switch Combination switch All switch OFF (Wiper intermittent dial 4) (V) (V) (Wiper intermittent dial 4) (V) (V) (Wiper intermittent dial 4) Input SEC 6 (L/R) Combination switch INPUT 1 Input Combination switch Any of the condition below with all switch OFF (V) (V) (V) (V) (V) (V) (V) (V) (V) (V)							G																
6 (L/R) Ground Combination switch INPUT 1 Input Combination switch Combination switch Any of the condition below with all switch OFF Input Super intermittent dial 2 (All switch OFF) Input Super intermittent dial 3 (All switch OFF) Input Super intermittent dial 4 (All switch OFF) Input Super intermittent dial 6 (All switch OFF) Input Super intermittent dial 7 (All super interm								Н															
6 (L/R) Ground Combination switch INPUT 1 Input Combination switch Combination switch Any of the condition below with all switch OFF Input Combination switch Any of the condition below with all switch OFF Input Combination switch Any of the condition below with all switch OFF Input Any of the condition below with all switch OFF Input Input Combination switch Any of the condition below with all switch OFF Input Input <td< td=""><td></td><td></td><td></td><td></td><td rowspan="5"></td><td></td><td></td><td></td></td<>																							
6 (L/R) Ground Combination switch INPUT 1 Input Combination switch Any of the condition below with all switch OFF Imput Any of the condition below with all switch OFF Imput M 0								I															
6 (L/R) Ground Combination switch INPUT 1 Input Combination switch Any of the condition below with all switch OFF Input Any of the condition below with all switch OFF Input M 9							+ +10ms ±	J															
6 (L/R) Ground Combination switch INPUT 1 Input Combination switch Any of the condition below with all switch OFF M Input M M Viper intermittent dial 1 Wiper intermittent dial 2 Input M M M Viper intermittent dial 2 N N N N N N N Viper intermittent dial 2 N N N N N N N Viper intermittent dial 2 N N N N N N N Viper intermittent dial 3 N N N N N N N N N Viper intermittent dial 4 N											SEC												
Wiper intermittent dial 2 PKIB4952J N		Ground		Input				with all switch OFF		L													
Any of the condition below with all switch OFF • Wiper intermittent dial 6 • Wiper intermittent dial 7								M															
Any of the condition below with all switch OFF • Wiper intermittent dial 6 • Wiper intermittent dial 7						1.9 V																	
with all switch OFF • Wiper intermittent dial 6 • Wiper intermittent dial 7 PKIB4956J					Any of the condition below		Ν																
																					with all switch OFFWiper intermittent dial 6		0
0.8 V							PKIB4956J 0.8 V	Ρ															

< ECU DIAGNOSIS INFORMATION >

	Terminal No. Description					Velue
(Wire +	color)	Signal name	Input/ Output		Condition	Value (Approx.)
7 (W/R)	Ground	Door key cylinder switch UNLOCK	Input	Door key cylin- der switch	NEUTRAL position	(V) 15 10 5 0 • • • 10ms JPMIA0587GB
						8.0 - 8.5 V
					UNLOCK position NEUTRAL position	0 V 12 V
8 (W/B)	Ground	Door key cylinder switch LOCK	Input	Door key cylin- der switch	LOCK position	0 V
					OFF (Brake pedal is not	0 V
9	Ground	Stop lamp switch 1	Input	Stop lamp	depressed)	
(R)		·	switch	ON (Brake pedal is de- pressed)	Battery voltage	
10 (V/W)	Ground	Tire pressure warn- ing check switch	Input	Ignition switch O		(V) 15 10 5 0 10 ms JPMIA0012GB 1.0 - 1.5 V
11		ACC feedback	Input	Ignition switch O		0 V
(L/Y)			•	Ignition switch A	CC or ON	Battery voltage
12 (SB)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closed)	(V) 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
					ON (When passenger door opened)	0 V
13 (GR/L)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (When rear RH door closed)	(V) 15 0 4 4 10ms FKIB4960J 7.0 - 8.0 V
					ON (When rear RH door opened)	0 V
14	Ground	Optical sensor	Input	Ignition switch	When bright outside of the vehicle	Close to 5 V
(L/B)	Cround		mput	ON	When dark outside of the vehicle	Close to 0 V

< ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value									
(Wire +	e color) –	Signal name	Input/ Output		Condition	(Approx.)									
15 (W/L)	Ground	Rear window defog- ger switch	Input	Rear window defogger switch	Not pressed	(V) 15 10 5 0 10 ms 10 ms 1.0 - 1.5 V									
					Pressed	0 V									
17 (R/G)	Ground	Optical sensor pow- er supply	Output	Ignition switch	OFF, ACC ON	0 V 5 V									
18 (V)	Ground	Receiver and sensor ground	Input	Ignition switch O	N	0 V									
19 (BR)	Ground	Remote keyless en- try receiver power supply	Output	Ignition switch OFF		(V) 10 5 10 5 11 11 11 11 11 11 11 11 11									
20	Ground	Remote keyless en-									Remote keyless en- try receiver commu-		Waiting		(V) 15 10 0 11 11 11 11 11 11 11 11
(G/Y)	Clound	nication	Input	Signal receiving		(V) 15 10 5 0 <i>WM/IM/IM/IM/IM/IM/IM/IM/IM/IM/IM/IM/IM/IM</i>									
21 (P/L)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.									
22 (W/G)	Ground	Remote keyless en- try receiver RSSI	Input	Waiting Signal receiving	1	0 V									

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
(Wire +	color)	Signal name	Input/ Output		Condition	Value (Approx.)
					ON	0 V
23 (R/Y)	Ground	Security indicator lamp	Output	Security indica- tor	Blinking (Ignition switch OFF)	(V) ₁₅ 10 5 0 ++15 JPMIA0590GB 12.0 V
				OFF	Battery voltage	
24* (GR/R)	Ground	Dongle link	Input/ Output	Ignition switch O	FF	5 V
25 (LG)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
27 (Y/G)	Ground	A/C switch	Input	Air conditioner	OFF (A/C switch indicator: OFF)	(V) 15 10 5 0 10 ms JPMIA0012GB 1.0 - 1.5 V
					ON (A/C switch indicator: ON) OFF	0 V 0 V
28 (G/W)	Ground	Blower fan switch	Input	Blower fan	ON	(V) 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
29	Ground	Hazard switch	Input	Hazard switch	OFF	12 V
(L/W)	Cround		input		ON	0 V
31 (G/B)	Ground	Front door lock as- sembly driver side (Unlock sensor)	Input	Driver door	LOCK status (Unlock sen- sor switch OFF)	(V) 15 0 • • 10ms • • 10ms PKIB4960J 7.0 - 8.0 V
					UNLOCK status (Unlock sensor switch ON)	0 V

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

	nal No.	Description				Value	Δ
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)	A
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V	B C D
32 (LG)	Ground	Combination switch OUTPUT 5	Output	Combination switch	Front fog lamp switch ON (Wiper intermittent dial 4)		
					Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15 10 5	E
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2	0	F
					Wiper intermittent dial 6Wiper intermittent dial 7	1.0 V	G
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 + 10ms	H
						PKIB4960J 7.0 - 8.0 V	J
33 (Y/L)	Ground	Combination switch OUTPUT 4	Output	Combination switch	Lighting switch 1ST (Wiper intermittent dial 4)		0
					Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10	SEC
					Rear wiper switch INT (Wiper intermittent dial 4)	5 0 	
					Any of the condition below with all switch OFF	++10ms	L
					 Wiper intermittent dial 1 Wiper intermittent dial 5 Wiper intermittent dial 6 	PKIB4958J 1.2 V	M

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< ECU DIAGNOSIS INFORMATION >

	nal No.					Value	
(Wire +	color)	Signal name	Input/ Output		Condition	(Approx.)	
					All switch OFF (Wiper intermittent dial 4)	(V) 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
34 (W)		Combination switch OUTPUT 3	Output	Combination switch	Lighting switch 2ND (Wiper intermittent dial 4)		
					Lighting switch HI (Wiper intermittent dial 4)	(V) 15 10	
					Rear washer switch ON (Wiper intermittent dial 4)		
					 Any of the condition below with all switch OFF Wiper intermittent dial 1 Wiper intermittent dial 2 Wiper intermittent dial 3 	PKIB4958J 1.2 V	
35		Combination switch		Combination	All switch OFF	(V) 15 0 ↓ ↓ 10ms → 10 → 10	
(R/L)	Ground	OUTPUT 2	Output	(Wiper intermit- tent dial 4)	Lighting switch 2ND		
					Lighting switch PASS	(V) 15	
					Front wiper switch INT		
					Front wiper switch HI	v ↔ +10ms PKIB4958J 1.2 V	
36	36 Combination switch		Combination	All switch OFF	(V) 15 0 ↓ ↓ 10ms → ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓		
(L/O)	Ground	OUTPUT 1	Output	(Wiper intermit-	Turn signal switch RH		
				tent dial 4)	Turn signal switch LH	(V) 15 10 5 0	
				-	Front wiper switch LO (Front wiper switch MIST)		
					Front washer switch ON	→ +10ms PKIB4958J 1.2 V	
	<u> </u>						

< ECU DIAGNOSIS INFORMATION >

	nal No. color)	Description				Value	
(Wire	color)	Signal name	Input/ Output		Condition	(Approx.)	
37		Selector lever P po-			P position	0 V	
(G/O)	Ground	sition switch	Input	Selector lever	Any position other than P	12 V	
38	Oracial		la a d	lessities essiteb	OFF or ACC	0 V	
(O)	Ground	IGN feedback	Input	Ignition switch	ON	Battery voltage	
39 (L)	Ground	CAN-H	Input/ Output		_	_	
40 (P)	Ground	CAN-L	Input/ Output		_	_	
43 (W)	Ground	Back door switch	Input	Back door switch	OFF (When back door closed) ON	(V) 15 10 5 0 + 10ms PKIB4960J 9.5 - 10.0 V	
			(When back door opened)	0 V			
4.4		Deservises stars as		lausitiana annitada	Rear wiper stop position	12 V	
44 (LG)	Ground	Rear wiper stop po- sition	Input	Ignition switch ON	Any position other than rear wiper stop position	0 V	
45 (GR)	Ground	Door lock and unlock switch LOCK	Input	Door lock and unlock switch	NEUTRAL position	(V) 10 10 10 10 10 10 10 10 10 10	
					LOCK position	0 V	
46 (BR)	Ground	Door lock and unlock switch UNLOCK	Input	Door lock and unlock switch	NEUTRAL position	(V) 15 10 10 ms JPMIA0012GB 1.0 - 1.5 V	
					UNLOCK position	0 V	
47 (BR/Y)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closed)	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V	
				ON (When driver door opened)	0 V		

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
(vvire	color)	Signal name	Input/ Output		Condition	(Approx.)
48 (W/G)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (When rear LH door closed)	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V
					ON (When rear door LH opened)	0 V
49				Luggage room	Back door is closed (Back door lamp turns OFF)	12 V
(Y)	Ground	Luggage room lamp	Output	lamp switch DOOR position	Back door is opened (Back door lamp turns ON)	0 V
54	Ground	Rear wiper	Output	Rear wiper	OFF (Stopped)	0 V
(L/W)	Gibunu	iteal wiper	Output	iteal wiper	ON (Activated)	12 V
55	Ground	Rear door UNLOCK	C Output Rear door	Rear door	UNLOCK (Actuator is activated)	12 V
(G)	Ground		Output		Other then UNLOCK (Ac- tuator is not activated)	0 V
					p battery saver is activated. room lamp power supply)	0 V
56 (L)	Ground	Interior room lamp power supply	Output	vated.	np battery saver is not acti- rior room lamp power sup-	12 V
57 (Y)	Ground	Battery power sup- ply	Input	Ignition switch O	FF	Battery voltage
59	Ground	Passenger door UN-	Output	Passenger door	UNLOCK (Actuator is activated)	12 V
(G)	Ground	LOCK	Output	rassenger uoor	Other then UNLOCK (Ac- tuator is not activated)	0 V
					Turn signal switch OFF	0 V
60 (W/B)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 15 10 10 10 10 10 10 10 10 10 10

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
(Wire +	e color) –	Signal name	Input/ Output		Condition	Value (Approx.)
					Turn signal switch OFF	0 V
61 (W/L)	Ground	Turn signal RH	Output	Ignition switch ON	Turn signal switch RH	(V) 15 0 10 10 10 10 10 10 10 10 10
63		Interior room lamp		Interior room	OFF	12 V
(BR)	Ground	timer control	Output	lamp	ON	0 V
65					LOCK (Actuator is activat- ed)	12 V
(V)	Ground	All doors LOCK	Output	Output All doors	Other then LOCK (Actua- tor is not activated)	0 V
66	Ground	Driver door UN-	Output Driver door	Driver door	UNLOCK (Actuator is activated)	12 V
(L/B)	Ground	LOCK	σαιραι		Other then UNLOCK (Ac- tuator is not activated)	0 V
67 (B)	Ground	Ground	Output	Ignition switch ON		0 V
68 (L)	Ground	P/W power supply (IGN)	Output	Ignition switch O	N	12 V
69 (L/W)	Ground	P/W power supply (BAT)	Output	Ignition switch O	FF	12 V
70 (Y)	Ground	Battery power sup- ply	Input	Ignition switch O	FF	Battery voltage
71	Ground	Tire pressure receiv-	Input/	Ignition switch	Standby state	(V) 6 4 2 0 ••• 0.2s OCC3881D
(R)		er communication	Output	ON	When receiving the signal from the transmitter	(V) 6 2 0 • • 0.2s OCC3880D
72	Ground	Back door lock actu- ator relay control	Output	Back door	LOCK (Actuator is activat- ed) Other than LOCK (Actua- tor is not activated)	0 V Battery voltage
(R/W)						
	Ground	Driver door request	Input	Driver door re-	ON (Pressed)	0 V

< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description				Value	
+	-	Signal name	Input/ Output	Condition		(Approx.)	
76	Ground	Passenger door re-	Input	Passenger door	ON (Pressed)	0 V	
(G)	Ciouna	quest switch	mput	request switch	OFF (Not pressed)	12 V	
77	Ground	Back door request	Input	Back door re-	ON (Pressed)	0 V	
(W)	Cround	switch	mput	quest switch	OFF (Not pressed)	12 V	
78	Ground	ound Driver door antenna (+)	Output	When the driver door request switch is operat- ed with ignition switch OFF	When Intelligent Key is not in the antenna detec- tion area	(V) 15 10 0 1111111111111111111 50 500 ms JMKIA3838GB	
(LG)	Ground				When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA3839GB	
79	Ground	Orana Driver door antenna	Outout	When the driver door request	When Intelligent Key is not in the antenna detec- tion area	(V) 15 10 5 0 111111111111111111111111	
(V)		(-) Cutput s	switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 5 10 5 0 1 5 10 5 0 1 5 10 5 0 1 5 10 5 0 10 5 10 5		

< ECU DIAGNOSIS INFORMATION >

Terminal No.		Description					
(Wire +	color)	Signal name	Input/ Output		Condition	Value (Approx.)	A
80		Passenger door an-		When the pas- senger door re- quest switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detec- tion area	(V) 15 10 5 0 11 11 10 10 10 10 10 10 10	B C D
(BR/Y)	Ground	tenna (+)	Output		When Intelligent Key is in the antenna detection area	(V) 15 0 5 0 1 5 0 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5	E
81	Ground	Ground Passenger door an- tenna (-)	Output	When the pas- senger door re- quest switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detec- tion area	(V) 15 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5	G H I
(L/Y)	Giound				When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 15 10 15 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 10 10 10 10 10 10 10 10 10 10 10 10	J SEC
82	Ground	Fround Back door antenna Output		When the back door request	When Intelligent Key is not in the antenna detec- tion area	(V) 15 10 5 0 1111111111111111111111111111	M
(W/B)	Ground		switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 0 0 15 0 15 0 15 0 15 10 15 0 15 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 10 15 10 10 10 15 10 15 10 10 10 10 10 10 10 10 10 10 10 10 10	P	

< ECU DIAGNOSIS INFORMATION >

Terminal No.		Description				Value	
(Wire +	color)	Signal name	Input/ Output		Condition	(Approx.)	
83		Back door antenna (-)	Output	When the back door request switch is operat- ed with ignition switch OFF	When Intelligent Key is not in the antenna detec- tion area	(V) 15 10 5 0 111111111111111111111111	
(B/W)	Ground				When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA3839GB	
84 (Y/G)	Ground	Room antenna (+) (Instrument panel)	Output	Ignition switch OFF	When Intelligent Key is not in the antenna detec- tion area	(V) 15 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0	
(1/3)					When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA3839GB	
85	Ground	round Room antenna (-) (Instrument panel) Output		Ignition switch	When Intelligent Key is not in the antenna detec- tion area	(V) 15 0 10 5 0 11111111111111111111111111	
(Y/L)			OFF	When Intelligent Key is in the antenna detection area	(V) 15 0 0 15 0 15 0 15 0 15 0 15 0 15 0 1		

< ECU DIAGNOSIS INFORMATION >

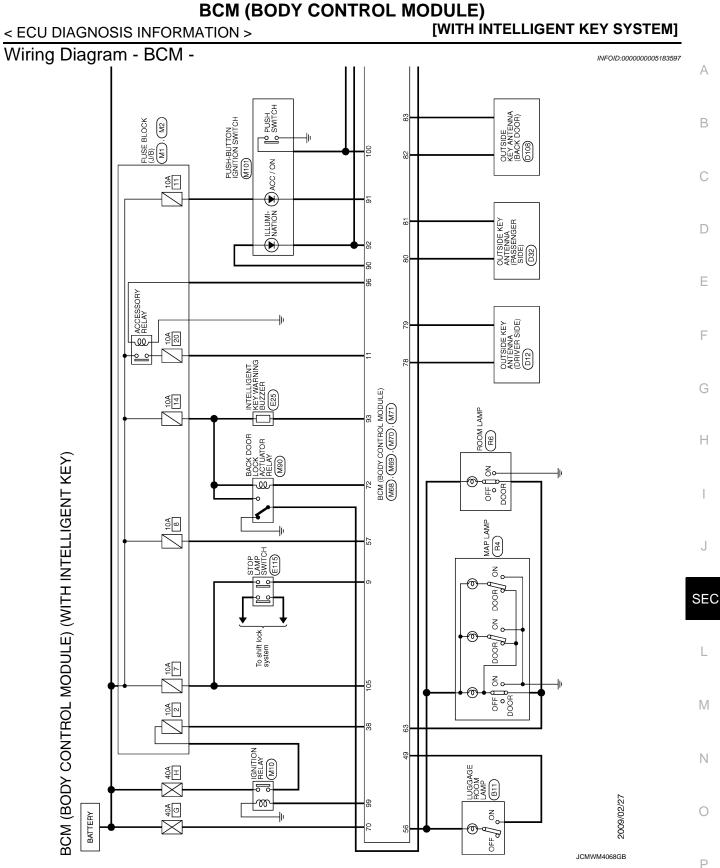
Terminal No.		Description) /= l++=	
(Wire	e color)	Signal name	Input/ Output		Condition	Value (Approx.)	A
86		Luggage room an-		Ignition switch	When Intelligent Key is not in the antenna detec- tion area	(V) 15 10 5 0 11 11 11 11 11 11 11 11 11	B C D
(P)	Ground	tenna (+)	Output	ŎFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA3839GB	E
87	Ground	d Luggage room an- tenna (-)	Output	Ignition switch OFF	When Intelligent Key is not in the antenna detec- tion area	(V) 15 10 5 0 111111111111111111111111	G H
(L)					When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 1 1 1 1 1 1 1 1 1 1 1 1	J SEC
90	Ground	Push-button ignition	Output	Push-button ig- nition switch illu-	ON	12 V	
(W/L)	Ground	switch illumination	Culput	mination	OFF	0 V	M
91 (Y)	Ground	ACC/ON indicator lamp	Output	Ignition switch	OFF ACC or ON OFF	Battery voltage 0.5 V 0 V	Ν
92 (BR/R)	Ground	Push-button ignition switch illumination ground	Output	Tail lamp	ON	NOTE: When the illumination brighten- ing/dimming level is in the neutral position (V) 15 10 5 0 10 ms JPMIA1554GB 6.0 - 7.0 V	O

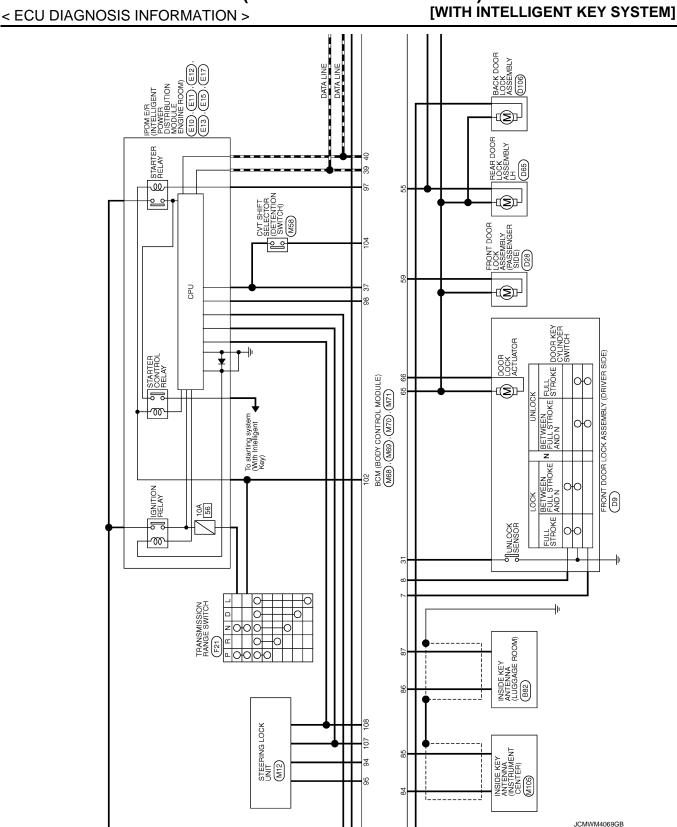
< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

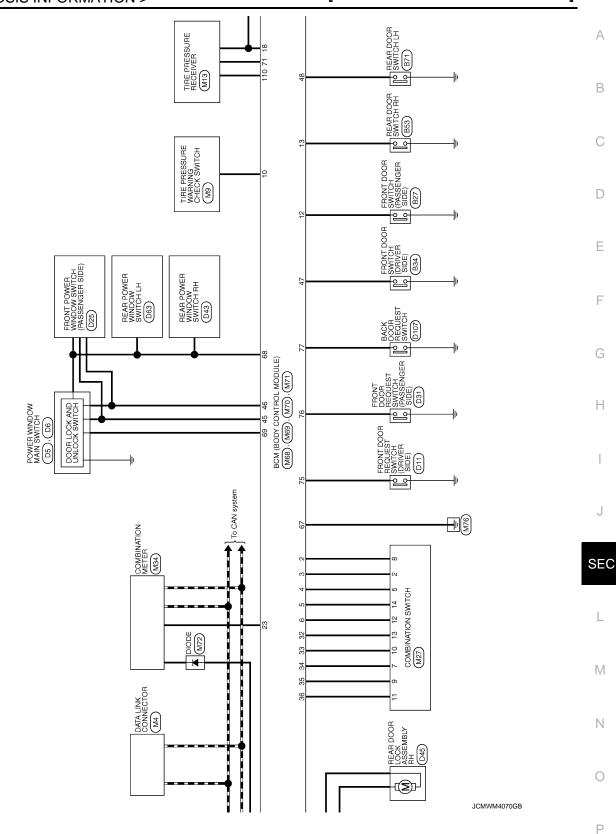
	nal No.	Description				Value	
(vvire +	color) –	Signal name	Input/ Output		Condition	(Approx.)	
93		Intelligent Key warn-	a	Intelligent Key	Sounding	0 V	
(GR/W)	Ground	ing buzzer	Output	warning buzzer	Not sounding	12 V	
					LOCK status	12 V	
94 (Y/R)	Ground	Steering lock unit communication	Input/ Output	Steering lock	LOCK or UNLOCK	(V) 15 10 50 50 50 ms JMKIA0066GB	
					For 15 seconds after UN- LOCK	12 V	
					15 seconds or later after UNLOCK	0 V	
95	Ground	Steering lock unit	Output	Ignition switch	OFF or ACC	12 V	
(W/G)		power supply			ON	0 V	
96	Ground	ACC relay control	Output	Ignition switch	OFF	0 V	
(BR/W)	Giouna	ACC relay control	Output	Ignition switch	ACC or ON	12 V	
97 (L/R) Ground	Cround	nd Starter relay control	Output	Ignition switch ON	When selector lever is in P or N position	Battery voltage	
	Ground	Stanter relay control	Output		When selector lever is not in P or N position	0 V	
98	Oround	Ignition relay (IPDM	Output	Innition owitch	OFF or ACC	12 V	
(BR)	Ground	E/R) control	Output	Ignition switch	ON	0 V	
99	Ground	Ignition relay control	Output	Ignition switch	OFF or ACC	0 V	
(W/R)	Giouna	Ignition relay control	Output	Ignition Switch	ON	12 V	
100		Push-button ignition		Push-button ig-	Pressed	0 V	
(L/O)	Ground	switch (push switch)	Input	nition switch (push switch)	Not pressed	12 V	
102	Ground	Selector lever P/N	Innut	Selector lever	P or N position	Battery voltage	
(G)	Ground	position	Input	Selector lever	Except P and N positions	0 V	
104 (Y/R)	Ground	CVT shift selector (detention switch) power supply	Output	Ignition switch O	N	12 V	
105 (B/O)	Ground	Stop lamp switch 2	Input	Ignition switch O	FF	Battery voltage	
106	Ground	Blower fan motor re-	Outrout	Ignition owitch	OFF or ACC	0 V	
(Y/B)	Ground	lay control	Output	Ignition switch	ON	12 V	
107	Crownel	Steering lock condi-	Incut	Stooring look	LOCK status	0 V	
(L/W)	Ground	tion No. 1	Input	Steering lock	UNLOCK status	12 V	
108	Crown d	Steering lock condi-	lanet	Stooring Is -1-	LOCK status	12 V	
(P/L)	Ground	tion No. 2	Input	Steering lock	UNLOCK status	0 V	
110	0	Tire pressure receiv-	0 / .	1	OFF or ACC	0 V	
(BR/W)	Ground	er power supply	Output	Ignition switch	ON	5 V	

*: For Canada







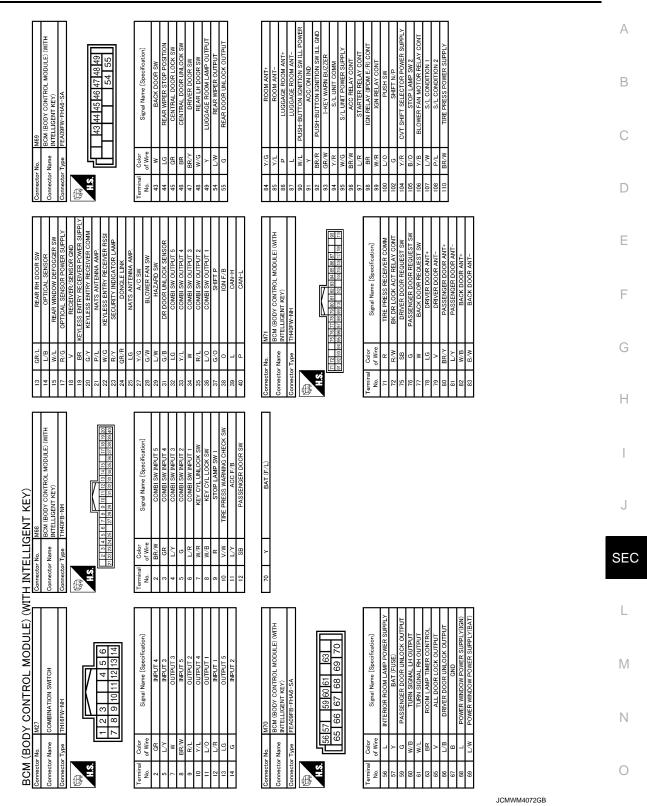


REAR COMBINATION LAMP RH (TURN SIGNAL) B59 0 ÷ To ignition power supply SIDE SIGNAL LAMP RH E40 ୭ ÷ E46 E46 FRONT SIGNAL E46 E46 106 0 ÷ BEAR COMBINATION (TURN SIGNAL) (BB0) 5 NATS ANTENNA AMP. M26 25 0 SIDE SIGNAL LAMP LH E23 24: CN DONGLE UNIT M75): CN 0 ÷. BCM (BODY CONTROL MODULE) (M6B) , (M5D) , (M71) FRONT SIGNAL LAMP LH E27 0 ÷ A/C AUTO AMP. 58 REAR WIPER MOTOR D112 27 5 STOP REMOTE KEYLESS ENTRY RECEIVER (M52) 44 MOVE <u>σ</u> 22 20 -œj∔ 54 ÷. HAZARD SWITCH 53 4 0 OPTICAL SENSOR M17 BACK BOOR SWITCH B75 4 ł١ 5 JCMWM4071GB

CN : For Canada

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]



Fail-safe

INFOID:000000005183598

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FAIL-SAFE CONTROL BY DTC

BCM performs fail-safe control when any DTC are detected.

< ECU DIAGNOSIS INFORMATION >

Display contents of CONSULT	Fail-safe	Cancellation
B2013: ID DISCORD BCM-S/L	Inhibit engine cranking	When communication between BCM and steering lock unit are commu- nicated normally.
B2014: CHAIN OF S/L-BCM	Inhibit engine cranking	When communication between BCM and steering lock unit are commu- nicated normally.
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	Ignition switch $ON \rightarrow OFF$
B2196: DONGLE NG	Inhibit engine cranking	Erase DTC
B2198: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2557: VEHICLE SPEED	Inhibit steering lock	 When the following CAN signal status (vehicle speed signal) becomes consistent Vehicle speed signal (ABS) Vehicle speed signal (Meter)
B2601: SHIFT POSITION	Inhibit steering 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 steering 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 km/h (2.5 MPH) or more
B2603: SHIFT POSI STATUS	Inhibit steering lock	 500 ms after any of the following BCM recognition conditions are fulfilled Status 1 Ignition switch is in the ON position Selector lever P position switch signal: Except P position (12 V) Selector lever P/N position signal: Except P and N positions (0 V) Status 2 Ignition switch is in the ON position Selector lever P position switch signal: P position (0 V) Selector lever P/N position signal: P or N positions (12 V)
B2604: PNP/CLUTCH SW	Inhibit steering lock	 500 ms after any of the following BCM recognition conditions are fulfilled Status 1 Ignition switch is in the ON position Selector lever P/N position signal: P or N position (12 V) Shift position signal (CAN): P or N position Status 2 Ignition switch is in the ON position Selector lever P/N position signal: Except P and N positions (0 V) Shift position signal (CAN): Except P and N position
B2605: PNP/CLUTCH SW	Inhibit steering lock	 500 ms after any of the following BCM recognition conditions are fulfilled Status 1 Power position: IGN Selector lever P/N position signal: Except P and N positions (0 V) Interlock/PNP switch signal (CAN): OFF Status 2 Ignition switch is in the ON position Selector lever P/N position signal: P or N position (12 V) Interlock/PNP switch signal (CAN): ON
B2608: STARTER RELAY	Inhibit engine cranking	 500 ms after the following signal communication status becomes consistent Starter motor relay control signal Starter relay status signal (CAN)
B2609: S/L STATUS	 Inhibit engine crank- ing Inhibit steering lock 	 When the following steering lock conditions agree BCM steering lock control status Steering lock condition No. 1 signal status Steering lock condition No. 2 signal status
B260B: STEERING LOCK UNIT	Inhibit steering lock	Erase DTC

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

Display contents of CONSULT	Fail-safe	Cancellation
B260D: STEERING LOCK UNIT	Inhibit steering lock	Erase DTC
B260F: ENG STATE SIG LOST	Inhibit engine cranking	When any of the following conditions are fulfilledPower position changes to ACCReceives engine status signal (CAN)
B2612: S/L STATUS	 Inhibit engine crank- ing Inhibit steering lock 	 When any of the following conditions are fulfilled Steering lock unit status signal (CAN) is received normally The BCM steering lock control status matches the steering lock status recognized by the steering lock unit status signal (CAN from IPDM E/R)
B2619: BCM	Inhibit engine cranking	1 second after the steering lock unit power supply output control inside BCM becomes normal
B26EF: STRG LCK RELAY OFF	Inhibit engine cranking	When the following conditions are fulfilledSteering lock relay signal (CAN): ONSteering lock unit status signal (CAN): ON
B26F0: STRG LCK RELAY ON	Inhibit engine cranking	When the following conditions are fulfilledSteering lock relay signal (CAN): OFFSteering lock unit status signal (CAN): OFF
B26F1: IGN RELAY OFF	Inhibit engine cranking	 When the following conditions are fulfilled Ignition switch ON signal (CAN: Transmitted from BCM): ON Ignition switch ON signal (CAN: Transmitted from IPDM E/R): ON
B26F2: IGN RELAY ON	Inhibit engine cranking	 When the following conditions are fulfilled Ignition switch ON signal (CAN: Transmitted from BCM): OFF Ignition switch ON signal (CAN: Transmitted from IPDM E/R): OFF
B26F3: START CONT RLY ON	Inhibit engine cranking	 When the following conditions are fulfilled Starter control relay signal (CAN: Transmitted from BCM): OFF Starter control relay signal (CAN: Transmitted from IPDM E/R): OFF
B26F4: START CONT RLY OFF	Inhibit engine cranking	 When the following conditions are fulfilled Starter control relay signal (CAN: Transmitted from BCM): ON Starter control relay signal (CAN: Transmitted from IPDM E/R): ON
B26F7: BCM	Inhibit engine cranking by Intelligent Key sys- tem	When room antenna and luggage room antenna functions normally
U0415: VEHICLE SPEED	Inhibit steering lock	When vehicle speed signal (Meter) (CAN) is received normally

HIGH FLASHER OPERATION

BCM detects the turn signal lamp circuit status by the current value.

BCM increases the turn signal lamp blinking speed if the bulb or harness open is detected with the turn signal lamp operating.

NOTE:

The blinking speed is normal while activating the hazard warning lamp.

REAR WIPER MOTOR PROTECTION

BCM detects the rear wiper stopping position according to the rear wiper stop position signal. When the rear wiper stop position signal does not change for more than 5 seconds while driving the rear ^N wiper, BCM stops power supply to protect the rear wiper motor.

Condition of cancellation

- 1. More than 1 minute is passed after the rear wiper stop.
- 2. Turn rear wiper switch OFF.
- 3. Operate the rear wiper switch or rear washer switch.

DTC Inspection Priority Chart

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

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< ECU DIAGNOSIS INFORMATION >

Priority	DTC
1	B2562: LOW VOLTAGE
2	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)
3	 B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM B2195: ANTI-SCANNING B2196: DONGLE NG B2198: NATS ANTENNA AMP
4	 B2013: ID DISCORD BCM-S/L B2014: CHAIN OF S/L-BCM B2553: IGNITION RELAY B2555: STOP LAMP B2555: FUSH-BTN IGN SW B2557: VEHICLE SPEED B2601: SHIFT POSITION B2602: SHIFT POSITION B2603: SHIFT POSITION B2604: PNP/CLUTCH SW B2605: STARETE RELAY B2609: S/L STATUS B26010: STEERING LOCK UNIT B26010: STEERING LOCK UNIT B26010: STEERING LOCK UNIT B26010: STEERING LOCK UNIT B26011: ENG STATE SIG LOST B2614: BCM B2614: BCM B2614: BCM B2614: BCM B2614: BCM B2615: BCM B2614: BCM B2615: BCM B2619: BCM B2614: BCM B2614: BCM B2615: BCM B2614: BCM B2615: BCM B2614: BCM B2615: BCM B2616: BCM B2617: BCM RELAY OFF B2667: STRG LCK RELAY OFF B2676: BCM B2676:

FOU DIAGNOSIS INFORMATION -

Revision: 2009 March

< ECU DIAG	NOSIS INFORMATION >		NI KET STSTEWIJ
Priority		DTC	
	C1704: LOW PRESSURE FL		A
	C1705: LOW PRESSURE FR		
	C1706: LOW PRESSURE RR		
	 C1707: LOW PRESSURE RL 		В
	 C1708: [NO DATA] FL 		
	 C1709: [NO DATA] FR 		
	 C1710: [NO DATA] RR 		
	 C1711: [NO DATA] RL 		С
	 C1712: [CHECKSUM ERR] FL 		
	 C1713: [CHECKSUM ERR] FR 		
	 C1714: [CHECKSUM ERR] RR 		_
	 C1715: [CHECKSUM ERR] RL 		D
5	 C1716: [PRESSDATA ERR] FL 		
	 C1717: [PRESSDATA ERR] FR 		
	 C1718: [PRESSDATA ERR] RR 		E
	 C1719: [PRESSDATA ERR] RL 		L
	 C1720: [CODE ERR] FL 		
	 C1721: [CODE ERR] FR 		
	 C1722: [CODE ERR] RR 		F
	 C1723: [CODE ERR] RL 		
	C1724: [BATT VOLT LOW] FL		
	C1725: [BATT VOLT LOW] FR		
	C1726: [BATT VOLT LOW] RR		G

DTC In	dex
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NOTE:

The details of time display are as follows.

• CRNT: A malfunction is detected now.

• PAST: A malfunction was detected in the past.

• C1727: [BATT VOLT LOW] RL C1734: CONTROL UNIT B2621: INSIDE ANTENNA

 B2622: INSIDE ANTENNA B2626: OUTSIDE ANTENNA

 B2627: OUTSIDE ANTENNA B2628: OUTSIDE ANTENNA

IGN counter is displayed on Freeze Frame Data. For details of Freeze Frame Data, refer to BCS-18, "COM-MON ITEM : CONSULT-III Function (BCM - COMMON ITEM)".

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condi- tion	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page	N
No DTC is detected. further testing may be required.	_	_	_	_	_	Ν
U1000: CAN COMM	—	—		—	BCS-39	C
U1010: CONTROL UNIT (CAN)	—	—	—	_	BCS-40	
U0415: VEHICLE SPEED	×	—	×	_	BCS-41	
B2013: ID DISCORD BCM-S/L	×	×	×	_	<u>SEC-45</u>	P
B2014: CHAIN OF S/L-BCM	×	×	×	_	<u>SEC-46</u>	
B2192: ID DISCORD BCM-ECM	×	—		—	<u>SEC-35</u>	
B2193: CHAIN OF BCM-ECM	×	—	—	_	<u>SEC-37</u>	
B2195: ANTI-SCANNING	×	—	—	_	<u>SEC-38</u>	
B2196: DONGLE NG	×	—	—	—	<u>SEC-39</u>	

SEC-171

INFOID:000000005183600

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< ECU DIAGNOSIS INFORMATION >

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condi- tion	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2198: NATS ANTENNA AMP	×	_			<u>SEC-41</u>
B2553: IGNITION RELAY		×	×		PCS-78
B2555: STOP LAMP	_	×	×		<u>SEC-49</u>
B2556: PUSH-BTN IGN SW	_	×	×		<u>SEC-51</u>
B2557: VEHICLE SPEED	×	×	×		<u>SEC-53</u>
B2562: LOW VOLTAGE	—	×			BCS-42
B2601: SHIFT POSITION	×	×	×		<u>SEC-54</u>
B2602: SHIFT POSITION	×	×	×		<u>SEC-57</u>
B2603: SHIFT POSI STATUS	×	×	×		<u>SEC-60</u>
B2604: PNP/CLUTCH SW	×	×	×		<u>SEC-65</u>
B2605: PNP/CLUTCH SW	×	×	×		<u>SEC-68</u>
B2608: STARTER RELAY	×	×	×	—	<u>SEC-70</u>
B2609: S/L STATUS	×	×	×		<u>SEC-72</u>
B260B: STEERING LOCK UNIT	×	×	×		<u>SEC-75</u>
B260C: STEERING LOCK UNIT	—	×	×		<u>SEC-76</u>
B260D: STEERING LOCK UNIT	×	×	×		<u>SEC-77</u>
B260F: ENG STATE SIG LOST	×	×	×	—	<u>SEC-78</u>
B2612: S/L STATUS	×	×	×	—	<u>SEC-79</u>
B2614: BCM	—	×	×		PCS-80
B2615: BCM	—	×	×		PCS-83
B2616: BCM	—	×	×	—	PCS-86
B2618: BCM	—	×	×	—	PCS-89
B2619: BCM	×	×	×	—	<u>SEC-82</u>
B261A: PUSH-BTN IGN SW	_	×	×	_	PCS-90
B2621: INSIDE ANTENNA	_	×	_	_	<u>DLK-44</u>
B2622: INSIDE ANTENNA	—	×			<u>DLK-46</u>
B2626: OUTSIDE ANTENNA	_	×			<u>DLK-48</u>
B2627: OUTSIDE ANTENNA	—	×			<u>DLK-50</u>
B2628: OUTSIDE ANTENNA	_	×			<u>DLK-52</u>
B26E9: LOCK MALFUNCTION	_	×	× (Turn ON for 15 seconds)	_	<u>SEC-83</u>
B26EF: STRG LCK RELAY OFF	×	×	×	—	<u>SEC-84</u>
B26F0: STRG LCK RELAY ON	×	×	×	—	<u>SEC-86</u>
B26F1: IGN RELAY OFF	×	×	×	—	PCS-92
B26F2: IGN RELAY ON	×	×	×	—	PCS-95
B26F3: START CONT RLY ON	×	×	×	—	<u>SEC-87</u>
B26F4: START CONT RLY OFF	×	×	×	—	<u>SEC-88</u>
B26F5: STRG LCK STS SW	—	×	×	—	<u>SEC-90</u>
B26F6: BCM	—	×	×	—	PCS-98
B26F7: BCM	×	×	×	—	<u>SEC-93</u>
B26F8: BCM	—	×	×	—	<u>SEC-94</u>

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condi- tion	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page	A
B26FC: KEY REGISTRATION		×	×		<u>SEC-95</u>	-
C1704: LOW PRESSURE FL		_	_	×		С
C1705: LOW PRESSURE FR	_	_	_	×	N/T 40	C
C1706: LOW PRESSURE RR	_	_	_	×	<u>WT-16</u>	
C1707: LOW PRESSURE RL	_	_	_	×		D
C1708: [NO DATA] FL	_	_	_	×		-
C1709: [NO DATA] FR	_	_	_	×	-	_
C1710: [NO DATA] RR	_	_	_	×	<u>WT-18</u>	E
C1711: [NO DATA] RL	_	_	_	×		
C1712: [CHECKSUM ERR] FL		_	_	×		F
C1713: [CHECKSUM ERR] FR	_	_	_	×		
C1714: [CHECKSUM ERR] RR		_	_	×	<u>WT-21</u>	
C1715: [CHECKSUM ERR] RL		_	_	×		G
C1716: [PRESSDATA ERR] FL		_	_	×		-
C1717: [PRESSDATA ERR] FR	_	_	_	×		Н
C1718: [PRESSDATA ERR] RR	_	_	_	×	<u>WT-24</u>	
C1719: [PRESSDATA ERR] RL	_	—	_	×		
C1720: [CODE ERR] FL		—	_	×		
C1721: [CODE ERR] FR	_	_	_	×		
C1722: [CODE ERR] RR	_	_	_	×	<u>WT-26</u>	J
C1723: [CODE ERR] RL		—	_	×		
C1724: [BATT VOLT LOW] FL	_	_	_	×		
C1725: [BATT VOLT LOW] FR	_	_	_	×		SEC
C1726: [BATT VOLT LOW] RR	—	—	_	×	<u>WT-29</u>	
C1727: [BATT VOLT LOW] RL	—	—	_	×		I
C1729: VHCL SPEED SIG ERR	—	—	—	×	<u>WT-32</u>	
C1734: CONTROL UNIT	_	_	—	×	<u>WT-34</u>	-

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

Reference Value

INFOID:000000005183601

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	(Condition	Value/Status
MOTOR FAN REQ	Engine idle speed	Changes depending on engine coolant temperature, air conditioner operation status, vehicle speed, etc.	1/2/3/4
		A/C switch OFF	Off
AC COMP REQ	Engine running	A/C switch ON (Compressor is operating)	On
	Lighting switch OFF		Off
TAIL&CLR REQ	Lighting switch 1ST, 2ND, HI or	AUTO (Light is illuminated)	On
	Lighting switch OFF		Off
HL LO REQ	Lighting switch 2ND, HI or AUTO	D (Light is illuminated)	On
	Lighting switch OFF		Off
HL HI REQ	Lighting switch HI		On
	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
	Ignition switch ON	Front wiper switch INT	1LOW
FR WIP REQ		Front wiper switch LO	Low
		Front wiper switch HI	Hi
		Front wiper stop position	STOP P
WIP AUTO STOP	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 opera- tion	BLOCK
IGN RLY1 -REQ	Ignition switch OFF or ACC		Off
IGN KETT-KEQ	Ignition switch ON	On	
IGN RLY	Ignition switch OFF or ACC		Off
	Ignition switch ON	On	
PUSH SW	Release the push-button ignition	Off	
F 03H 3W	Press the push-button ignition s	On	
	Ignition switch ON	 Selector lever in any position other than P or N (CVT models) Release clutch pedal (M/T models) 	Off
INTER/NP SW	Ignition switch ON	 Selector lever in P or N position (CVT models) Depress clutch pedal (M/T mod- els) 	On
	Ignition switch ON		Off
ST RLY CONT	At engine cranking		On

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

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTÉM]

Monitor Item	C	Value/Status		
	Ignition switch ON	Off		
IHBT RLY -REQ	At engine cranking		On	
	Ignition switch ON		Off	
	At engine cranking		$INHI\:ON\toST\:ON$	
ST/INHI RLY		er control relay cannot be recognized by tc. when the starter relay is ON and the	UNKWN	
DETENT SW	Ignition switch ON Ignition swit			
	Release the selector lever with se NOTE: Fixed On for M/T models	On		
	None of the conditions below are	Off		
S/L RLY -REQ	 Open the driver door after the is seconds) Press the push-button ignition s ed 	On		
	Steering lock is activated	LOCK		
S/L STATE	Steering lock is deactivated	UNLOCK		
	[DTC: B210A] is detected	UNKWN		
OTRL REQ	Not operation		Off	
IOTE: This item is monitored only on he vehicle with the daytime unning light system.	Daytime running light system is o	On		
	Ignition switch OFF, ACC or engir	Open		
DIL P SW	Ignition switch ON	Close		
HOOD SW	NOTE: The item is indicated, but not mor	Off		
	Not operation		Off	
THFT HRN REQ	 Panic alarm is activated Horn is activated with VEHICLE TEM 	E SECURITY (THEFT WARNING) SYS-	On	
	Not operating		Off	
HORN CHIRP	Door locking with Intelligent Key (horn chirp mode)	On	

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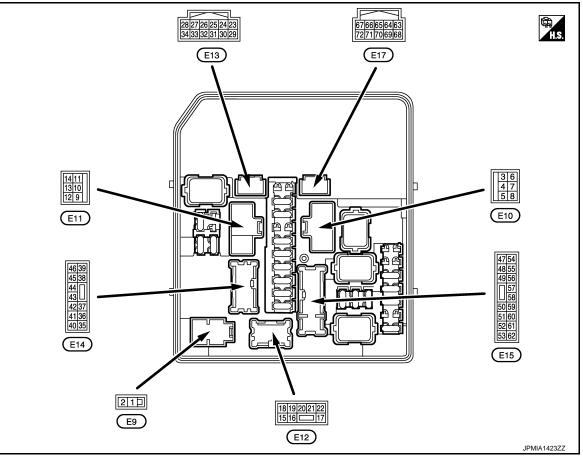
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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal NO.		Description			Value	
(Wire +	(Wire color) + _ Signal name		Input/ Output	Condition	(Approx.)	
1 (R)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage	
2 (G)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage	
3	Ground	Starter motor	Output	Ignition switch ON	0 V	
(BR)	Giouna	Starter motor	Output	At engine cranking	Battery voltage	
4 (P)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage	
5	Ground	Cooling fan relay-1 power supply	Output	Cooling fan OFF	0 V	
(LG)	Ground			Cooling fan operated	Battery voltage	
_		Cooling fan relay-2 power supply		Cooling fan OFF	0 V	
7 (Y)	Ground		Output	Cooling fan LO operated	9.0 V	
(.)		ponol oupply		Cooling fan HI operated	Battery voltage	
8 (V)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage	
9 (B/W)	Ground	Ground	_	Ignition switch ON	0 V	
				Cooling fan OFF	0 V	
10 (L)	Ground	Cooling fan motor ground	Output	Cooling fan LO operated	5.0 V	
~ /				Cooling fan HI operated	0 V	

		Description				Value	
(Wire +	color) –	Signal name	Input/ Output		Condition	(Approx.)	
13	Ground	Rear window defogger		Ignition switch	Rear window defogger switch OFF	0 V	
(W)	Ground	Real window delogger	Output	ON Rear window defogger switch ON		Battery voltage	
19 (B/W)	Ground	Ground	_	Ignition sw	vitch ON	0 V	
21 (W)	Ground	Front fog lamp (RH)	Output	Lighting switch	Front fog lamp switch OFF	0 V	
(**)				2ND	Front fog lamp switch ON	Battery voltage	
22 (V)	Ground	Front fog lamp (LH)	Output	Lighting switch	Front fog lamp switch OFF	0 V	
(•)				2ND	Front fog lamp switch ON	Battery voltage	
24	Ground	Oil pressure switch	Input	Ignition switch	Engine stopped	0 V	
(G)	Cround		mput	ON	Engine running	Battery voltage	
25				Ignition	Front wiper stop position	0 V	
(Y)	Ground	Front wiper auto stop	Input	switch ON	Any position other than front wiper stop position	Battery voltage	
26 (P)	Ground	CAN-L	Input/ Output		_	_	
27 (L)	Ground	CAN-H	Input/ Output	-		_	
28 ^{*1}	Ground	Daytime running light	Output –	Daytime ru	unning light deactivated	0 V	
(P)	Cround	relay-1 control	output	Daytime ru	unning light activated	Battery voltage	
30	Ground	Starter relay control	Output	At engine	cranking	0 V	
(SB)				Ignition sw	vitch ON	Battery voltage	
31	Ground	Fuel pump relay control	Output		mately 1 second after turn- gnition switch ON running	0 - 1.5 V	
(W)			1		ately 1 second or more after e ignition switch ON	Battery voltage	
				Ignition sw	vitch ON	Battery voltage	
33 (O)	Ground	Power generation com- mand signal	Output	40 % is set on "ACTIVE TEST", "AL- TERNATOR DUTY" of "ENGINE"		(V) 4 2 0 4 2 2 ms JPMIA0002GB 3.8 V	
					et on "ACTIVE TEST", "AL- OR DUTY" of "ENGINE"	(V) 6 2 0 F 2 0 F 4 2 0 F 4 2 0 F 7 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	

Terminal NO. (Wire color)		Description				Value								
(vvire +	color)	Signal name	Input/ Output		Condition	(Approx.)								
34				The horn is deactivated		Battery voltage								
(R)	Ground	Horn relay control	Output	The horn i	s activated	0 V								
36				Ignition	Lighting switch OFF	0 V								
(O)	Ground	Parking lamp (LH)	Output	switch ON	Lighting switch 1ST	Battery voltage								
37	0		0.1.1	Ignition	Lighting switch OFF	0 V								
(V)	Ground	Parking lamp (RH)	Output	switch ON	Lighting switch 1ST	Battery voltage								
38		Tail lamp (RH) & illumi-	Q () (Ignition	Lighting switch OFF	0 V								
(G)	Ground	nations	Output	switch ON	Lighting switch 1ST	Battery voltage								
39	One und	Front win on LU	Outrut	Ignition	Front wiper switch OFF	0 V								
(V)	Ground	Front wiper HI	Output	switch ON	Front wiper switch HI	Battery voltage								
40				``	vitch OFF n a few seconds after turn- n switch OFF)	Battery voltage								
(R)	Ground	ECM relay control	• Ignit (For		switch ON switch OFF ew seconds after turning ig- witch OFF)	0 - 1.5 V								
41		Tail lamp (LH) & license		Ignition	Lighting switch OFF	0 V								
(SB)	Ground	plate lamps	Output	switch ON	Lighting switch 1ST	Battery voltage								
				Ignition sw	vitch ACC or ON	0 V								
42 (W)	Ground	Steering lock unit pow- er supply		ring lock unit pow-		Battery voltage								
(**)				Ignition switch LOCK	Press the push-button ig- nition switch	Battery voltage								
43		EOM relation	ECM relay power sup	ECM relay power sup-	ECM relay power sup	FCM relay power sup-	ECM rolay power sup-		ECM rolow power our	ECM rolow power our		Ignition switch OFF (More than a few seconds after turn- ing ignition switch OFF)		0 V
(G)	Ground	ply	Output	 Ignition (For a feed) 	switch ON switch OFF ew seconds after turning ig- witch OFF)	Battery voltage								
44		ECM relay power sup-		Ignition switch OFF (More than a few seconds after turn- ing ignition switch OFF) • Ignition switch ON • Ignition switch OFF (For a few seconds after turning ig- nition switch OFF)		0 V								
(P)	Ground	ply	Output			Battery voltage								
45 (Y)	Ground	TCM power supply	Output	Ignition switch OFF		Battery voltage								
46	Orecord		Outrast	Ignition	Front wiper switch OFF	0 V								
(O)	Ground	Front wiper LO	Output	switch ON	Front wiper switch LO	Battery voltage								

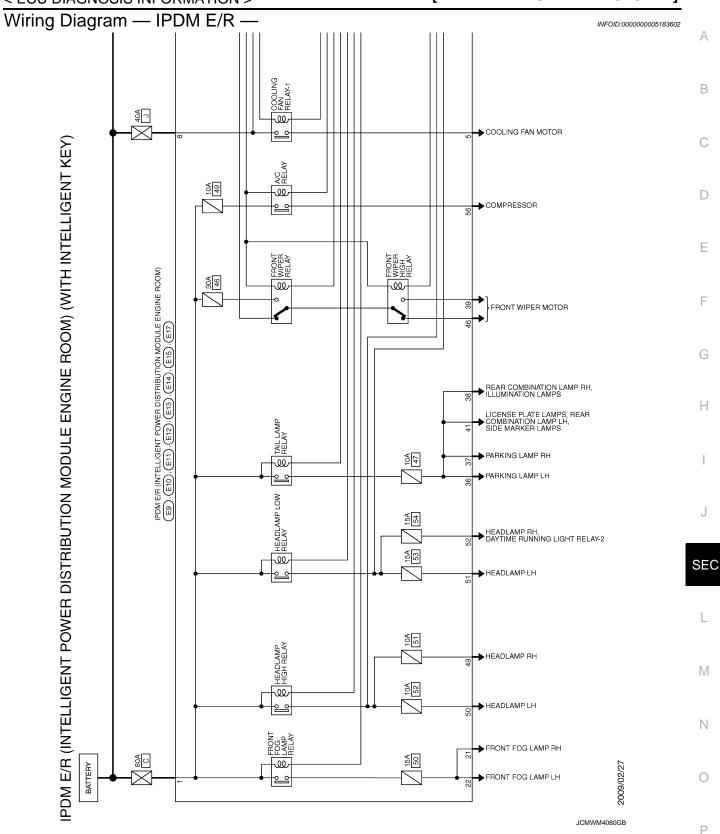
	minal NO. Description					Value	
+	-	Signal name	Input/ Output		Condition	(Approx.)	
		Transmission range				er in any position other than hition switch ON)	0 V
47 (BR) Ground	switch ^{*2}	Input	Select leve ON)	er P or N (Ignition switch	Battery voltage		
		Clutch interlockk		Release th	ne clutch pedal	0 V	
		switch ^{*3}		Depress th	ne clutch pedal	Battery voltage	
				Ignition	Lighting switch OFF	0 V	
49 (W)	Ground	Headlamp HI (RH)	Output	switch ON	Lighting switch HILighting switch PASS	Battery voltage	
				Daytime ru	unning light activated ^{*1}	7.0 V	
				Ignition	Lighting switch OFF	0 V	
50 (GR)	Ground	Headlamp HI (LH)	Output	switch ON	Lighting switch HILighting switch PASS	Battery voltage	
				Daytime ru	unning light activated ^{*1}	7.0 V	
51				Ignition	Lighting switch OFF	0 V	
(R)	Ground	Headlamp LO (LH)	Output	switch ON	Lighting switch 2ND	Battery voltage	
52		Headlamp LO (RH)		Ignition	Lighting switch OFF	0 V	
(P)	Ground	Daytime running light relay-2 ^{*1}	Output	switch ON	Lighting switch 2ND	Battery voltage	
54		Throttle control motor	Output	(More than a few seconds after ing ignition switch OFF)	Ignition switch OFF (More than a few seconds after turn- ing ignition switch OFF)		0 V
(GR)	Ground	relay power supply		(For a fe	switch ON switch OFF ew seconds after turning ig- vitch OFF)	Battery voltage	
55		Fuel pump power sup-			ately 1 second or more than ng the ignition switch ON	0 V	
(P)	Ground	ply	Output		mately 1 second after turn- gnition switch ON running	Battery voltage	
					A/C switch OFF	0 V	
56 (SB)	Ground	A/C relay power supply	Output	Engine running	A/C switch ON (A/C compressor is oper- ating)	Battery voltage	
57 (G)	Ground	Throttle control motor relay control	Output	Ignition switch ON \rightarrow OFF		0 - 1.0 V ↓ Battery voltage ↓ 0 V	
				Ignition switch ON		0 - 1.0 V	
58		Ignition relay power		Ignition sw	vitch OFF	0 V	
(R) ^{*2} (Y) ^{*3}	Ground	supply	Output	Ignition sw		Battery voltage	
59	Ground	Ignition relay power	Output	Ignition sw	vitch OFF	0 V	
(Y)		supply	Carpar	Ignition sw	vitch ON	Battery voltage	
60	Ground	Ignition relay power	Output	Ignition sw	vitch OFF	0 V	
(V) Ground	supply	Carpar	Ignition sw	vitch ON	Battery voltage		

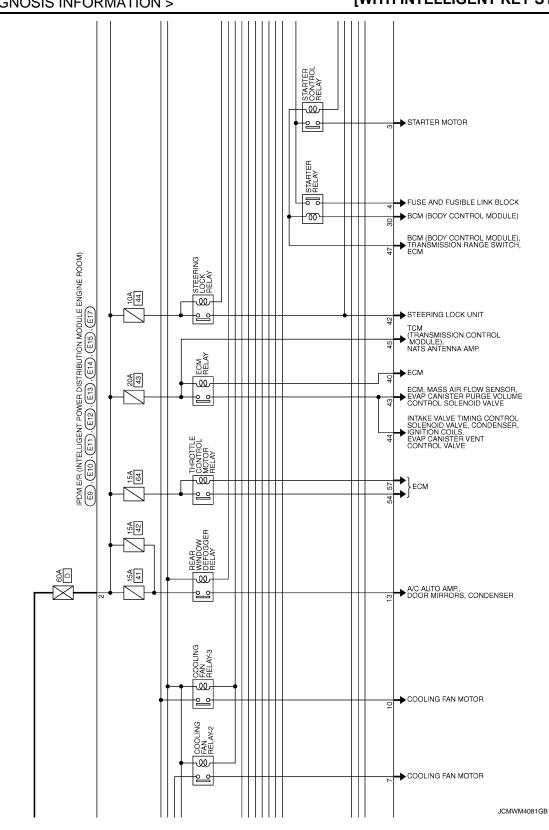
Termina		Description				Value			
(Wire) +	color)	Signal name	Input/ Output		Condition	(Approx.)			
61	Ground	Ignition relay power	Output	Ignition sw	vitch OFF	0 V			
(W)	Ground	supply	Output	Ignition sw	vitch ON	Battery voltage			
62	Ground	Ignition relay power	Output	Ignition sw	vitch OFF	0 V			
(L)	Giouna	supply	Output	Ignition sw	vitch ON	Battery voltage			
64 ^{*2}		CVT shift selector (Detention switch)		Ignition t switch ON	Select lever P	0 V			
64 - (R)			Input		Select lever in any posi- tion other than P	Battery voltage			
65	Cround	Steering lock unit con- dition-1	Steering lock unit con-	Steering lock unit con-	Steering lock unit con-	Input	Steering lo	ock is activated	0 V
(Y)	Ground		Input	Steering lock is deactivated		Battery voltage			
66		Duch hutten ignition	Push-button ignition		Press the push-button ignition switch		0 V		
(L)	Ground	switch	Input	Release th switch	ne push-button ignition	Battery voltage			
68	Crownd	Steering lock unit con-	unit con- Steering lock is activated		Battery voltage				
(W)	Ground	dition-2	Input	Steering lo	ock is deactivated	0 V			
69	Ground	Ignition rolay manitar	Input	Ignition switch OFF or ACC		Battery voltage			
(O)	Giouna	Ignition relay monitor Inpu		Ignition switch ON		0 V			

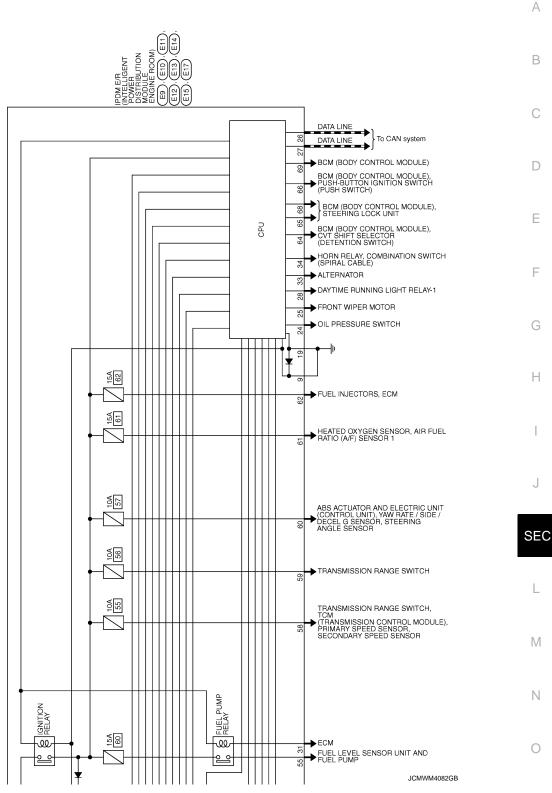
*1: With daytime running light system

*2: CVT models

*3: M/T models





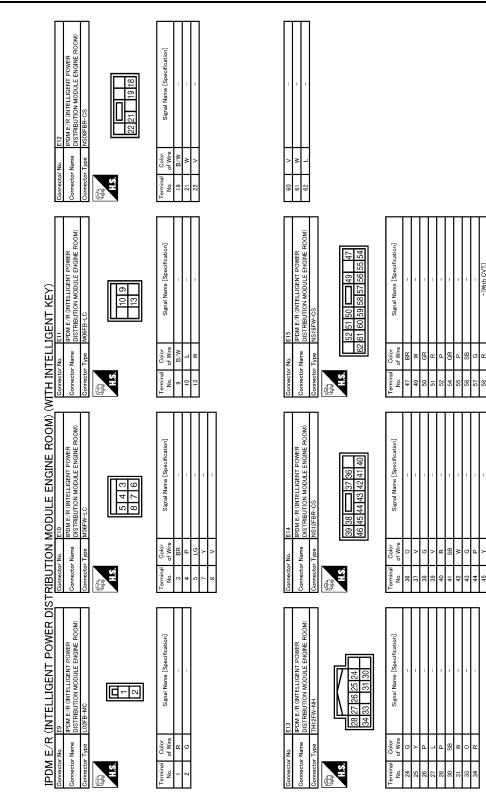


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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]



JCMWM4083GB

В С D Ε PDM E/R (intelligent power distribution module engine room) (with intelligent KeV) F Н J SEC L - POWER Signal Name [Specifi Μ AODULE PDM E/R (INT Ν Name Ο JCMWM4084GB Ρ INFOID:000000005183603

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

SEC-185

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Control part	Fail-safe operation	
Cooling fan	 The cooling fan relay-1, the cooling fan relay-2 and the cooling fan relay-3 turn ON when the ignition switch is turned ON (Cooling fan HI operation) The cooling fan relay-1, the cooling fan relay-2 and the cooling fan relay-3 turn OFF when the ignition switch is turned OFF 	
A/C compressor	A/C relay OFF	
Alternator	Outputs the power generation command signal (PWM signal) 0%	

If No CAN Communication Is Available With BCM

Control part	Fail-safe 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 Daytime running light relay OFF[*]
 Parking lamps Side marker lamps License plate lamps Illuminations Tail 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 wipe motor is operating.
Front fog lamps	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
Steering lock unit	Steering lock relay OFF

*: With daytime running light system

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.

Voltage judgment			Operation	
Ignition relay contact side	gnition relay contact side Ignition relay excitation coil side			
ON	ON	Ignition relay ON normal	_	
OFF	OFF	Ignition relay OFF normal	_	
ON	OFF	Ignition relay ON stuck	 Detects DTC "B2098: IGN RELAY ON" Turns ON the tail lamp relay for 10 minutes 	
OFF	ON	Ignition relay OFF stuck	Detects DTC "B2099: IGN RELAY OFF"	

FRONT WIPER CONTROL

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

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

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

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTÉM]

Ignition switch	Front wiper switch	Front wiper stop position signal
ON	OFF	The front wiper stop position signal (stop position) cannot be input for 10 seconds.
ON	ON	The front wiper stop position signal does not change for 10 seconds.
NOTE: This operation status can be confi "WIP PROT" while the wiper is stop		or" that displays "BLOCK" for the item
STARTER MOTOR PROTECTION IPDM E/R turns OFF the starter contractive for 90 seconds.		r when the starter control relay remains
DTC Index		INFOID:000000005183604
ON.	now. ed in the past. (Freeze Frame data). d now.	ormal condition whenever IGN OFF \rightarrow it is over 39.
		×: Applicable
CONSULT display	Fail-safe	Refer to
No DTC is detected. further testing may be required.	_	
		D00 10

may be required.			
U1000: CAN COMM CIRCUIT	×	PCS-16	_
B2098: IGN RELAY ON	×	PCS-17	J
B2099: IGN RELAY OFF	—	PCS-18	_
B2108: STRG LCK RELAY ON	—	<u>SEC-96</u>	SEC
B2109: STRG LCK RELAY OFF	_	<u>SEC-97</u>	
B210A: STRG LCK STATE SW	_	<u>SEC-98</u>	
B210B: START CONT RLY ON	_	<u>SEC-101</u>	L
B210C: START CONT RLY OFF	_	<u>SEC-102</u>	
B210D: STARTER RELAY ON	_	<u>SEC-103</u>	M
B210E: STARTER RELAY OFF	_	<u>SEC-104</u>	IVI
B210F: INTRLCK/PNP SW ON	-	<u>SEC-106</u>	
B2110: INTRLCK/PNP SW OFF	—	<u>SEC-108</u>	N

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ENGINE DOES NOT START WHEN INTELLIGENT KEY IS INSIDE OF VEHICLE < SYMPTOM DIAGNOSIS > [WITH INTELLIGENT KEY SYSTEM]

SYMPTOM DIAGNOSIS

ENGINE DOES NOT START WHEN INTELLIGENT KEY IS INSIDE OF VEHICLE

Description

INFOID:000000005037742

Engine does not start when push-button ignition switch is pressed while carrying Intelligent Key. **NOTE:**

- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- The engine start function, door lock function, power distribution system, and NATS-IVIS/NVIS in the Intelligent Key system are closely related to each other regarding control. The vehicle security function can operate only when the door lock and power distribution system are operating normally.

Conditions of Vehicle (Operating Conditions)

- "ENGINE START BY I-KEY" in "WORK SUPPORT" is ON when setting on CONSULT-III.
- Intelligent Key is not inserted in key slot.
- One or more of Intelligent Keys with registered Intelligent Key ID is in the vehicle.

Diagnosis Procedure

INFOID:000000005037743

1.PERFORM WORK SUPPORT

Perform "INSIDE ANT DIAGNOSIS" on Work Support in "INTELLIGENT KEY". Refer to <u>SEC-25, "INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY)"</u>.

>> GO TO 2.

2. PERFORM SELF-DIAGNOSIS RESULT

Perform Self-Diagnosis Result in "BCM", and check whether or not DTC of inside key antenna is detected. <u>Is DTC detected?</u>

YES >> Refer to <u>DLK-44, "DTC Logic"</u> (instrument center) or <u>DLK-46, "DTC Logic"</u> (luggage room). NO >> GO TO 3.

3.CHECK PUSH-BUTTON IGNITION SWITCH

Check push-button ignition switch.

Refer to PCS-100, "Component Function Check".

Is the operation normal?

YES >> GO TO 4.

NO >> Repair or replace malfunctioning parts.

4.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection normal?

YES >> Check intermittent incident. Refer to <u>GI-34, "Intermittent Incident"</u>.

NO >> GO TO 1.

STEERING DOES NOT LOCK

STEERING DOES NOT LOCK А Description INFOID:000000005037744 Steering does not lock when door is open while ignition switch is OFF. В NOTE: Before performing the diagnosis, check "Work Flow". Refer to SEC-6, "Work Flow". **Diagnosis** Procedure INFOID:000000005037745 С 1.CHECK DOOR SWITCH D Check door switch. Refer to DLK-55, "Component Function Check". Is the inspection normal? Ε YES >> GO TO 2. NO >> Repair or replace malfunctioning parts. 2. CONFIRM THE OPERATION F Confirm the operation again. Is the inspection normal? YES >> Check intermittent incident. Refer to GI-34, "Intermittent Incident". NO >> GO TO 1.

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< SYMPTOM DIAGNOSIS >

SECURITY INDICATOR LAMP DOES NOT TURN ON OR BLINK IM DIAGNOSIS > [WITH INTELLIGENT KEY SYSTEM]

< SYMPTOM DIAGNOSIS >

SECURITY INDICATOR LAMP DOES NOT TURN ON OR BLINK

Description

INFOID:000000005037746

Security indicator lamp does not blink when ignition switch is in a position other than ON **NOTE:**

- Before performing the diagnosis, check "Work Flow". Refer to <u>SEC-6, "Work Flow"</u>.
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.

Conditions of Vehicle (Operating Conditions) Ignition switch is not in the ON position.

Diagnosis Procedure

INFOID:000000005037747

1.CHECK SECURITY INDICATOR LAMP

Check security indicator lamp.

Refer to SEC-113, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.confirm the operation

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to <u>GI-34, "Intermittent Incident"</u>.

NO >> GO TO 1.

VEHICLE SECURITY SYSTEM CANNOT BE SET < SYMPTOM DIAGNOSIS > [WITH INTELLIGENT KEY SYSTEM]
VEHICLE SECURITY SYSTEM CANNOT BE SET
INTELLIGENT KEY
INTELLIGENT KEY : Description
Armed phase is not activated when door is locked using Intelligent Key.
NOTE: Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
CONDITION OF VEHICLE (OPERATING CONDITION) Confirm the setting of "SECURITY ALARM SET" in "WORK SUPPORT" in "THEFT ALM" using CONSULT-III.
INTELLIGENT KEY : Diagnosis Procedure
1. CHECK INTELLIGENT KEY SYSTEM (REMOTE KEYLESS ENTRY FUNCTION)
Lock/unlock door with Intelligent Key. Refer to <u>DLK-25, "REMOTE KEYLESS ENTRY FUNCTION : System Description"</u> . Is the inspection result normal?
YES >> GO TO 2. NO >> Check Intelligent Key system (remote keyless entry function). Refer to <u>DLK-148. "Diagnosis Pro-</u> <u>cedure"</u> .
2.CONFIRM THE OPERATION
Confirm the operation again.
<u>Is the result normal?</u> YES >> Check intermittent incident. Refer to <u>GI-34. "Intermittent Incident"</u> . NO >> GO TO 1. DOOR REQUEST SWITCH
DOOR REQUEST SWITCH : Description
Armed phase is not activated when door is locked using door request switch.
Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
CONDITION OF VEHICLE (OPERATING CONDITION) Confirm the setting of "SECURITY ALARM SET" in "WORK SUPPORT" in "THEFT ALM" using CONSULT-III.
DOOR REQUEST SWITCH : Diagnosis Procedure
1. CHECK INTELLIGENT KEY SYSTEM (DOOR LOCK FUNCTION)
Lock/unlock door with door request switch. Refer to <u>DLK-20, "DOOR LOCK FUNCTION : System Description"</u> .
Is the inspection result normal?
 YES >> GO TO 2. NO >> Check Intelligent Key system (door lock function). Refer to <u>DLK-145, "ALL DOOR : Diagnosis Procedure"</u>.
2.CONFIRM THE OPERATION
Confirm the operation again.
Is the result normal?
YES >> Check intermittent incident. Refer to <u>GI-34, "Intermittent Incident"</u> . NO >> GO TO 1. DOOR KEY CYLINDER

VEHICLE SECURITY SYSTEM CANNOT BE SET

< SYMPTOM DIAGNOSIS >

DOOR KEY CYLINDER : Description

Armed phase is not activated when door is locked using mechanical key. **NOTE:**

Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.

CONDITION OF VEHICLE (OPERATING CONDITION) Confirm the setting of "SECURITY ALARM SET" in "WORK SUPPORT" in "THEFT ALM" using CONSULT-III.

DOOR KEY CYLINDER : Diagnosis Procedure

INFOID:000000005154022

INFOID:000000005154021

[WITH INTELLIGENT KEY SYSTEM]

1. CHECK POWER DOOR LOCK SYSTEM

Lock/unlock door with mechanical key. Refer to DLK-13, "System Description".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check power door lock system. Refer to <u>DLK-144, "Diagnosis Procedure"</u>.

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-34, "Intermittent Incident".

NO >> GO TO 1.

VEHICLE SECURITY ALARM DOES NOT ACTIVATE

<pre>< SYMPTOM DIAGNOSIS ></pre>	[WITH INTELLIGENT KEY SYSTEM]
VEHICLE SECURITY ALARM DOES NOT ACT	IVATE
Description	INF0ID:00000005037752
Alarm does not operate when alarm operating condition is satisfied. NOTE: Check that vehicle is under the condition shown in "Conditions of ve each symptom.	hicle" before starting diagnosis, and check
CONDITIONS OF VEHICLE (OPERATING CONDITIONS) "SECURITY ALARM SET" in "WORK SUPPORT" of "THEFT ALM"	s ON when setting on CONSULT-III.
Diagnosis Procedure	INFOID:00000005037753
1.CHECK DOOR SWITCH	
Check door switch. Refer to <u>DLK-55, "Component Function Check"</u> . Is the inspection result normal?	
YES >> GO TO 2. NO >> Replace the malfunctioning door switch	
2.CHECK HEADLAMP FUNCTION	
Check headlamp function. Refer to <u>SEC-117, "Component Function Check"</u> .	
Is the inspection result normal? YES >> GO TO 3.	
NO >> Repair or replace the malfunctioning parts. 3.CHECK HORN FUNCTION	
Check horn function. Refer to <u>SEC-115</u> , "Component Function Check". <u>Is the inspection result normal?</u> YES >> GO TO 4.	
NO >> Repair or replace the malfunctioning parts. 4.CONFIRM THE OPERATION	
Confirm the operation again. <u>Is the result normal?</u> YES >> Check intermittent incident. Refer to <u>GI-34</u> , "Intermittent	: Incident".
NO >> GO TO 1.	

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< PRECAUTION > PRECAUTION PRECAUTIONS

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

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

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the "SRS AIR BAG".
- 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 Air Bag Diagnosis Sensor Unit or other Air Bag 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:000000005116333

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-III 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

1. Connect both battery cables. **NOTE:**

Supply power using jumper cables if battery is discharged.

- 2. 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.
- 4. Perform the necessary repair operation.

PRECAUTIONS

< PRECAUTION >

[WITH INTELLIGENT KEY SYSTEM]

- 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 A wheel will lock when the push-button ignition switch is turned to LOCK position.)
- 6. Perform self-diagnosis check of all control units using CONSULT-III.

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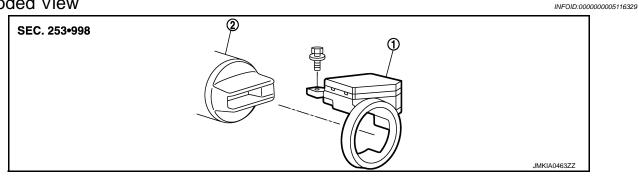
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REMOVAL AND INSTALLATION NATS ANTENNA AMP.

Exploded View

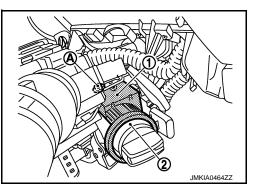


- 1. NATS antenna amp.
- 2. Steering lock assembly

Removal and Installation

REMOVAL

- 1. Remove the steering column cover. Refer to <u>IP-13, "Removal and Installation"</u>.
- 2. Remove the NATS antenna amp. mounting screw (A), and then remove NATS antenna amp. (1) from steering lock assembly (2).



INFOID:000000005116330

INSTALLATION Install in the reverse order of removal.

[WITHOUT INTELLIGENT KEY SYSTEM]

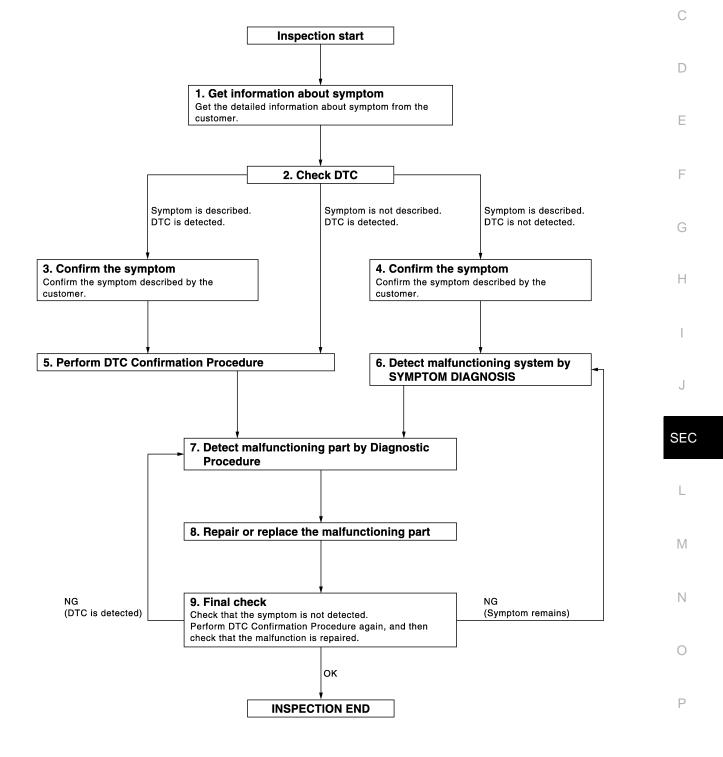
BASIC INSPECTION DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000005038239

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OVERALL SEQUENCE



DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

1.GET INFORMATION ABOUT 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

- 1. Check DTC for BCM.
- 2. Perform the following procedure if DTC is displayed.
- Erase DTC.
- Study the relationship between the cause detected by DTC and the symptom described by the customer.
- 3. Check related service bulletins for information.

Is any symptom described and any DTC detected?

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

3.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

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

>> GO TO 5.

4.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer. Connect CONSULT-III to the vehicle in "DATA MONITOR " mode and check real-time diagnosis results. Verify relation 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. If two or more DTCs are detected, refer to <u>SEC-264</u>, "<u>DTC Inspection Priority Chart</u>" (BCM) and determine trouble diagnosis order.

Is DTC detected?

YES >> GO TO 7.

NO >> Refer to <u>GI-34, "Intermittent Incident"</u>.

6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM DIAGNOSIS

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

>> GO TO 7.

7. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

>> GO TO 8.

$\mathbf{8}$. REPAIR OR REPLACE THE MALFUNCTIONING PART

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

SEC-198

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

>> GO TO 9.	
9.FINAL CHECK	А
When DTC was detected in step 9, perform DTC Confirmation Procedure or Component Function Check again, and then check that the malfunctions have been fully repaired. When symptom was described by the customer, refer to the confirmed symptom in step 3 or 4, and check that the symptom is not detected.	В
Does the symptom reappear?	С
YES (DTC is detected)>>GO TO 7. YES (Symptom remains)>>GO TO 6. NO >> INSPECTION END	C
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INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

INSPECTION AND ADJUSTMENT

ECM RECOMMUNICATING FUNCTION

ECM RECOMMUNICATING FUNCTION : Description

INFOID:000000005116335

Performing the following procedure can automatically activate recommunication of ECM and BCM, but only when the ECM is replaced with a new one*.

*: New one means a virgin ECM that is never energized on-board.

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

NOTE:

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

ECM RECOMMUNICATING FUNCTION : Special Repair Requirement

INFOID:000000005116336

1.PERFORM ECM RECOMMUNICATING FUNCTION

1. Install ECM.

- Insert the registered ignition key* into key cylinder, turn ignition switch to "ON".
 *: To perform this step, use the key that is used before performing ECM replacement.
- 3. Maintain ignition switch in the "ON" position for 5 seconds or more.
- 4. Turn ignition switch to "OFF".
- 5. Start engine.

Can engine be started?

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

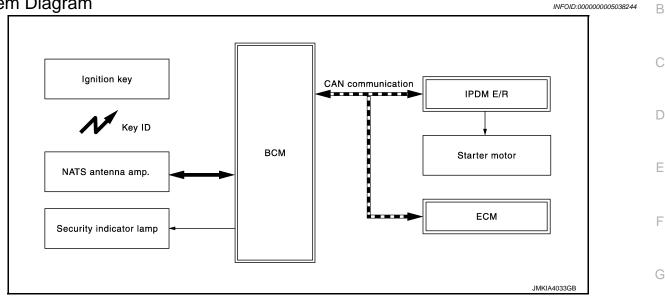
NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

[WITHOUT INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION > SYSTEM DESCRIPTION

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

System Diagram



System Description

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SYSTEM DESCRIPTION

NVIS (Nissan Vehicle Immobilizer System-NATS) has the following immobilizer functions:

- Engine immobilizer shows high anti-theft performance to prevent engine start by other than the owner.
- Only a key with key ID registered in BCM and ECM can start engine, and shows high anti-theft performance to prevent key from being copied or stolen.
- If system detects malfunction, security indicator lamp illuminate when ignition switch is turned to ON position.
- If the owner requires, ignition key ID can be registered for up to 5 keys.
- During trouble diagnosis or when the following parts have been replaced, and if ignition key is added, registration* is required.

*: All keys kept by the owner of the vehicle should be registered with ignition key.

- ECM
- BCM
- Ignition key
- NVIS(NATS) trouble diagnosis, system initialization and additional registration of other Ignition key IDs must be carried out using CONSULT-III hardware and SECURITY CARD. When NVIS(NATS) initialization has been completed, the ID of the inserted ignition key or ignition key IDs can be carried out.
- Possible symptom of NVIS(NATS) malfunction is "Engine cannot start". The engine can be started with the NVIS(NATS). Identify the possible causes according to "Work Flow". Refer to <u>SEC-197</u>, "Work Flow".
- If ECM other than Genuine NISSAN is installed, the engine cannot be started. For ECM replacement procedure, refer to <u>EC-15</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT</u> : <u>Special Repair</u> <u>Requirement</u>".

PRECAUTIONS FOR KEY REGISTRATION

- The key registration is a procedure that erases the current NVIS(NATS) ID once, and then reregisters a new ID. Therefore the registered ignition key is necessary for this procedure. Before starting the registration
 P
- NVIS(NATS) ID registration is the procedure that registers the ID stored into the transponder (integrated in ignition key) to BCM.

SECURITY INDICATOR LAMP

- Warns that the vehicle is equipped with NVIS(NATS).
- Security indicator lamp always blinks, when the ignition switch is in any position except the ON position.

SEC-201

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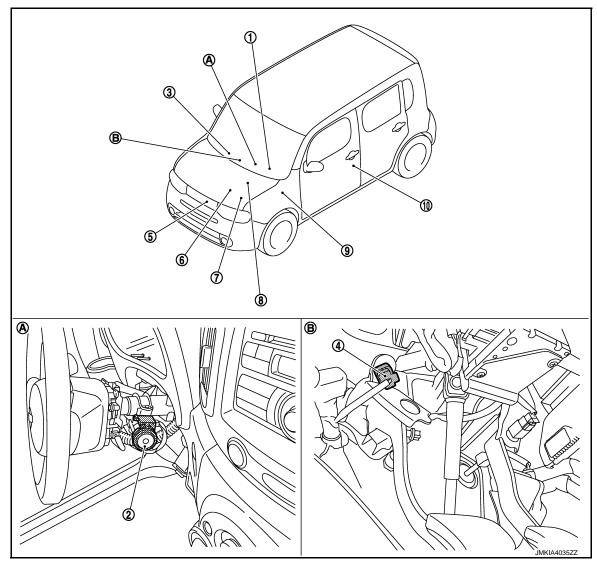
< SYSTEM DESCRIPTION >

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS [WITHOUT INTELLIGENT KEY SYSTEM]

• Security indicator lamp turns OFF, when the ignition switch is in ON position.

Component Parts Location

INFOID:000000005038246



- 1. Security indicator lamp (combination meter M34)
- Clutch interlock switch E113 4. (with M/T)
- IPDM E/R 7. E10, E11, E12, E13, E14, E15
- 10. Front door switch (driver side) B34
- Behind steering column cover Α.

Component Description

- NATS antenna amp. M26 2.
- Horn E50, E51 5.
- ECM E16 8.
- Β. Behind instrument lower panel LH
- Remote keyless entry tuner M61 3.
- Transmission range switch F21 6. (with CVT)
- BCM 9. M65, M66, M67

INFOID:000000005038247

Component	Reference
BCM	<u>BCS-87</u>
NATS antenna amp.	<u>SEC-217</u>
Security indicator lamp	<u>SEC-228</u>

SEC-202

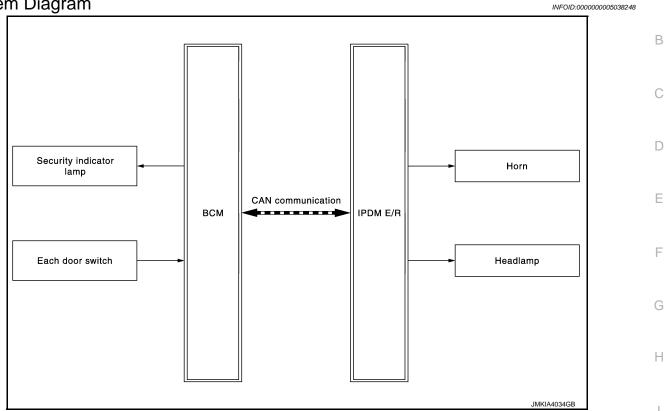
VEHICLE SECURITY SYSTEM

< SYSTEM DESCRIPTION >

VEHICLE SECURITY SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

System Diagram



System Description

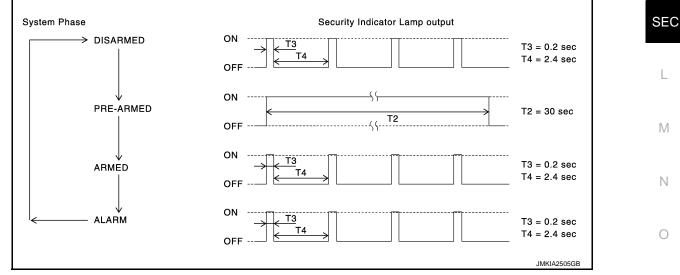
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OPERATION FLOW



SETTING THE VEHICLE SECURITY SYSTEM

Initial Condition

• Ignition switch is in OFF position.

Disarmed Phase

• When any door is open, the vehicle security system is set in the disarmed phase on the assumption that the owner is inside or near the vehicle.

SEC-203

VEHICLE SECURITY SYSTEM

< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

 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. (Security indicator lamp illuminates.)

- 1. BCM receives LOCK signal from door key cylinder switch, door lock and unlock switch or keyfob, after all doors are closed.
- 2. All doors are closed after all doors are locked by ignition key or door lock and unlock switch.

CANCELING THE ARMED PHASE VEHICLE SECURITY SYSTEM

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

- 1. Unlock all doors ignition key, door lock and unlock switch or keyfob.
- 2. Turn ignition switch "ON" position.

CANCELING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM

When one of the following operations is performed, the alarm operation is canceled.

- 1. Unlock all doors with the keyfob.
- 2. Turn ignition switch "ON" position.

ACTIVATING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM

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

- 1. Any door is opened during armed phase.
- 2. Disconnecting and connecting the battery connector before canceling armed phase.

PANIC ALARM OPERATION

When BCM receives panic alarm signal from keyfob, 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 (HI) and horn. The headlamp blinks and the horn sounds intermittently.

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

VEHICLE SECURITY SYSTEM

< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Component Parts Location

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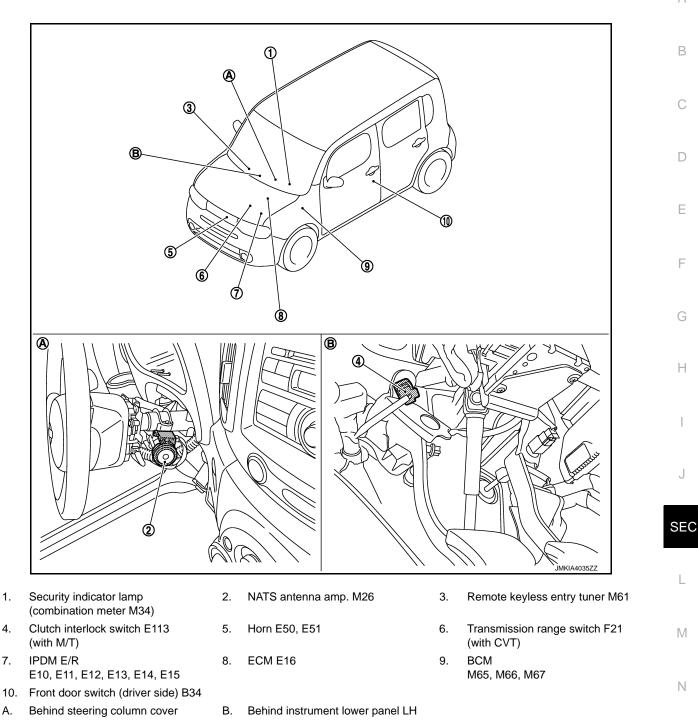
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Component Description

Component	Reference	
BCM	BCS-87	
Security indicator lamp	<u>SEC-228</u>	
Door switch	<u>DLK-242</u>	
Horn	<u>SEC-230</u>	
Headlamp	<u>SEC-232</u>	

INFOID:000000005038251

DIAGNOSIS SYSTEM (BCM) COMMON ITEM

COMMON ITEM : CONSULT-III Function (BCM - COMMON ITEM)

INFOID:000000005158148

APPLICATION ITEM

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

Diagnosis mode	Function Description		
Work Support	Changes the setting for each system function.		
Self Diagnostic Result	Displays the diagnosis results judged by BCM.		
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM. Refer to CONSULT-III opera- tion manual.		
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	Read and save the vehicle specification.Write the vehicle specification when replacing BCM.		

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 control	INT LAMP	×	×	×
Remote keyless entry system	MULTI REMOTE ENT	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER		×	×
Automatic air conditionerManual air conditioner	AIR CONDITONER		×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
NVIS - NATS	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	×
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	TPMS (AIR PRESSURE MONITOR)	×	×	×
Panic alarm system	PANIC ALARM			×

IMMU

< SYSTEM DESCRIPTION >

IMMU : CONSULT-III Function (BCM - IMMU)

DATA MONITOR

Monitor item	Content	В
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.	
KEY ON SW	Indicates [ON/OFF] condition of key switch.	С

ACTIVE TEST

Test item	Description	D
THEFT IND	This test is able to check security indicator lamp operation [ON/OFF].	

THEFT ALM

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

DATA MONITOR

Monitor Item	Condition	
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.	G
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.	
KEY ON SW	Indicates [ON/OFF] condition of key switch.	Н
KEYLESS LOCK	Indicates [ON/OFF] condition of lock signal from keyfob.	
KEYLESS UNLOCK	Indicates [ON/OFF] condition of unlock signal from keyfob.	
TRUNK OPNR SW	NOTE: The item is indicated, but not monitored.	
TRNK OPNR MNTR	NOTE: The item is indicated, but not monitored.	J
HOOD SW	NOTE: The item is indicated, but not monitored.	
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch (driver side).	SEC
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch (passenger side).	
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.	
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.	L
BACK DOOR SW	Indicates [ON/OFF] condition of back door switch.	
KEY CYL LK-SW	Indicates [ON/OFF] condition of door key cylinder switch.	M
KEY CYL UN-SW	Indicates [ON/OFF] condition of door key cylinder switch.	
CDL LOCK SW	Indicates [ON/OFF] condition of door lock and unlock switch.	N
CDL UNLOCK SW	Indicates [ON/OFF] condition of door lock and unlock switch.	— N
TRANSPONDER	Indicates key ID verification results by [ON/OFF].	
INTELLI KEY	NOTE: The item is indicated, but not monitored.	0
LOCK STATUS	NOTE: The item is indicated, but not monitored.	P
AUTO RELOCK	NOTE: The item is indicated, but not monitored.	

WORK SUPPORT

Revision: 2009 March

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< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (BCM)

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

ACTIVE TEST

Test Item	Description	
THEFT IND	This test is able to check security indicator lamp operation. Security indicator lamp will be turned on when "ON" on CONSULT-III screen is touched.	
VEHICLE SECURITY HORN	This test is able to check horn operation. Horn will be activated for 0.5 seconds after "ON" CONSULT-III screen is touched.	
HEADLAMP (HI)	This test is able to check headlamp (HI) operation. Headlamps (HI) will be activated for 0.5 seconds after "ON" on CONSULT-III screen is touched.	
FLASHER	This test is able to check hazard warning lamp operation. Hazard warning lamps will be activated after "LH" or "RH" on CONSULT-III screen is touched.	

PANIC ALARM

PANIC ALARM : CONSULT-III Function (BCM - PANIC ALARM)

INFOID:000000005149638

ACTIVE TEST

Test item Description	
VEHICLE SECURITY HORN This test is able to check horn operation. Horn is activated for 0.5 seconds aft on CONSULT-III screen touched.	
HEAD LAMP (HI) This test is able to check headlamp (HI) operation. Headlamps (HI) will be a ter "ON" on CONSULT-III screen touched.	

DTC/CIRCUIT DIAGNOSIS P1610 LOCK MODE

Description

ECM forcibly switches to the mode that inhibits engine start, when engine start operation is performed 5 times or more while communication between ECM and BCM is not normal, and when engine start operation is performed 5 times or more by unregistered ignition key.

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1610	LOCK MODE	 When ECM detects any of the following 2 states Ignition switch ON 5 times or more during communication between ECM and BCM is malfunctioning Ignition switch ON by unregistered ignition key 5 times or more 	_
	IRMATION PRO	DCEDURE	
1.PERFOR	M DTC CONFIRM	MATION PROCEDURE	
	nition switch ON. Self diagnosis res	sult" with CONSULT-III.	
s DTC dete	-		
	Refer to SEC-209 INSPECTION EN	<u>), "Diagnosis Procedure"</u> . ID	
	Procedure		INFOID:000000005038876
1. снеск в	ENGINE START F	UNCTION	
		C except DTC P1610. e DTC after fixing.	
3. Turn ign	nition switch OFF.	, , , , , , , , , , , , , , , , , , ,	
5. Turn the	e ignition switch O	when registered ignition key is inserted into key cylinder and IFF and wait 5 seconds.	wait for 5 seconds.
		ce (a total of 3 times). art when registered ignition key is inserted into key cylinder.	
>>	INSPECTION EN	ID	

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INFOID:000000005038874

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P1611 ID DISCORD, IMMU-ECM

Description

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

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC P1611 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-39, "DTC Logic"</u>.
- If DTC P1611 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-40, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1611	ID DISCORD IMMU-ECM	The ID verification results between BCM and ECM are NG.	BCMECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to <u>SEC-210, "Diagnosis Procedure"</u>.

NO >> INSPECTION END

Diagnosis Procedure

1.PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Reregister all ignition keys.

For initialization and registration of ignition key. Refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".

Can the system be initialized and can the engine be started with reregistered ignition key?

YES >> INSPECTION END

NO >> GO TO 2.

2.REPLACE BCM

- 1. Replace BCM. Refer to <u>BCS-82, "Removal and Installation"</u>.
- Perform initialization with CONSULT-III. Reregister all ignition keys. For initialization and registration of ignition key. Refer to "CONSULT-III Operation Manual NATS-IVIS/ NVIS".

Can the system be initialized and can the engine be started with reregistered ignition key?

YES >> INSPECTION END

NO >> GO TO 3.

3.REPLACE ECM

- 1. Replace ECM.
- 2. Perform initialization with CONSULT-III. Reregister all ignition keys.

For initialization and registration of ignition key. Refer to "CONSULT-III Operation Manual NATS-IVIS/ NVIS".

Can the system be initialized and can the engine be started with reregistered ignition key?

YES >> INSPECTION END

NO >> GO TO 4.

4.CHECK INTERMITTENT INCIDENT

INFOID:000000005038877

INEOID:000000005038878

INEOID-000000005038879

	CORD, IMMU-ECM [WITHOUT INTELLIGENT KEY SYSTEM]
< DTC/CIRCUIT DIAGNOSIS > Refer to GI-34, "Intermittent Incident".	
Refer to OF-34, Internittent incident.	
>> INSPECTION END	
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P1612 CHAIN OF ECM-IMMU

Description

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

DTC Logic

INFOID:000000005038881

INFOID:000000005038880

DTC DETECTION LOGIC **NOTE**:

- If DTC P1612 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-39, "DTC Logic".
- If DTC P1612 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-40, "DTC Logic"</u>.

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

- YES >> Refer to <u>SEC-212</u>, "Diagnosis Procedure".
- NO >> INSPECTION END

Diagnosis Procedure

1.REPLACE BCM

- 1. Replace BCM. Refer to <u>BCS-82, "Removal and Installation"</u>.
- Perform initialization with CONSULT-III. For initialization, refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".

Does the engine start?

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

2.REPLACE ECM

Replace ECM. Refer to EC-15, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> INSPECTION END

INFOID:000000005038882

P1614 CHAIN OF IMMU-KEY

Description

Performs ID verification through BCM and NATS antenna amp. when ignition switch is ON position. Prohibits the release of steering lock or start of engine when an unregistered ID of ignition key is used.

DTC Logic

INFOID:000000005038884

INFOID:000000005038883

DTC DETECTION LOGIC

Trouble diagnosis name	DTC detecting condition	Possible cause	[
NATS ANTENNA AMP.	 Inactive communication between NATS antenna amp. and BCM Ignition key is malfunctioning 	 Harness or connectors (The NATS antenna amp. circuit is open or short) Ignition key NATS antenna amp. BCM 	1
IRMATION PROCE	DURE		
M DTC CONFIRMAT	ION PROCEDURE		C
	NATS ANTENNA AMP.	name DTC detecting condition NATS ANTENNA AMP. • Inactive communication between NATS antenna amp. and BCM	name DTC detecting condition Possible cause NATS ANTENNA AMP. • Inactive communication between NATS antenna amp. and BCM • Ignition key is malfunctioning • Harness or connectors (The NATS antenna amp. circuit is open or short) • Ignition key IRMATION PROCEDURE • BCM

- 1. Insert ignition key into the key cylinder.
- 2. Turn ignition switch ON.
- 3. Check "Self diagnosis result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-213, "Diagnosis Procedure"</u>.
- NO >> INSPECTION END

Diagnosis Procedure

1.CHECK FUSE

Check that the following IPDM E/R fuse is not blown.

	Signal name	Fuse No.
	Battery power supply	43
Is the fuse fus	ing?	
	the blown fuse after repairing the affecte O TO 2.	d circuit if a fuse is blown.
2.CHECK NA	TS ANTENNA AMP. INSTALLATION	
Check NATS a	antenna amp. Installation. Refer to SEC-2	17, "Diagnosis Procedure".
Is the inspection	on result normal?	
	О ТО 3.	
-	einstall NATS antenna amp. correctly.	
3. CHECK IG	NITION KEY	
Start engine w	ith another registered ignition key.	
Does the engi	ne start?	
	eplace ignition key. Perform initialization a CONSULT-III Operation Manual NATS-IV	and registration and registration of ignition key. Refer to S/NVIS".
NO >> G	О ТО 4.	
4.CHECK NA	ATS ANTENNA AMP. POWER SUPPLY	
1. Turn igniti	on switch OFF.	

- 2. Disconnect NATS antenna amp. connector.
- 3. Check voltage between NATS antenna amp. harness connector and ground.

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P1614 CHAIN OF IMMU-KEY [WITHOUT INTELLIGENT KEY SYSTEM]

(*	+)		Voltage (V)	
NATS antenna amp.		()	(Approx.)	
Connector Terminal				
M26	1	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 6. NO >> GO TO 5.

5. CHECK NATS ANTENNA AMP. POWER SUPPLY CIRCUIT

1. Disconnect IPDM E/R connector.

2. Check continuity between IPDM E/R harness connector and NATS antenna amp. connector.

IPDM E/R		NATS antenna amp.		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
E14	45	M26	1	Existed	

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

IPDI	M E/R		Continuity	
Connector	Connector Terminal		Continuity	
E14	45		Not existed	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to <u>PCS-65. "Removal and Installation"</u>.

NO >> Repair or replace harness.

 $\mathbf{6.}$ CHECK NATS ANTENNA AMP. GROUND CIRCUIT

Check continuity between NATS antenna amp. harness connector and ground.

NATS and	enna amp.		Continuity	
Connector Terminal		Ground	Continuity	
M26	3		Existed	

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness.

7.CHECK NATS ANTENNA AMP. SIGNAL

1. Connect BCM connector and NATS antenna amp. connector.

2. Check voltage between BCM harness connector and ground.

(+) BCM		(-)	Condition	Voltage (V) (Approx.)	
Connector	Terminal			(
	21		Just after inserting ignition key in key cylinder	Pointer of tester should move	
M65		Ground	Other than above	0	
COM	25	Ground	Just after inserting ignition key in key cylinder	Pointer of tester should move	
			Other than above	0	

Is the inspection result normal?

YES >> GO TO 9.

NO >> GO TO 8.

8. CHECK NATS ANTENNA AMP. SIGNAL CIRCUIT

P1614 CHAIN OF IMMU-KEY

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

- 1.
- Disconnect NATS antenna amp. connector. Check continuity between BCM harness connector and NATS antenna amp. harness connector. 2.

BCM		NATS ante	NATS antenna amp.		
Connector	Terminal	Connector	Terminal	- Continuity	
M65	21	M26	2	Existed	
IVI05	25	10120	4		
ieck continuity b	etween BCM harness	s connector and groun	nd.		
Connector	Termina			Continuity	
M65	21		Ground	Not existed	
MOS	25				
e inspection result					
S >> Replace N >> Repair or r HECK INTERMITT	eplace harness. ENT INCIDENT	efer to <u>SEC-271, "Rer</u>	noval and Installati	<u>on"</u> .	
>> Replace N >> Repair or r IECK INTERMITT	eplace harness. ENT INCIDENT	efer to <u>SEC-271, "Rer</u>	moval and Installati	<u>on"</u> .	
S >> Replace N >> Repair or r	eplace harness. ENT INCIDENT ttent Incident".	efer to <u>SEC-271, "Rer</u>	moval and Installati	<u>on"</u> .	

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P1615 DIFFRENCE OF KEY

Description

Performs ID verification through BCM when ignition switch is ON position. Prohibits the release of steering lock or start of engine when an unregistered key is used.

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1615	DIFFERENCE OF KEY	The ID verification results between BCM and ignition key are NG.	 Ignition key BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Insert ignition key into the key cylinder.
- 2. Turn ignition switch ON.
- 3. Check "Self diagnosis result" with CONSULT-III.

Is DTC detected?

YES >> Refer to SEC-216, "Diagnosis Procedure".

NO >> INSPECTION END

Diagnosis Procedure

1.PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Reregister all ignition keys.

For initialization and registration of ignition key. Refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS". Can the system be initialized and can the engine be started with reregistered ignition key?

YES >> INSPECTION END

NO >> GO TO 2.

2.REPLACE IGNITION KEY

1. Replace ignition key.

2. Perform initialization with CONSULT-III. Reregister all ignition keys.

For initialization and registration of ignition key. Refer to "CONSULT-III Operation Manual NATS-IVIS/ NVIS".

Can the system be initialized and can the engine be started with reregistered ignition key?

YES >> INSPECTION END NO >> GO TO 3. **3.**REPLACE BCM

Replace BCM. Refer to BCS-82, "Removal and Installation".

>> INSPECTION END

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INFOID:000000005038888

B2190 NATS ANTENNA AMP.

Description

Performs ID verification through BCM and NATS antenna amp. when ignition switch is ON position. Prohibits the release of steering lock or start of engine when an unregistered ID of ignition key is used.

DTC Logic

INFOID:000000005038893

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DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B2190	NATS ANTENNA AMP.	 Inactive communication between NATS antenna amp. and BCM. Ignition key is malfunctioning. 	 Harness or connectors (The NATS antenna amp. circuit is open or short) Ignition key NATS antenna amp. BCM 	

DTC CONFIRMATION PROCEDURE

Ι.	PERFORM DTC CONFIRMATION PROCEDURE
1.	Insert ignition key into the key cylinder.

2. Turn ignition switch ON.

3. Check "Self diagnosis result" with CONSULT-III.

Is DTC detected?

YES >> Refer to <u>SEC-217</u>, "Diagnosis Procedure".

NO >> INSPECTION END

Diagnosis Procedure

1.CHECK FUSE

Check that the following IPDM E/R fuse is not blown.

	Signal name	Fuse No.	S
	Battery power supply	43	
<u>ls the fu</u>	<u>se fusing?</u>		
YES NO	>> Is the blown fuse after repairing the affecte >> GO TO 2.	d circuit if a fuse is blown.	
2.сне	CK NATS ANTENNA AMP. INSTALLATION		
	IATS antenna amp. Installation. Refer to <u>SEC-2</u>	217, "Diagnosis Procedure".	
Is the in	spection result normal?		
YES	>> GO TO 3.		
NO	>> Reinstall NATS antenna amp. correctly.		
3. CHE	CK IGNITION KEY		(
Start en	gine with another registered ignition key.		
Does the	e engine start?		
YES	>> Replace ignition key. Perform initialization a "CONSULT-III Operation Manual NATS-IVI	and registration and registration of ignition key. Refer to S/NVIS".	
NO	>> GO TO 4.		
4.CHE	CK NATS ANTENNA AMP. POWER SUPPLY		
1. Turr	n ignition switch OFF.		

- 2. Disconnect NATS antenna amp. connector.
- 3. Check voltage between NATS antenna amp. harness connector and ground.

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B2190 NATS ANTENNA AMP.

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

(NATS ant	+) enna amp.	()	Voltage (V) (Approx.)	
Connector	Terminal			
M26	1	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 6. NO >> GO TO 5.

5. CHECK NATS ANTENNA AMP. POWER SUPPLY CIRCUIT

1. Disconnect IPDM E/R connector.

2. Check continuity between IPDM E/R harness connector and NATS antenna amp. connector.

IPDM E/R		NATS ant	Continuity		
Connector	Terminal	Connector	Terminal	Continuity	
E14	45	M26	1	Existed	

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

	IPDN	/IE/R		Continuity
(Connector	Terminal	Ground	Continuity
	E14	45		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to <u>PCS-65, "Removal and Installation"</u>.

NO >> Repair or replace harness.

 ${f 6.}$ CHECK NATS ANTENNA AMP. GROUND CIRCUIT

Check continuity between NATS antenna amp. harness connector and ground.

NATS and	enna amp.		Continuity	
Connector Terminal		Ground	Continuity	
M26	3		Existed	

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness.

7.CHECK NATS ANTENNA AMP. SIGNAL

1. Connect BCM connector and NATS antenna amp. connector.

2. Check voltage between BCM harness connector and ground.

(+) BCM		(–)	Condition	Voltage (V) (Approx.)
Connector	Terminal			(
	21 Ground 25	Ground	Just after inserting ignition key in key cylinder	Pointer of tester should move
M65			Other than above	0
MOS		Just after inserting ignition key in key cylinder	Pointer of tester should move	
			Other than above	0

Is the inspection result normal?

YES >> GO TO 9.

NO >> GO TO 8.

8. CHECK NATS ANTENNA AMP. SIGNAL CIRCUIT

B2190 NATS ANTENNA AMP.

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

Continuity

Existed

1. Disconnect NATS antenna amp. connector. 2. Check continuity between BCM harness connector and NATS antenna amp. harness connector. BCM NATS antenna amp. Connector Terminal Connector Terminal 2 21 M65 M26 25 4 3. Check continuity between BCM harness connector and ground.

BCM			Orationity	г	
Connector	Connector Terminal		Continuity	L	
M65	21	Ground	Not existed		
	25		NOT EXISTED	E	
s the inspection result norr	<u>nal?</u>				
YES >> Replace NATS antenna amp. Refer to <u>SEC-271, "Removal and Installation"</u> .					
NO >> Repair or replace harness.					
$9.$ check intermitten ^{\cdot}	T INCIDENT				
Refer to GI-34, "Intermitten	t Incident"				

>> INSPECTION END

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B2191 DIFFERENCE OF KEY

Description

Performs ID verification through BCM when ignition switch is ON position. Prohibits the release of steering lock or start of engine when an unregistered key is used.

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2191	DIFFERENCE OF KEY	The ID verification results between BCM and ignition key are NG.	 Ignition key BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Insert ignition key into the key cylinder.
- 2. Turn ignition switch ON.
- 3. Check "Self diagnosis result" with CONSULT-III.

Is DTC detected?

YES >> Refer to SEC-220, "Diagnosis Procedure".

NO >> INSPECTION END

Diagnosis Procedure

1.PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Reregister all ignition keys.

For initialization and registration of ignition key. Refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS". Can the system be initialized and can the engine be started with reregistered ignition key?

YES >> INSPECTION END

NO >> GO TO 2.

2.REPLACE IGNITION KEY

1. Replace ignition key.

2. Perform initialization with CONSULT-III. Reregister all ignition keys.

For initialization and registration of ignition key. Refer to "CONSULT-III Operation Manual NATS-IVIS/ NVIS".

Can the system be initialized and can the engine be started with reregistered ignition key?

YES >> INSPECTION END NO >> GO TO 3. **3.**REPLACE BCM

Replace BCM. Refer to BCS-82, "Removal and Installation".

>> INSPECTION END

INFOID:000000005038895

INEOID-000000005038896

< DTC/CIRCUIT DIAGNOSIS > B2192 ID DISCORD, IMMU-ECM

Description

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

DTC Logic

DTC DETECTION LOGIC

- NOTE:
- If DTC B2192 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-39, "DTC Logic"</u>.
- If DTC B2192 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-40, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	_
B2192	ID DISCORD BCM-ECM	The ID verification results between BCM and ECM are NG.	• BCM • ECM	ŀ

DTC CONFIRMATION PROCEDURE	
1.PERFORM DTC CONFIRMATION PROCEDURE	

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

Is DTC detected?

YES >> Refer to <u>SEC-221, "Diagnosis Procedure"</u>.

NO >> INSPECTION END

Diagnosis Procedure

1.PERFORM INITIALIZATION	J
Perform initialization with CONSULT-III. Reregister all ignition keys. For initialization and registration of ignition key. Refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".	SEC
Can the system be initialized and can the engine be started with reregistered ignition key?	
YES >> INSPECTION END NO >> GO TO 2.	L
2.REPLACE BCM	
 Replace BCM. Refer to <u>BCS-82. "Removal and Installation"</u>. Perform initialization with CONSULT-III. Reregister all ignition keys. For initialization and registration of ignition key. Refer to "CONSULT-III Operation Manual NATS-IVIS/ NVIS". 	Μ
Can the system be initialized and can the engine be started with reregistered ignition key? YES >> INSPECTION END NO >> GO TO 3.	Ν
3. REPLACE ECM	0
 Replace ECM. Perform initialization with CONSULT-III. Reregister all ignition keys. For initialization and registration of ignition key. Refer to "CONSULT-III Operation Manual NATS-IVIS/ NVIS". 	Ρ
Can the system be initialized and can the engine be started with reregistered ignition key?	
YES >> INSPECTION END	
NO >> GO TO 4.	

4.CHECK INTERMITTENT INCIDENT

В

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INFOID:000000005038898

INFOID:000000005038899

Refer to GI-34, "Intermittent Incident".

>> INSPECTION END

B2193 CHAIN OF ECM-IMMU

Description

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

DTC Logic

DTC DETECTION LOGIC **NOTE**:

- If DTC B2193 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-39, "DTC Logic".
- If DTC B2193 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-40, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause			
B2193	CHAIN OF BCM- ECM	Inactive communication between ECM and BCM	 Harness or connectors (The CAN communication line is open or short) BCM ECM 			
TC CONFIRMATION PROCEDURE						
.PERFORM DTC CONFIRMATION PROCEDURE						
 Turn ignition switch ON. Check "Self diagnosis result" with CONSULT-III. 						
s DTC dete	cted?					

YES >> Refer to <u>SEC-223, "Diagnosis Procedure"</u>.

NO >> INSPECTION END

Diagnosis Procedure

1.REPLACE BCM

- 1. Replace BCM. Refer to BCS-82, "Removal and Installation".
- 2. Perform initialization with CONSULT-III.

For initialization, refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".

Does the engine start?

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

2.REPLACE ECM

Replace ECM. Refer to EC-15, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> INSPECTION END

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INFOID:000000005038903

INFOID:000000005038901

B2195 ANTI-SCANNING

Description

INFOID:000000005038904

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

INFOID:000000005038905

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.

2. Check "Self-diagnosis result" using CONSULT-III.

Is DTC detected?

- YES >> Refer to SEC-224, "Diagnosis Procedure".
- NO >> INSPECTION END.

Diagnosis Procedure

1.CHECK SELF-DIAGNOSIS RESULT-1

- 1. Perform "Self-diagnosis result" of BCM using CONSULT-III.
- 2. Erase DTC.
- 3. Perform DTC Confirmation Procedure. Refer to SEC-224, "DTC Logic".

Is DTC 2195 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 <u>BCS-82, "Removal and Installation"</u>.

3.CHECK SELF-DIAGNOSIS RESULT-2

- 1. Obtain the customers approval to remove unspecified accessory part related to engine start, and then remove it.
- 2. Perform "Self-diagnosis result" of BCM using CONSULT-III.
- 3. Erase DTC.
- 4. Perform DTC Confirmation Procedure. Refer to <u>SEC-224, "DTC Logic"</u>.

Is DTC 2195 detected?

- YES >> Replace BCM. Refer to <u>BCS-82, "Removal and Installation"</u>.
- NO >> INSPECTION END

B2196 DONGLE UNIT

[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCU	IT DIAGNO	OSIS >			WIT	HOUT INTELL	IGENT KEY SYSTEM]
B2196 DO	NGLE L	JNIT					
Description							INFOID:00000000511630
BCM performs When verificat							
DTC Logic			·	U U			INFOID:0000000511630
DTC DETEC							
NOTE:							
 If DTC B219 BCS-39, "DT 		yed with	DTC U10	00, first perform the	trou	ble diagnosis f	or DTC U1000. Refer to
	6 is display	yed with	DTC U10	10, first perform the	trou	ble diagnosis f	or DTC U1010. Refer to
DTC No.	Trouble dia name	-	רס	C detecting condition		Pc	ossible cause
B2196	DONGLE NG		The ID veri and dongle	fication results between B unit is NG.	СМ	 Dongle unit Harness or cor (Dongle unit ci 	nnectors rcuit is open or shorted.)
DTC CONFIR	RMATION F	PROCE	DURE				
1.PERFORM	DTC CONF	FIRMATIO	ON PROC	EDURE			
 Turn ignition Turn ignition Check "See Is the DTC dete YES >> Reference 	on switch O on switch O on switch O elf-diagnosis <u>ected?</u> efer to <u>SEC-</u> SPECTION	0FF. 0N. s result" ι <u>-225, "Di</u> a	-				
Diagnosis F	Procedure	е					INFOID:00000000511630
1 .PERFORM	INITIALIZA	TION					
Manual NA 2. Start the e Does the engin YES >> IN	ATS-IVIS/N ^v ngine. <u>ne start?</u> SPECTION O TO 2.	VIS". I END		. Reregister all ignit	ion k	keys. Refer to	"CONSULT-III Operatior
2. Disconnec		nector an		unit connector. connector and dong	le ur	nit harness con	nector.
	BCM			Dong	gle uni	it	Continuity
Conne		Term		Connector		Terminal	
M65	D	24	ł	M75		7	Existed

4. Check continuity between BCM harness connector and ground.

BO	CM		Continuity	
Connector Terminal		Ground	Continuity	
M65	24		Not existed	

Is the inspection result normal?

B2196 DONGLE UNIT

< DTC/CIRCUIT DIAGNOSIS >

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK DONGLE UNIT GROUND CIRCUIT

Check continuity between dongle unit harness connector and ground.

Dong	le unit		Continuity
Connector	Terminal	Ground	Continuity
M75	1		Existed

Is the inspection result normal?

YES >> Replace dongle unit.

NO >> Repair or replace harness.

< DTC/CIF				PPLY /	AND GF	COUND CIRCUIT [WITHOUT INTELLIGENT KEY SYSTEM]
POWEF BCM	RSUPF	PLY ANI	D GRO	UND C	CIRCUI	Г
BCM : D	iagnosis	s Proced	ure			INFOID:00000005153898
1. CHECK	FUSES A	ND FUSIB	LE LINK			
Check that	the follow	ving fuses a	and fusible	link are r	not fusing.	
		Signal nan	ne			Fuses and fusible link No.
	В	attery power	supply			G
		ACC power s	upply			20
	lg	nition power	supply			2
2. Discor	nition swi		S.	connecto	or and gro	und.
	Terminals	_	laniti	on switch p	osition	
	+)			.g		
Connector	CM Terminal	(-)	OFF	ACC	ON	
	70		Battery	Battery	Battery	
M67	57	-	voltage	voltage	voltage	
M65	11	Ground	Approx. 0 V	Battery voltage	Battery voltage	S
	38		Approx. 0 V	Approx. 0 V	Battery voltage	
	> GO TO 3 > Repair h 3 GROUNE	3. arness or c D CIRCUIT	connector.	onnector	and grour	nd.
	BCM					
Connect	Contin		ontinuity			
M67		67			Existed	
	> INSPEC	? TION END arness or c				

SECURITY INDICATOR LAMP

< DTC/CIRCUIT DIAGNOSIS >

SECURITY INDICATOR LAMP

Description

- · Security indicator lamp is located on combination meter.
- NVIS (Nissan Vehicle Immobilizer System) and vehicle security system conditions are indicated by blink or illumination of security indicator lamp.

Component Function Check

1.CHECK FUNCTION

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

Test	item	Desc	ription
THEFT IND	ON	Security indicator lamp	Illuminates
	OFF	Security indicator lamp	Does not illuminate

Is the inspection result normal?

- YES >> INSPECTION END
- NO >> Go to <u>SEC-228</u>, "Diagnosis Procedure".

Diagnosis Procedure

1.CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT

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

	+) tion meter	(-)	Voltage (V) (Approx.)
Connector Terminal			
M34	27	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 2.

NO-1 >> Check 10 A fuse [No. 13, located in the fuse block (J/B)].

NO-2 >> Check harness for open or short between combination meter and fuse.

2.CHECK SECURITY INDICATOR LAMP SIGNAL

- 1. Connect combination meter connector.
- 2. Disconnect BCM connector.
- 3. Check voltage between BCM harness connector and ground.

	+) CM	()	Voltage (V)
Connector	Terminal		(Approx.)
M65	23	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-82, "Removal and Installation"</u>.

NO >> GO TO 3.

3.CHECK COMBINATION METER CIRCUIT

1. Disconnect combination meter connector.

2. Check continuity between combination meter harness connector and BCM harness connector.

SEC-228

INFOID:000000005116314

INEOID:000000005116315

SECURITY INDICATOR LAMP

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

	Combination meter		B	CM	Continuity	A
	Connector	Terminal	Connector	Terminal	Continuity	
	M34	18	M65	23	Existed	_
_					4	- 6

3. Check continuity between combination meter harness connector and ground.

Combina	tion meter		Continuity	0
Connector Terminal		Ground	Continuity	C
M34	18		Not existed	

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-97, "Removal and Installation".

NO >> Repair or replace harness.

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HORN FUNCTION

Description

Perform answer-back for each operation with horn.

Component Function Check

1.CHECK FUNCTION

1. Perform "VEHICLE SECURITY HORN" in the "ACTIVE TEST" mode using CONSULT-III.

2. Check the horn operation.

Tes	st item	Description	
VEHICLE SECURITY HORN	ON	Horn	Sounds (for 20 ms)

Is the operation normal?

YES >> Horn function is OK. NO >> Go to <u>SEC-230</u>, "Diagnosis Procedure".

Diagnosis Procedure

1.CHECK HORN FUNCTION

Check horn function with horn switch.

Do the horn sound?

YES >> GO TO 2.

NO >> Refer to <u>HRN-2</u>, "Wiring Diagram - HORN -".

2. CHECK IPDM E/R POWER SUPPLY

1. Disconnect IPDM E/R connector.

2. Check voltage between IPDM E/R harness connector and ground.

	(+)		Voltage (V)	
Connector	IPDM E/R Connector Terminal		(Approx.)	
E13 34		Ground	Battery voltage	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to <u>PCS-65, "Removal and Installation"</u>.

NO >> GO TO 3.

3.CHECK IPDM E/R POWER SUPPLY CIRCUIT

1. Disconnect horn relay connector.

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

IPDM E/R		Horn	Continuity		
Connector	Terminal	Connector Terminal		Continuity	
E13	34	E5	1	Existed	

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

	IPDM E	Ŕ		Continuity	
Connect	or	Terminal	Ground	Continuity	
E13		34		Not existed	

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

INFOID:000000005116317

INFOID:000000005116318

1. CHECK INTERMITTENT INCIDENT

>> INSPECTION END

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HEADLAMP FUNCTION

Description

Headlamp lighting when vehicle security system is alarm phase.

Component Function Check

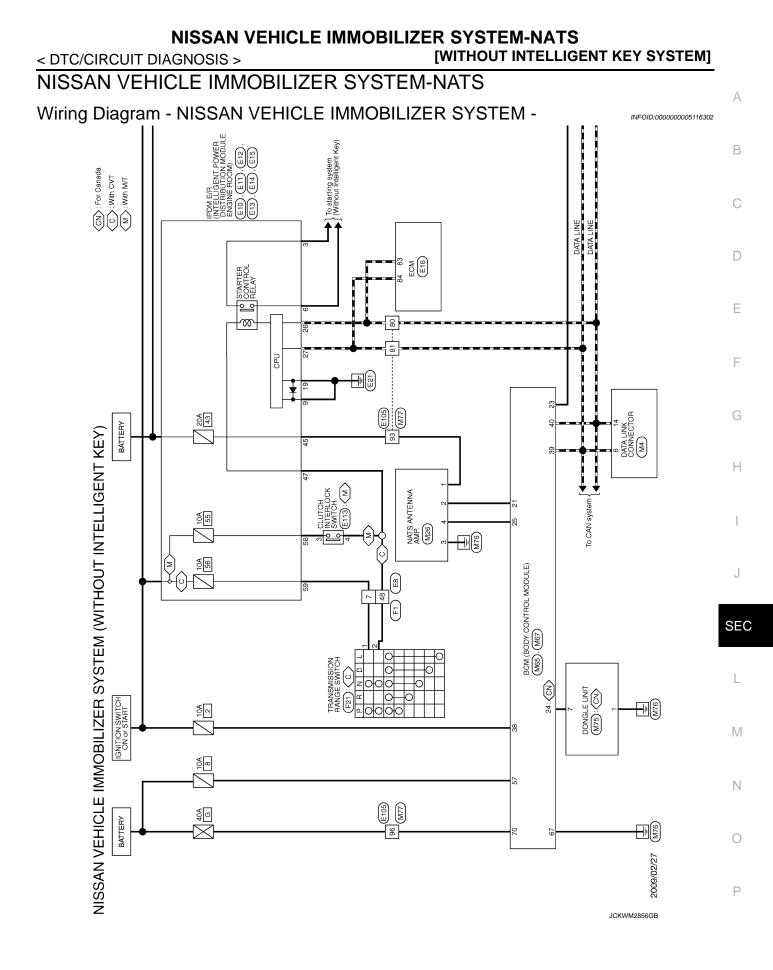
1. CHECK FUNCTION

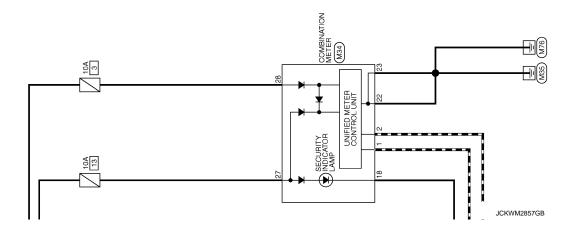
- 1. Perform "HEAD LAMP(HI)" in the "ACTIVE TEST" mode using CONSULT-III.
- 2. Check headlamp operation.

	Test	item	Description		
		ON		Lighting	
	EAD LAMP (HI)	OFF	HEADLAMP (HI)	Does not lighting	
Is the inspe	ection result norma	al?			
-	> INSPECTION EI > Refer to <u>SEC-23</u>	ND <u>2, "Diagnosis Procedure"</u> .			
Diagnos	is Procedure			INFOID:000000005148492	
1.снеск	(HEADLAMP FUR	NCTION			
Refer to EX	XL-47, "Componer	nt Function Check".			
Is the inspe	ection result norma	<u>al?</u>			
	> GO TO 2.				
NO >:	> Repair or replace	e the malfunctioning parts.			
2. CHECK	INTERMITTENT	INCIDENT			

>> INSPECTION END

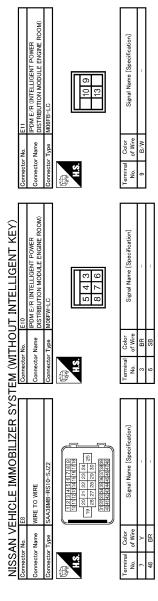
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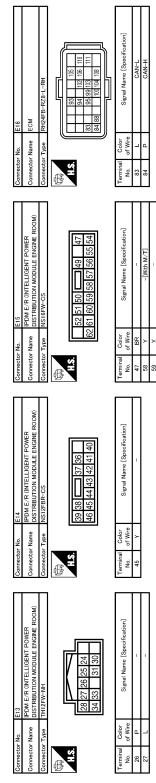




NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS < DTC/CIRCUIT DIAGNOSIS > [WITHOUT INTELLIGENT KEY SYSTEM]

PDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) Signal Name [Specification] Signal Name [Specification] 93 105 94 102 106 1 83 95 99 102 1 84 88 100 14 1 S Color of Wire Color of Wire nector Name nector Name ja di and No. H.S. Terminal No. H.S. erminal No. 84 倨 E





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NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

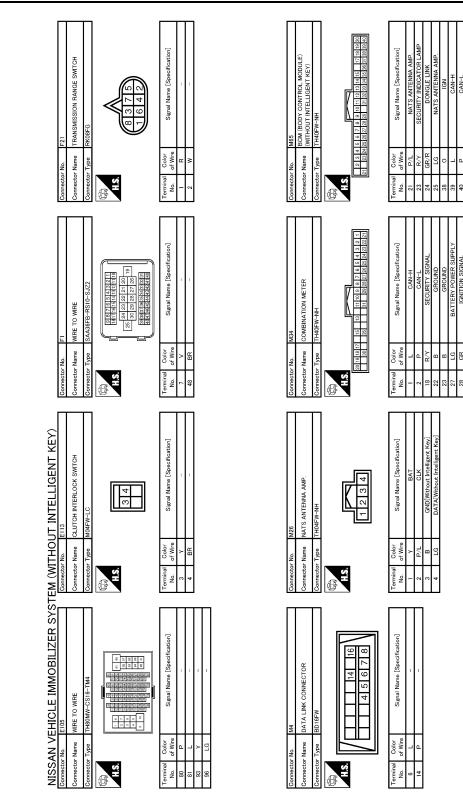
< DTC/CIRCUIT DIAGNOSIS >



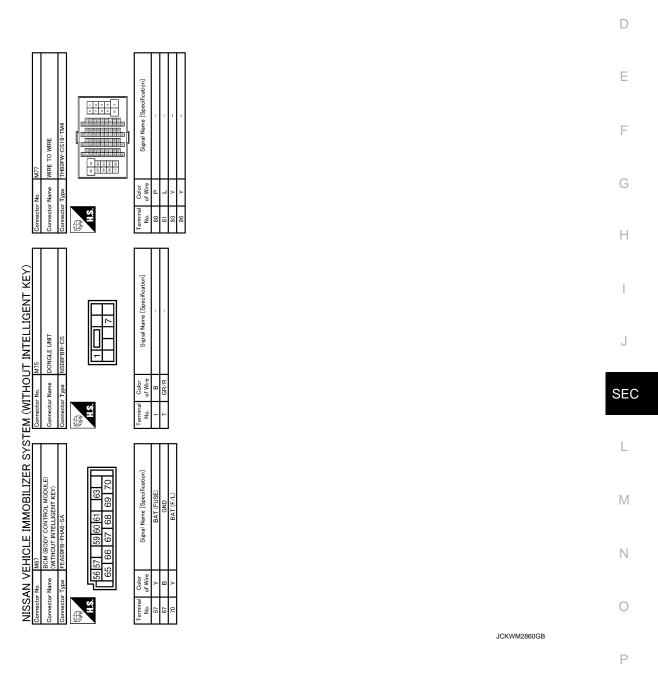
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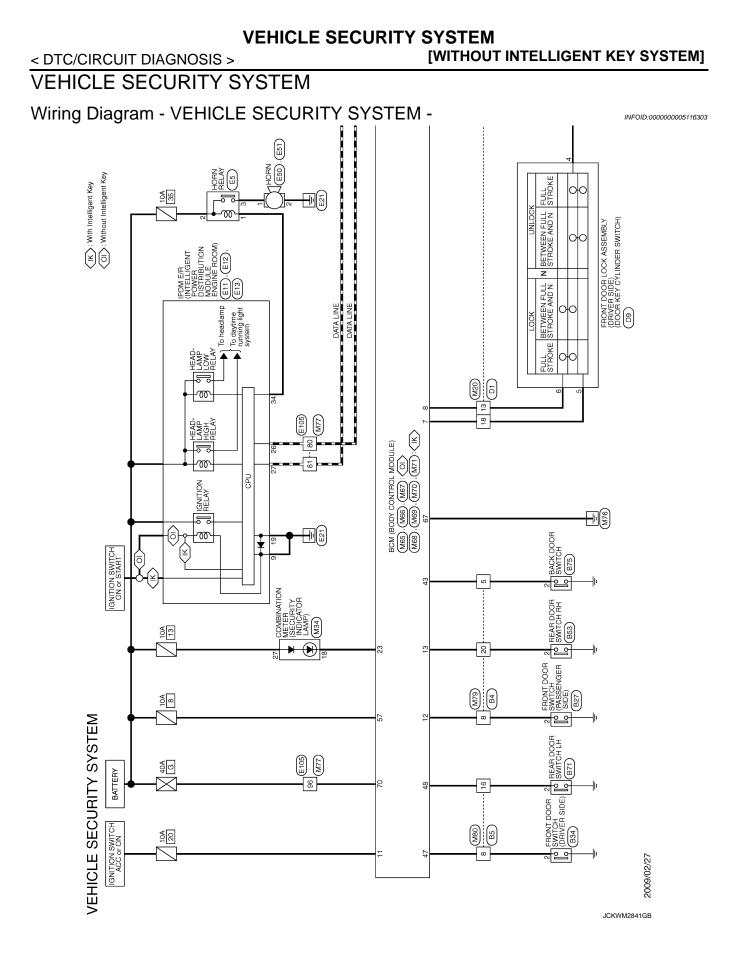
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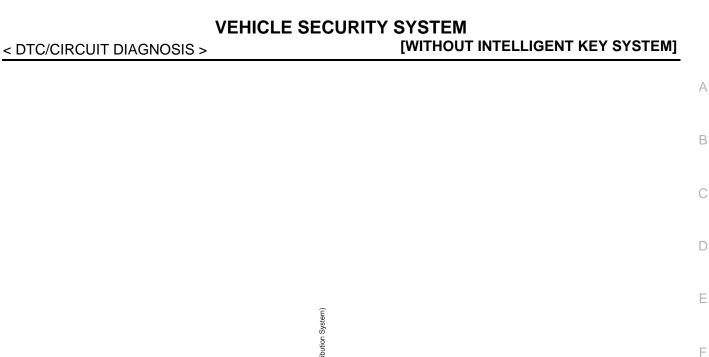


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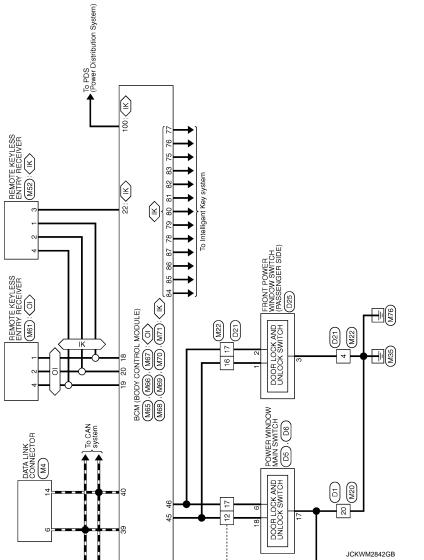
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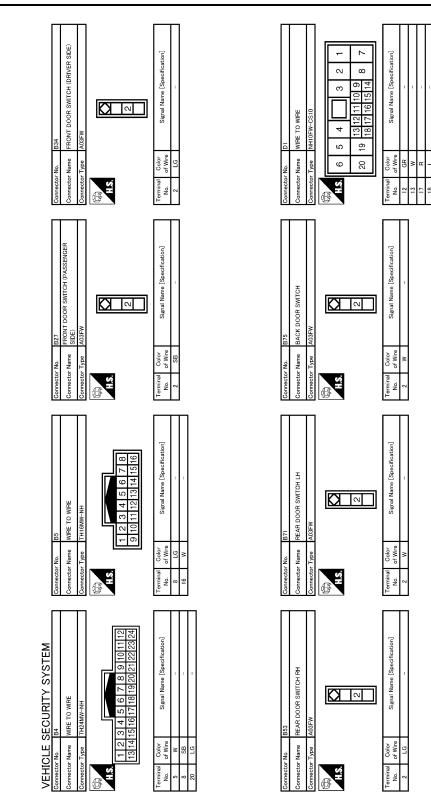
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VEHICLE SECURITY SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

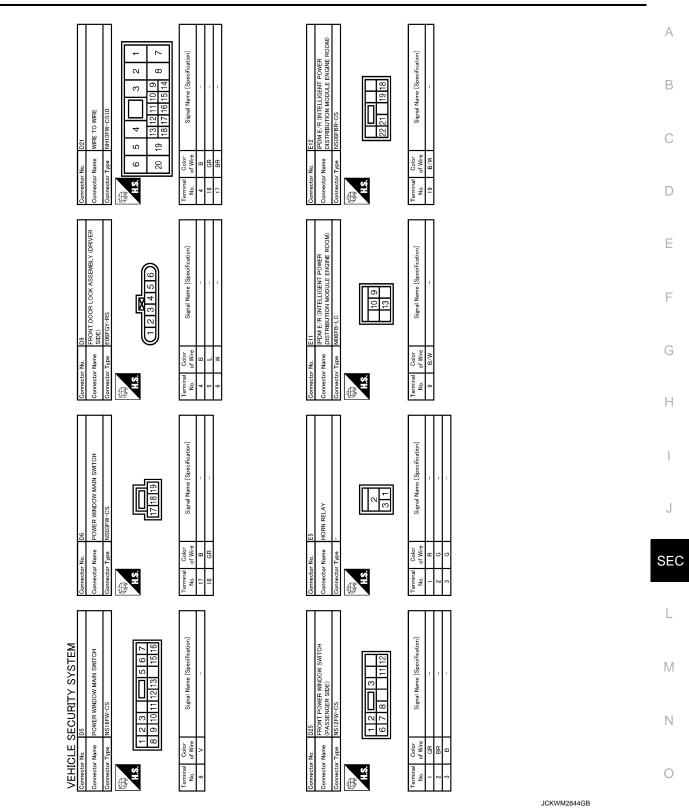
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VEHICLE SECURITY SYSTEM

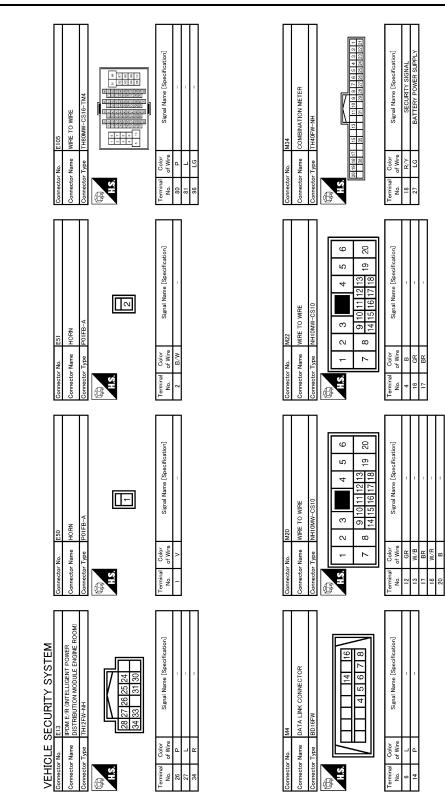
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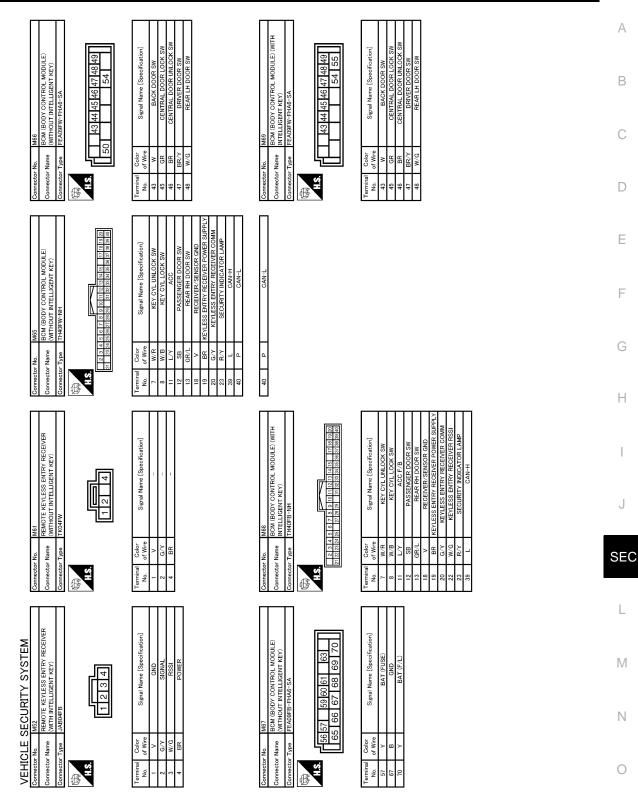
VEHICLE SECURITY SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]



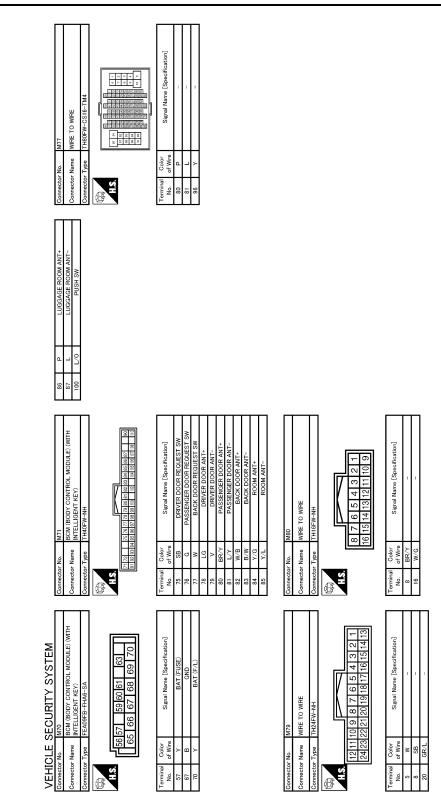
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VEHICLE SECURITY SYSTEM [WITHOUT INTELLIGENT KEY SYSTEM]



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JCKWM2847GB

[WITHOUT INTELLIGENT KEY SYSTEM]

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INFOID:000000005183605

Reference Value

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status	0
IGN ON SW	Ignition switch OFF or ACC	Off	
IGN ON SW	Ignition switch ON	On	D
KEY ON SW	Mechanical key is removed from key cylinder	Off	
KET ON SW	Mechanical key is inserted to key cylinder	On	Е
CDL LOCK SW	Door lock/unlock switch does not operate	Off	
CDL LOCK 3W	Press door lock/unlock switch to the lock side	On	
CDL UNLOCK SW	Door lock/unlock switch does not operate	Off	F
CDE UNEOCK 3W	Press door lock/unlock switch to the unlock side	On	
DOOR SW-DR	Driver's door closed	Off	
DOOR SW-DR	Driver's door opened	On	G
DOOR SW-AS	Passenger door closed	Off	
DOON GW-AG	Passenger door opened	On	Н
DOOR SW-RR	Rear RH door closed	Off	
DOOR SW-RR	Rear RH door opened	On	
DOOR SW-RL	Rear LH door closed	Off	
	Rear LH door opened	On	
BACK DOOR SW	Back door closed	Off	J
	Back door opened	On	0
LOCK STATUS	NOTE: The item is indicated, but not monitored.	Off	SE
ACC ON SW	Ignition switch OFF	Off	
ACC ON SW	Ignition switch ACC or ON	On	
KEYLESS LOCK	"LOCK" button of key fob is not pressed	Off	L
RETLESS LOOK	"LOCK" button of key fob is pressed	On	
KEYLESS UNLOCK	"UNLOCK" button of key fob is not pressed	Off	M
RETLESS UNLOCK	"UNLOCK" button of key fob is pressed	On	1 0 1
SHOCK SENSOR	NOTE: The item is indicated, but not monitored.	NORMAL	N
	Other than driver door key cylinder LOCK position	Off	
KEY CYL LK-SW	Driver door key cylinder LOCK position	On	
	Other than driver door key cylinder UNLOCK position	Off	0
KEY CYL UN-SW	Driver door key cylinder UNLOCK position	On	
VEHICLE SPEED	While driving	Equivalent to speed- ometer reading	Ρ
	Rear window defogger switch OFF	Off	
REAR DEF SW	Rear window defogger switch ON	On	
	NOTE:	Off	
REVERSE SW CAN	The item is indicated, but not used.	On	

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Monitor Item	Condition	Value/Status
AIL LAMP SW	Lighting switch OFF	Off
	Lighting switch 1ST	On
R FOG SW	Front fog lamp switch OFF	Off
K100.3W	Front fog lamp switch ON	On
	The seat belt (driver side) is fastened. [Seat belt switch (driver side) OFF]	Off
BUCKLE SW	The seat belt (driver side) is unfastened. [Seat belt switch (driver side) ON]	On
RNK/HAT MNTR	NOTE: The item is indicated, but not monitored.	Off
00.01/	Ignition switch OFF	Off
ACC SW	Ignition switch ACC or ON	On
YLS TRNK/HAT	NOTE: The item is indicated, but not monitored.	Off
	PANIC button of key fob is not pressed	Off
EYLESS PANIC	PANIC button of key fob is pressed	On
	Lighting switch OFF	Off
HI BEAM SW	Lighting switch HI	On
	Lighting switch OFF	Off
IEAD LAMP SW 1	Lighting switch 2ND	On
HEAD LAMP SW 2	Lighting switch OFF	Off
	Lighting switch 2ND	On
	Lighting switch OFF	Off
AUTO LIGHT SW	Lighting switch AUTO	On
	Other than lighting switch PASS	Off
PASSING SW	Lighting switch PASS	On
R FOG SW	NOTE: The item is indicated, but not monitored.	Off
	Turn signal switch OFF	Off
URN SIGNAL R	Turn signal switch RH	On
	Turn signal switch OFF	Off
URN SIGNAL L	Turn signal switch LH	On
	Parking brake switch is OFF	Off
YKB SW	Parking brake switch is ON	On
		Off
NGINE RUN	Engine stopped	-
	Engine running	On
OPTI SEN (DTCT)	Bright outside of the vehicle	Close to 5 V
	Dark outside of the vehicle	Close to 0 V
OPTI SEN (FILT)	Bright outside of the vehicle (Lighting switch AUTO)	Close to 5 V
	Dark outside of the vehicle (Lighting switch AUTO)	Close to 1.50 V
IG SEN COND	NOTE: The item is indicated, but not monitored.	OFF
GN SW CAN	Ignition switch OFF or ACC	Off
	Ignition switch ON	On
R WIPER HI	Front wiper switch OFF	Off
	Front wiper switch HI	On
R WIPER LOW	Front wiper switch OFF	Off
	Front wiper switch LO	On

Revision: 2009 March

< ECU DIAGNOSIS INFORMATION >

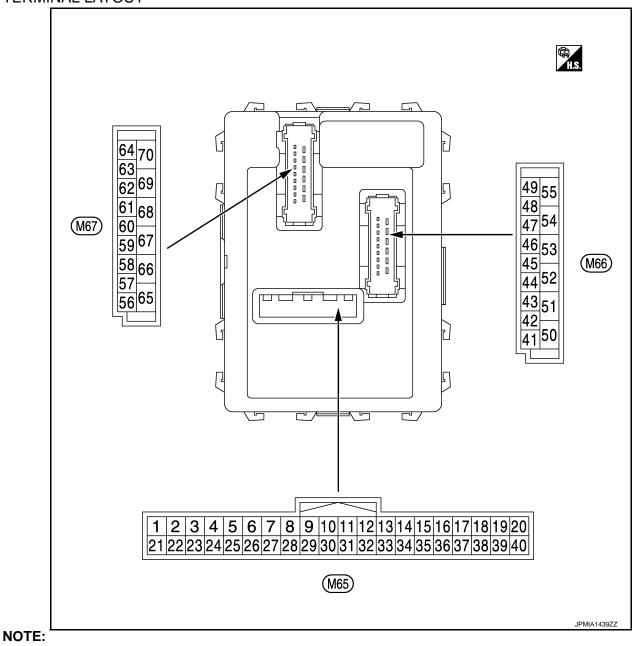
Monitor Item	Condition	Value/Status
	Front wiper switch OFF	Off
	Front wiper switch INT	On
FR WASHER SW	Front washer switch OFF	Off
IN WASHEN SW	Front washer switch ON	On
NT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
R WIPER STOP	Any position other than front wiper stop position	Off
K WIF EK STOF	Front wiper stop position	On
RR WIPER ON RR WIPER INT RR WASHER SW RR WIPER STOP RAIN SENSOR HAZARD SW	Rear wiper switch OFF	Off
	Rear wiper switch ON	On
	Rear wiper switch OFF	Off
	Rear wiper switch INT	On
	Rear washer switch OFF	Off
	Rear washer switch ON	On
	Rear wiper stop position	Off
R WIPER STOP	Other than rear wiper stop position	On
AIN SENSOR	NOTE: The item is indicated, but not monitored.	Off
IAZARD SW	Hazard switch OFF	Off
	Hazard switch ON	On
AN ON SIG	Blower control dial OFF	Off
	Other than blower control dial OFF	On
	 Air conditioner OFF (A/C switch indicator OFF) (Automatic air conditioner) A/C switch OFF (Manual air conditioner) 	Off
AIR COND SW	 Air conditioner ON (A/C switch indicator ON) (Automatic air conditioner) A/C switch ON (Manual air conditioner) 	On
HERMO AMP	Ignition switch ON	Off
IOTE: at models with automatic ir conditioner this item is ot monitored.	Evaporator is extremely low temperature	On
R DEF SW	Other than A/C mode defroster ON position	Off
R DEI 3W	A/C mode defroster ON position	On
EYLESS TRUNK	NOTE: The item is indicated, but not monitored.	Off
FRNK OPNR SW	NOTE: The item is indicated, but not monitored.	Off
RNK OPN MNTR	NOTE: The item is indicated, but not monitored.	Off
	Close the hood	Off
OOD SW	Open the hood	On
	Other than the ignition switch is ON by key registered to BCM.	Off
RANSPONDER	The ignition switch is ON by key registered to BCM.	On
NTELLI KEY	NOTE: The item is indicated, but not used.	Off
AUTO RELOCK	NOTE: The item is indicated, but not monitored.	Off

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Monitor Item	Condition	Value/Status
OIL PRESS SW	Ignition switch OFF or ACC Engine running	Off
	Ignition switch ON	On
BRAKE SW	Brake pedal is not depressed	Off
DRARE SW	Brake pedal is depressed	On

TERMINAL LAYOUT



• M65, M66: White

M67: Black

PHYSICAL VALUES

Revision: 2009 March

BCM (BODY CONTROL MODULE) < ECU DIAGNOSIS INFORMATION > [WITHOUT INTELL]

	nal No.	Description				Value
(Wire +	color)	Signal name	Input/ Output		Condition	(Approx.)
+ 2 (BR/W)	Ground	Combination switch INPUT 5	Input	Combination switch (Wiper intermit- tent dial 4)	All switch OFF Turn signal switch RH Lighting switch HI Lighting switch 1ST	0 V $\begin{pmatrix} () \\ 15 \\ 0 \\ \hline \hline \\ 0 \\ \hline \\ 0 \\ \hline \hline \\ 0 \\ \hline \hline \\ 0 \\ \hline \hline \\ 0 \\ \hline \\ 0 \\ \hline \hline \\ 0 \\ \hline \hline \\ 0 \\ \hline \\ 0 \\ \hline \hline \\ 0 \\ \hline \\ 0 \\ \hline \\ 0 \\ \hline \hline \\ 0 \\ \hline \\ 0 \\ \hline \hline \\ 0 \\ \hline \\ 0 \\ \hline \\ 0 \\ \hline \\ 0 \\ \hline \hline \\ 0 \\ \hline 0 \\ \hline \\ 0 \\ \hline 0 \\ \hline 0 \\ \hline \hline \\ 0 \\ \hline 0 \\$
3	Ground	Combination switch	Input	Combination switch	All switch OFF Turn signal switch LH Lighting switch PASS Lighting switch 2ND	2.0 V 0 V
(GR)		INPUT 4		(Wiper intermit- tent dial 4)	Front fog lamp switch ON	(V) 15 10 10 10 10 10 10 10 10 10 10
4 (L/Y)	Ground	Combination switch INPUT 3	Input	Combination switch (Wiper intermit- tent dial 4)	All switch OFF Front wiper switch LO Front wiper switch MIST Front wiper switch INT Lighting switch AUTO	0 V (V) 15 0 +10ms PKIB4958J 1.0 V

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
(Wire +	color)	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF (Wiper intermittent dial 4)	0 V
					Front washer switch (Wiper intermittent dial 4) Rear washer switch ON (Wiper intermittent dial 4)	(V) 15 10 5
5 (G)	Ground	Combination switch INPUT 2	Input	Combination switch	Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	v ★ 10ms PKIB4958J 1.0 V
					Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15 10 10 10 10 10 10 10 10 10 10
		Ground Combination switch INPUT 1 Input		Front wiper switch HI (Wiper intermittent dial 4) Rear wiper switch INT	All switch OFF (Wiper intermittent dial 4)	0 V
					(Wiper intermittent dial 4)	(V) 15
					Rear wiper switch INT (Wiper intermittent dial 4)	
					Wiper intermittent dial 3	++10ms PKIB4958J 1.0 V
6 (L/R)	Ground		Input	Combination switch	Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2	(V) 15 0 0 ++10ms PKIB4952J 1.9 V
				Any of the condition below with all switch OFF • Wiper intermittent dial 6 • Wiper intermittent dial 7	(V) 10 5 0 •••10ms •••10ms •••10ms •••0 ••••••	

< ECU DIAGNOSIS INFORMATION >

Terminal No.		Description				Value	А
(Wire +	color)	Signal name	Input/ Output	Condition		(Approx.)	
7 (W/R)	Ground	Door key cylinder switch UNLOCK	Input	Door key cylin- der switch	NEUTRAL position	(V) 15 10 5 0 •••10ms PKIB4960J 7.0 - 8.0 V	B C D
					UNLOCK position	0 V	
8	Ground	Door key cylinder switch LOCK	Input	Door key cylin- der switch	NEUTRAL position	12 V	Г
(W/B)					LOCK position	0 V	E
9 (R)	Ground	Stop lamp switch	Input	Stop lamp switch	OFF (Brake pedal is not depressed)	0 V	F
					ON (Brake pedal is de- pressed)	Battery voltage	
10	Ground	Rear window defog- ger switch	Input	Rear window defogger switch	OFF (Not pressed)	12 V	G
(W/L)	Clound				ON (Pressed)	0 V	
11	Ground	Ignition switch ACC	Input	Ignition switch OFF Ignition switch ACC or ON		0 V	
(L/Y)		.ge. e	mput			Battery voltage	Н
12 (SB)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closed)	(V) 15 10 50 ★ 10ms FKIB4960J 7.0 - 8.0 V	J
					ON (When passenger door opened)	0 V	SE
13 (GR/L)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (When rear RH door closed)	(V) 15 10 5 0 → 10ms PKIB4960J 7.0 - 8.0 V	M
					ON (When rear RH door opened)	0 V	
14 (L/B)	Ground	Optical sensor	Input	Ignition switch ON	When bright outside of the vehicle	Close to 5 V	0
					When dark outside of the vehicle	Close to 0 V	Ρ

< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description				Value	
(vvire +		Signal name	Input/ Output	Condition		(Approx.)	
15 (V/W)	Ground	Tire pressure warn- ing check switch	Input	Ignition switch OFF		(V) 15 0 10 10 10 10 10 10 10 10 10	
17 (R/G)	Ground	Optical sensor pow- er supply	Output	Ignition switch	OFF, ACC ON	0 V 5 V	
18 (V)	Ground	Receiver and sensor ground	Input	Ignition switch ON		0 V	
	Ground	Remote keyless en- try receiver power supply	Input	Ignition switch OFF	Insert mechanical key into ignition key cylinder	0 V	
					Remove mechanical key from ignition key cylinder (Any door opened)	5 V	
19 (BR)					Remove mechanical key from ignition key cylinder (Any door closed)	(V) 6 4 2 0 	
	Ground	Remote keyless en- try receiver commu- nication	Input	Ignition switch OFF	Insert mechanical key into ignition key cylinder	0 V	
20 (G/Y)					Waiting	(V) 6 4 2 0 •••••1.0ms •••••1.0ms •••••1.0ms •••••1.0ms	
					Signal receiving	(V) 6 2 0 ••••1.0ms PIIB7729J	
21 (P/L)	Ground	Immobilizer anten- na (Clock)	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.	

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Terminal No.		Description				
(Wire +	color)	Signal name	Input/ Output	Condition		Value (Approx.)
				ON		0 V
23 (R/Y)			Blinking (Ignition switch OFF)	(V) 15 0 15 15 15 15 15 15 15 15 15 15		
					OFF	12 V
24 (GR/R)	Ground	Dongle link	Input/ Output	Ignition switch O	FF	5 V
25 (LG)	Ground	Immobilizer anten- na (Rx, Tx)	Input/ Output	During waiting Ignition switch is pressed while inserting the key into the key slot.		Just after pressing ignition switch. Pointer of tester should move.
26* ¹	Ground	Thermo control amp.	Input	Ignition switch O	N	0 V
(GR)	Giodila	memo control amp.	mput	Evaporator is ext	tremely low temperature	12 V
		A/C switch (Auto- matic air condition- er)		A/C	OFF (A/C switch indicator: OFF)	(V) 15 10 5 10 10 ms JPMIA0012GB 1.0 - 1.5 V
27 (Y/G)* ²	Ground	Inp	Input		ON (A/C switch indicator: ON)	0 V
(Y/R)* ³		A/C switch (Manual c air conditioner)	(Manual		OFF	(V) 15 10 5 0 10 10 ms JPMIA0012GB 1.0 - 1.5 V
					ON	0 V

0

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description				Value		
(Wire +	color)	Signal name	Input/ Output		Condition	(Approx.)		
			output		Blower fan switch OFF	0 V		
28	Ground	Blower fan switch (Automatic air condi- tioner)	Inout	Fan switch	Blower fan switch ON	(V) 15 0 5 0 • • 10ms • • 10ms • • 10ms • • 10ms • • • • 10ms • • • • • • • • • • • • • • • • • • •		
(G/W)	Cicult	Blower fan switch (Manual air condi- tioner)	Input -	Input	Input	It Fan switch	Blower fan switch OFF	(V) 15 10 5 0 • • • • • • • • • • • • •
					Blower fan switch ON	0 V		
29	Ground	Hazard switch	Input	Hazard switch	OFF	Battery voltage		
(L/W)	Croana		mput		ON	0 V		
					A/C mode defroster ON position	0 V		
31 (G/Y)	Ground	Front defroster switch	Input	Ignition switch ON	Other than A/C mode de- froster ON position	(V) 15 0 5 0 + 2ms JPMIA0589GB 8.0 - 9.0 V		
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V		
32 (LG)	Ground	Combination switch OUTPUT 5	Output	Combination switch	Front fog lamp switch ON (Wiper intermittent dial 4) Rear wiper switch ON (Wiper intermittent dial 4) Any of the condition 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 10 10 10 10 10 10 10 10 10		

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description				Value	
(vvire +		Signal name	Input/ Output	Condition		(Approx.)	
					All switch OFF (Wiper intermittent dial 4)	(V) 10 50 • • • 10ms • • • • 0 • • • • 0 • • • • • • • • • • • • • • • • • • •	
33 (Y/L)	Ground	Combination switch OUTPUT 4	Output	Combination switch	Lighting switch 1ST (Wiper intermittent dial 4)		
					Lighting switch AUTO (Wiper intermittent dial 4)		
					Rear wiper switch INT (Wiper intermittent dial 4)	5 0	
					 Any of the condition below with all switch OFF Wiper intermittent dial 1 Wiper intermittent dial 5 Wiper intermittent dial 6 	++10ms PKIB4958J 1.2 V	
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V	
34 (W)	Ground	Combination switch OUTPUT 3	Output	Combination switch	Lighting switch 2ND (Wiper intermittent dial 4)		
					Lighting switch HI (Wiper intermittent dial 4)	(V) 15 10	
					Rear washer switch ON (Wiper intermittent dial 4)	50	
		 Any of the condition below with all switch OFF Wiper intermittent dial 1 Wiper intermittent dial 2 Wiper intermittent dial 3 	+10ms FKIB4958J 1.2 V				

0

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

	nal No.	Description				Value
(Wire +	color)	Signal name	Input/ Output	Condition		(Approx.)
35		, Combination switch		Combination	All switch OFF	(V) 10 50 ••••10ms PKIB4960J 7.0 - 8.0 V
(R/L)	Ground	OUTPUT 2	Output	(Wiper intermit-	Lighting switch 2ND	
				tent dial 4)	Lighting switch PASS	(V) 15
					Front wiper switch INT	
					Front wiper switch HI	0 +10ms PKIB4958J 1.2 V
36	Grand	Combination switch	0.444	Combination	All switch OFF	(V) 15 10 50 • • 10ms • • 10ms • • • 0 • • • • 0 • • • • • • • • • • • • • • • • • • •
(L/O)	Ground	OUTPUT 1	Output	(Wiper intermit-	Turn signal switch RH	
				tent dial 4)	Turn signal switch LH	(V) 15
					Front wiper switch LO	
					(Front wiper switch MIST) Front washer switch ON	0 ++10ms +FKIB4958J 1.2 V
37	Ground	Key switch	Input	Insert mechanical key into ignition key cylin- der Remove mechanical key from ignition key cylinder		Battery voltage
(R/W)	Cround		input			0 V
38	Ground	Ignition switch ON	Input	Ignition switch OFF or ACC		0 V
(O)	Ground		input	Ignition switch ON		Battery voltage
39 (L)	Ground	CAN-H	Input/ Output	_		_
40 (P)	Ground	CAN-L	Input/ Output		_	

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

	nal No.	Description				Value	
(Wire +	color)	Signal name	Input/ Output		Condition	Value (Approx.)	A
43 (W)	Ground	Back door switch	Input	Back door switch	OFF (When back door closed)	(V) 15 10 5 0 ++10ms PKIB4960J 7.0 - 8.0 V	B C D
					ON (When back door opened)	0 V	
4.4		Deer winer eten no		Invition owitch	Rear wiper stop position	12 V	E
44 (LG)	Ground	Rear wiper stop po- sition	Input	Ignition switch ON	Any position other than rear wiper stop position	0 V	- F
45 (GR)	Ground	Door lock and unlock switch LOCK	Input	Door lock and unlock switch	NEUTRAL position	(V) 15 10 5 0 10 ms JPMIA0012GB 1.0 - 1.5 V	G
					LOCK position	0 V	
46 (BR)	Ground	Door lock and unlock switch UNLOCK	Input	Door lock and unlock switch	NEUTRAL position	(V) 15 10 5 0 10 ms JPMIA0012GB 1.0 - 1.5 V	J
					UNLOCK position	0 V	L
47 (BR/Y)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closed)	(V) 15 0 5 0 ++10ms РКІВ4960J 7.0 - 8.0 V	M
					ON (When driver door opened)	0 V	0

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

	nal No.	Description				Value		
(Wire	color)	Signal name	Input/ Output	Condition		(Approx.)		
48 (W/G)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (When rear LH door closed)	(V) 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
					ON (When rear LH door opened)	0 V		
49				Luggage room	Back door is closed (Back door lamp turns OFF)	12 V		
(Y)	Ground	Luggage room lamp	Output	lamp switch DOOR position	Back door is opened (Back door lamp turns ON)	0 V		
50* ¹	Ground	A/C indicator	Output	A/C indicator	OFF	12 V		
(SB)	Croana		Output		ON	0 V		
54	Ground	Rear wiper	Output	Ignition switch	Rear wiper switch OFF	0 V		
(L/W)	Croana		Output	ON	Rear wiper switch ON	12 V		
						Interior room lamp battery saver is activated. (Cuts the interior room lamp power supply)		0 V
56 (L)	Ground	Interior room lamp power supply	Output	Interior room lamp battery saver is not activated. (Outputs the interior room lamp power supply)		12 V		
57 (Y)	Ground	Battery power sup- ply	Input	Ignition switch O	FF	Battery voltage		
59	Ground	Driver door UN-	Output	Driver door	UNLOCK (Actuator is activated)	12 V		
(L/B)	Ground	LOCK	Output	Diverdoor	Other then UNLOCK (Ac- tuator is not activated)	0 V		
					Turn signal switch OFF	0 V		
60 (W/B)	Ground	Turn signal LH	Output	lgnition switch ON	Turn signal switch LH	(V) 15 0 0 15 0 15 0 15 0 15 0 15 0 15 0 15 0 0 0 0 0 0 0 0 0 0 0 0 0		
					Turn signal switch OFF	0 V		
61 (W/L)	Ground	Turn signal RH	Output	lgnition switch ON	Turn signal switch RH	(V) 15 10 5 0 		

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

	nal No.	Description				Value	_					
(Wire +	color)	Signal name	Input/ Output		Condition (Approx.)		A					
63	Orregard	Interior room lamp	Outrut	Interior room	OFF	12 V						
(BR)	Ground	timer control	Output	lamp	ON	0 V	— В					
65	Ground	All doors LOCK	Output	All doors	LOCK (Actuator is activat- ed)	12 V						
(V)	Ground	All doors LOCK	All doors LOCK	All doors LOCK	All doors LOCK	All doors LOCK	Output All	Calput	All doors	Other then LOCK (Actua- tor is not activated)	0 V	_ 0
66	Ground	Passenger door and	Output	Passenger door	Passenger door	UNLOCK (Actuator is activated)	12 V	D				
(G)	Ground	rear door UNLOCK	Output	and rear door	Other then UNLOCK (Ac- tuator is not activated)	0 V	_ E					
67 (B)	Ground	Ground	Output	Ignition switch O	N	0 V	— L					
68 (L)	Ground	P/W power supply (IGN)	Output	Ignition switch ON		12 V	F					
69 (L/W)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF		12 V	_					
70 (Y)	Ground	Battery power sup- ply	Input	Ignition switch OFF		Battery voltage	- G					

• *1: Only manual air conditioner

• *2: Automatic air conditioner

• *3: Manual air conditioner

Η

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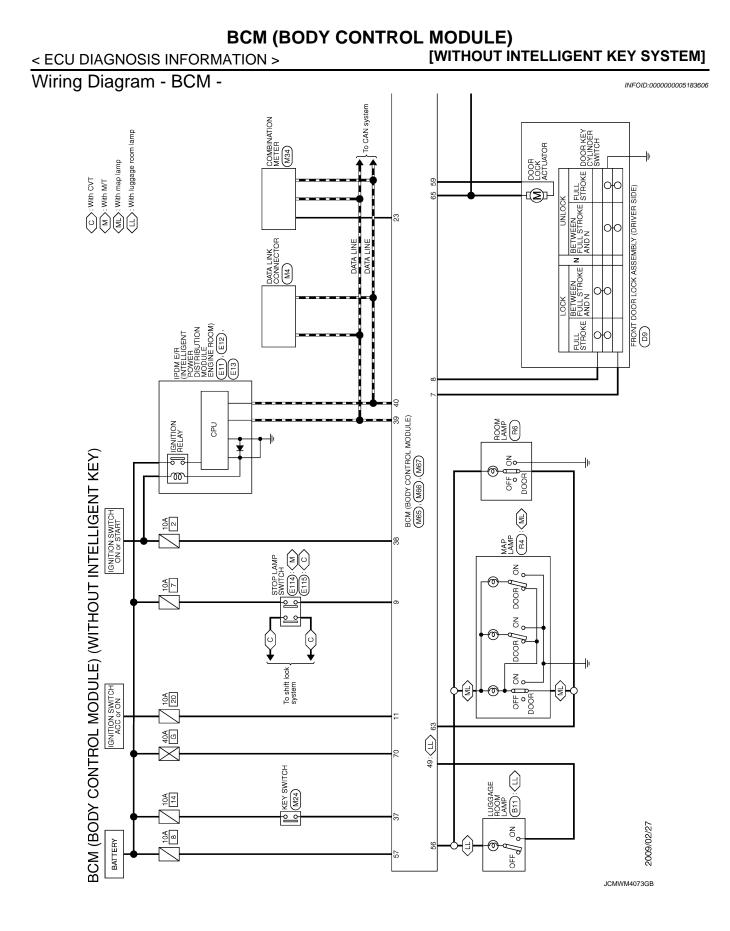
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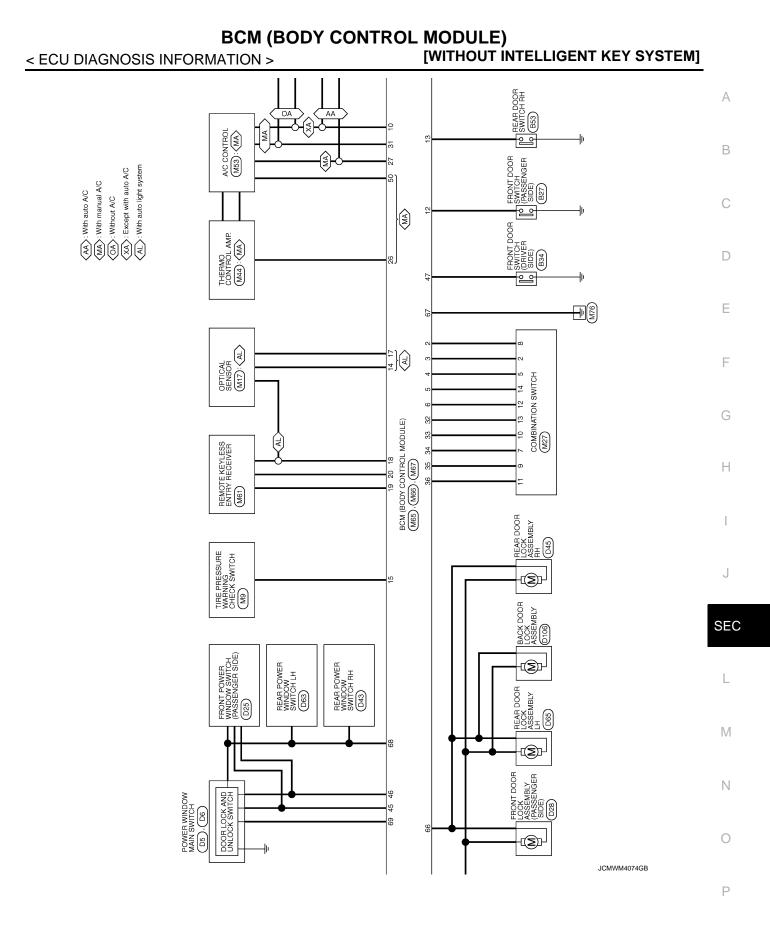
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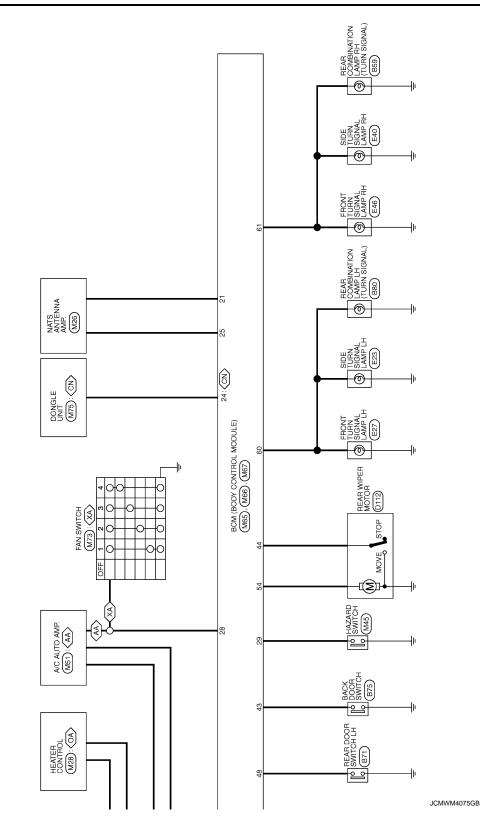
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Revision: 2009 March

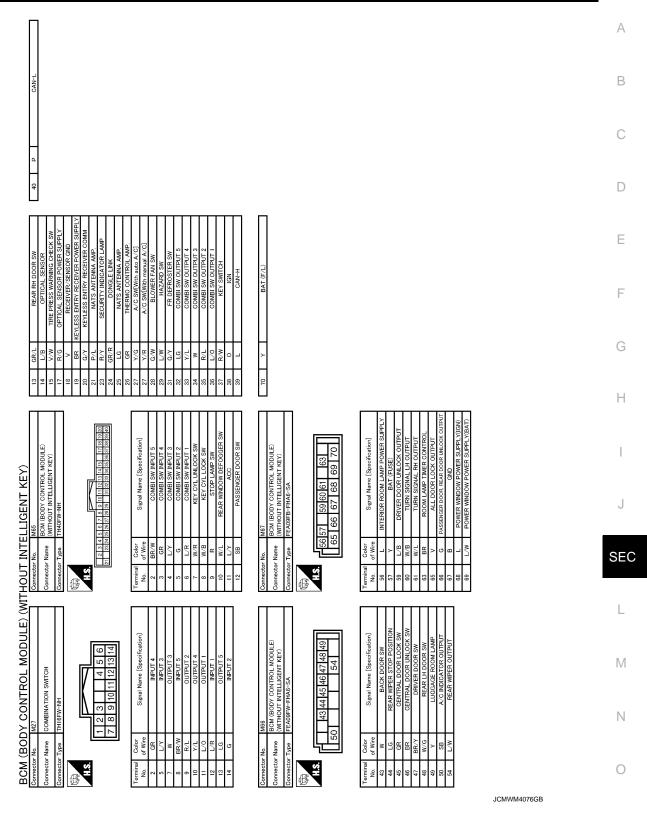
BCM (BODY CONTROL MODULE) < ECU DIAGNOSIS INFORMATION > [WITHOUT INTELLIGENT KEY SYSTEM]



CN) : For Canada AA) : With auto A/C OA) : Without A/C XA) : Except with auto A/C

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]



Fail-safe

INFOID:000000005183607

Ρ

FAIL-SAFE CONTROL BY DTC

BCM performs fail-safe control when any DTC are detected.

< ECU DIAGNOSIS INFORMATION >

UL	MODULE)
	[WITHOUT INTELLIGENT KEY SYSTEM]

Display contents of CONSULT	Fail-safe	Cancellation
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	Ignition switch $ON \rightarrow OFF$
B2196: DONGLE NG	Inhibit engine cranking	Erase DTC

REAR WIPER MOTOR PROTECTION

BCM detects the rear wiper stopping position according to the rear wiper auto stop signal.

When the rear wiper auto stop signal does not change more than 5 seconds while driving the rear wiper, BCM stops power supply to protect the rear wiper motor.

Condition of cancellation

- 1. Pass more than 1 minute after the rear wiper stop.
- 2. Turn rear wiper switch OFF.
- 3. Operate the rear wiper switch or rear washer switch.

HIGH FLASHER OPERATION

BCM detects the turn signal lamp circuit status by the current value.

BCM increases the turn signal lamp blinking speed if the bulb or harness open is detected with the turn signal lamp operating.

NOTE:

The blinking speed is normal while activating the hazard warning lamp.

DTC Inspection Priority Chart

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

Priority	DTC
1	U1000: CAN COMM U1010: CONTROL UNIT (CAN)
2	 B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM B2195: ANTI SCANNING B2196: DONGLE NG

INFOID:000000005183608

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Priority	DTC	_
3	C1735: IGN CIRCUIT OPEN	A
	C1704: LOW PRESSURE FL	
	C1705: LOW PRESSURE FR	D
	C1706: LOW PRESSURE RR	В
	C1707: LOW PRESSURE RL	
	• C1708: [NO DATA] FL	
	• C1709: [NO DATA] FR	С
	• C1710: [NO DATA] RR	0
	• C1711: [NO DATA] RL	
	C1712: [CHECKSUM ERR] FL	
	C1713: [CHECKSUM ERR] FR	D
	C1714: [CHECKSUM ERR] RR	
	C1715: [CHECKSUM ERR] RL	
4	C1716: [PRESSDATA ERR] FL	
•	C1717: [PRESSDATA ERR] FR	E
	C1718: [PRESSDATA ERR] RR	
	C1719: [PRESSDATA ERR] RL	
	• C1720: [CODE ERR] FL	_
	C1721: [CODE ERR] FR	F
	C1722: [CODE ERR] RR	
	C1723: [CODE ERR] RL	
	C1724: [BATT VOLT LOW] FL	G
	C1725: [BATT VOLT LOW] FR	0
	C1726: [BATT VOLT LOW] RR	
	C1727: [BATT VOLT LOW] RL	
	C1729: VHCL SPEED SIG ERR	Н
	C1734: CONTROL UNIT	

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	Tire pressure monitor warn- ing lamp ON	Reference
U1000: CAN COMM	—	—	BCS-116
U1010: CONTROL UNIT (CAN)	—	—	BCS-117
B2190: NATS ANTENNA AMP	×	—	<u>SEC-217</u>
B2191: DIFFERENCE OF KEY	×	—	<u>SEC-220</u>
B2192: ID DISCORD BCM-ECM	×	—	<u>SEC-221</u>
B2193: CHAIN OF BCM-ECM	×	—	<u>SEC-223</u>
B2195: ANTI SCANNING	×	—	<u>SEC-224</u>
B2196: DONGLE NG	×	—	<u>SEC-225</u>
C1704: LOW PRESSURE FL	—	×	
C1705: LOW PRESSURE FR	_	×	WT 16
C1706: LOW PRESSURE RR	_	×	<u>WT-16</u>
C1707: LOW PRESSURE RL	_	×	

SEC

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INFOID:000000005183609

ECU DIAGNOSIS INFORMATION >	[WI	THOUT INTE	LLIGENT KEY SYSTEM]
CONSULT display	Fail-safe	Tire pressure monitor warn- ing lamp ON	Reference
C1708: [NO DATA] FL	_	×	
C1709: [NO DATA] FR	—	×	<u>WT-18</u>
C1710: [NO DATA] RR		×	<u></u>
C1711: [NO DATA] RL		×	-
C1712: [CHECKSUM ERR] FL		×	
C1713: [CHECKSUM ERR] FR	-	×	WT-21
C1714: [CHECKSUM ERR] RR	—	×	
C1715: [CHECKSUM ERR] RL	_	×	
C1716: [PRESS DATA ERR] FL	_	×	
C1717: [PRESS DATA ERR] FR	—	×	
C1718: [PRESS DATA ERR] RR	—	×	- <u>WT-24</u>
C1719: [PRESS DATA ERR] RL	—	×	
C1720: [CODE ERR] FL	_	×	
C1721: [CODE ERR] FR	—	×	<u>WT-26</u>
C1722: [CODE ERR] RR	—	×	<u>vv1-20</u>
C1723: [CODE ERR] RL	—	×	-
C1724: [BATT VOLT LOW] FL	-	×	
C1725: [BATT VOLT LOW] FR	-	×	WT-29
C1726: [BATT VOLT LOW] RR	-	×	<u>vv 1-29</u>

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<u>WT-32</u>

<u>WT-34</u>

BCS-118

C1727: [BATT VOLT LOW] RL

C1734: CONTROL UNIT

C1735: IGN CIRCUIT OPEN

C1729: VHCL SPEED SIG ERR

SECURITY INDICATOR LAMP DOES NOT TURN ON OR BLINK

SECONT FINDICATOR LAWF DOES NOT TORN ON OR BEINK	
< SYMPTOM DIAGNOSIS > [WITHOUT INTELLIGENT KEY SYSTEM]	
SYMPTOM DIAGNOSIS	А
SECURITY INDICATOR LAMP DOES NOT TURN ON OR BLINK	~
Description INFOID:00000005148493	В
Security indicator lamp does not blink when ignition switch is in a position other than ON NOTE:	
 Before performing the diagnosis, check "Work Flow". Refer to <u>SEC-6, "Work Flow"</u>. Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom. 	С
CONDITIONS OF VEHICLE (OPERATING CONDITIONS) Ignition switch is not in the ON position.	D
Diagnosis Procedure	Е
1.CHECK SECURITY INDICATOR LAMP	
Check security indicator lamp. Refer to <u>SEC-113, "Component Function Check"</u> .	F
<u>Is the inspection result normal?</u> YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts.	G
2.CONFIRM THE OPERATION	
Confirm the operation again.	Н
Is the result normal?	
 YES >> Check intermittent incident. Refer to <u>GI-34. "Intermittent Incident"</u>. NO >> GO TO 1. 	Ι
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VEHICLE SECURITY SYSTEM CANNOT BE SET

< SYMPTOM DIAGNOSIS >

VEHICLE SECURITY SYSTEM CANNOT BE SET

Description

Armed phase is not activated when door is locked using keyfob.

NOTE:

Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.

CONDITION OF VEHICLE (OPERATING CONDITION) Confirm the setting of "SECURITY ALARM SET" in "WORK SUPPORT" in "THEFT ALM" using CONSULT-III.

Diagnosis Procedure

INFOID:000000005148496

INFOID:000000005148495

1.CHECK REMOTE KEYLESS ENTRY SYSTEM

Lock/unlock door with keyfob.

Refer to DLK-232, "System Description".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check remote keyless entry system. Refer to <u>DLK-306. "Diagnosis Procedure"</u>.

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-34, "Intermittent Incident".

NO >> GO TO 1.

VEHICLE SECURITY ALARM DOES NOT ACTIVATE

< SYMPTOM DIAGNOSIS >	[WITHOUT INTELLIGENT KEY SYSTEM]
VEHICLE SECURITY ALARM DOES NOT	
Description	INFOID:00000005148499
Alarm does not operate when alarm operating condition is sati NOTE: Check that vehicle is under the condition shown in "Conditions each symptom.	of vehicle" before starting diagnosis, and check
CONDITIONS OF VEHICLE (OPERATING CONDITIONS SECURITY ALARM SET" in "WORK SUPPORT" of "THEFT A	
Diagnosis Procedure	INFOID:000000005148500
1.CHECK DOOR SWITCH	
Check door switch. Refer to <u>DLK-242, "Component Function Check"</u> .	
Is the inspection result normal? YES >> GO TO 2. NO >> Replace the malfunctioning door switch	
Check headlamp function. Refer to <u>SEC-232, "Component Function Check"</u> .	
s the inspection result normal? YES >> GO TO 3.	
NO >> Repair or replace the malfunctioning parts.	
3.CHECK HORN FUNCTION	
Check horn function. Refer to <u>SEC-230, "Component Function Check"</u> . Is the inspection result normal?	
YES >> GO TO 4. NO >> Repair or replace the malfunctioning parts. 4. CONFIRM THE OPERATION	S
Confirm the operation again. <u>Is the result normal?</u> YES >> Check intermittent incident. Refer to <u>GI-34, "Intern</u>	nittent Incident".
NO >> GO TO 1.	

< PRECAUTION > PRECAUTION PRECAUTIONS

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

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

WARNING:

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

REMOVAL AND INSTALLATION NATS ANTENNA AMP.		А
Exploded View	INFOID:000000005038306	В
Refer to IP-12, "Exploded View".		
Removal and Installation	INFOID:000000005038307	С
REMOVAL		
 Remove the switch panel finisher. Refer to <u>IP-13, "Removal and Installation"</u>. 		D
2. Disengage pawl with flat blade screwdriver.		F
 Pawl Pull NATS antenna amp.(1) forward and then remove push-button ignition switch (2). 		F
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INSTALLATION Install in the reverse order of removal.

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