

# SECTION **SEC**

## SECURITY CONTROL SYSTEM

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## PRECAUTION

### PRECAUTIONS

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

INFOID:000000009754574

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:**

Always observe the following items for preventing accidental activation.

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that 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 "SRS AIR BAG".
- Never 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:**

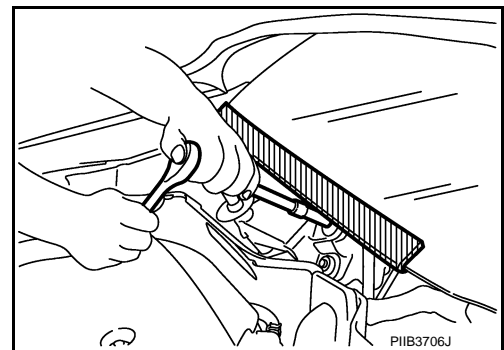
Always observe the following items for preventing accidental activation.

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never 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 for Procedure without Cowl Top Cover

INFOID:000000009754575

When performing the procedure after removing cowl top cover, cover the lower end of windshield with urethane, etc to prevent damage to windshield.



# COMPONENT PARTS

< SYSTEM DESCRIPTION >

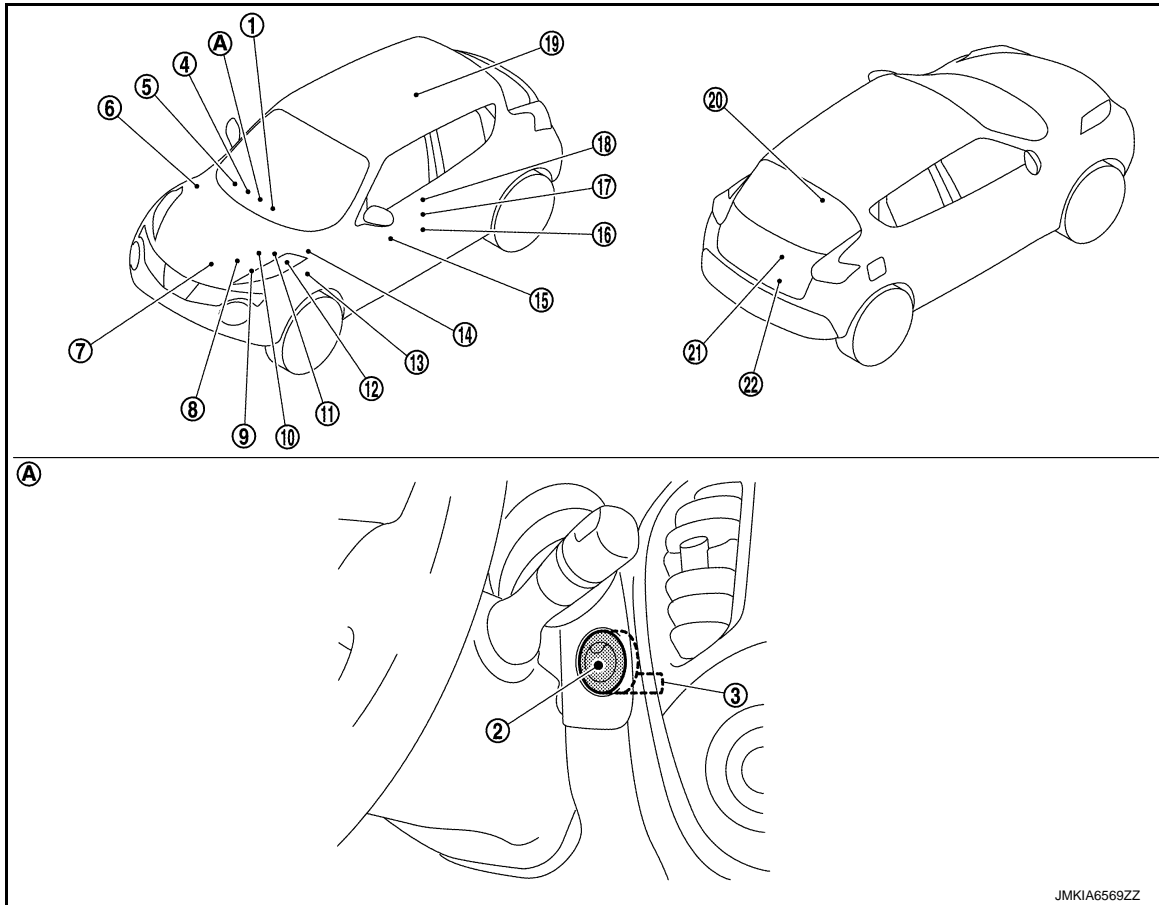
[WITH INTELLIGENT KEY SYSTEM]

## SYSTEM DESCRIPTION

### COMPONENT PARTS

#### Component Parts Location

INFOID:000000009754576



- |   |   |  |
|---|---|--|
| 1. Combination meter<br>Refer to <a href="#">MWI-5, "METER SYSTEM : Component Parts Location"</a> .   | 2. Push-button ignition switch  | 3. NATS antenna amp.   |
| 4. Inside key antenna (instrument center)<br>Refer to <a href="#">DLK-12, "Component Parts Location"</a> .  | 5. Remote keyless entry receiver<br>Refer to <a href="#">DLK-12, "Component Parts Location"</a> .                               | 6. ABS actuator and electric unit (control unit)<br>Refer to <a href="#">BRC-9, "Component Parts Location"</a> . |
| 7. Park/neutral position switch (M/T models)<br>Refer to <a href="#">TM-13, "Component Parts Location"</a> .                                      | 8. Transmission range switch (CVT models)<br>Refer to <a href="#">TM-150, "CVT CONTROL SYSTEM : Component Parts Location"</a> . | 9. ECM<br>Refer to <a href="#">EC-14, "ENGINE CONTROL SYSTEM : Component Parts Location"</a> .                   |
| 10. IPDM E/R<br>Refer to <a href="#">PCS-5, "Component Parts Location"</a> .  | 11. TCM (CVT models)<br>Refer to <a href="#">TM-150, "CVT CONTROL SYSTEM : Component Parts Location"</a> .                      | 12. Stop lamp switch<br>Refer to <a href="#">EC-14, "ENGINE CONTROL SYSTEM : Component Parts Location"</a> .     |
| 13. Clutch interlock switch (M/T models)<br>Refer to <a href="#">STR-5, "STARTING SYSTEM (WITH INTELLIGENT KEY) : Component Parts Location"</a> . | 14. BCM<br>Refer to <a href="#">BCS-6, "BODY CONTROL SYSTEM : Component Parts Location"</a> .                                   | 15. Power window main switch (door lock and unlock switch)   |
| 16. Front door switch (driver side)   | 17. Front door lock assembly (door key cylinder switch)   | 18. Front door request switch (driver side)  |

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# COMPONENT PARTS

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

19. Inside key antenna (console)  
Refer to [DLK-12](#),  
["Component Parts Location"](#).
20. Inside key antenna (luggage room)  
Refer to [DLK-12](#),  
["Component Parts Location"](#).
21. Back door request switch
22. Back door opener assembly (back door switch)
  - A. Behind push-button ignition switch

## Component Description

INFOID:000000009754577

Component	Reference
BCM	<a href="#">SEC-8</a>
CVT shift selector (detention switch) (CVT models)	<a href="#">SEC-8</a>
ECM	<a href="#">SEC-9</a>
IPDM E/R	<a href="#">SEC-9</a>
NATS antenna amp.	<a href="#">SEC-9</a>
TCM (CVT models)	<a href="#">SEC-9</a>
Clutch interlock switch (M/T models)	<a href="#">SEC-9</a>
Combination meter	<a href="#">SEC-9</a>
Door switch	<a href="#">SEC-9</a>
Inside key antenna	<a href="#">SEC-9</a>
Intelligent Key	<a href="#">SEC-9</a>
Park/neutral position switch (M/T models)	<a href="#">SEC-10</a>
Push-button ignition switch	<a href="#">SEC-10</a>
Remote keyless entry receiver	<a href="#">SEC-10</a>
Security indicator lamp	<a href="#">SEC-10</a>
Starter control relay	<a href="#">SEC-10</a>
Starter relay	<a href="#">SEC-10</a>
Stop lamp switch	<a href="#">SEC-10</a>
Transmission range switch (CVT models)	<a href="#">SEC-10</a>
Vehicle information display	<a href="#">SEC-11</a>

## BCM

INFOID:000000009754578

BCM controls INTELLIGENT KEY SYSTEM (ENGINE START FUNCTION), NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS [NVIS (NATS)], and VEHICLE SECURITY SYSTEM.

BCM performs the ID verification between BCM and Intelligent Key when the Intelligent Key is carried into the detection area of inside key antenna, and push-button ignition switch is pressed. If the ID verification result is OK, push-button ignition switch operation is available.

Then, when the power supply position is turned ON, BCM performs ID verification between BCM and ECM. If the ID verification result is OK, ECM can start engine.

## CVT Shift Selector (Detention Switch)

INFOID:000000009754579

Detention switch detects that CVT shift selector is in the P position, and then transmits the signal to BCM and IPDM E/R.

BCM confirms the CVT shift selector position with the following 5 signals.

- P position signal from CVT shift selector (detention switch)
- P/N position signal from transmission range switch
- P position signal from IPDM E/R (CAN)
- P/N position signal from IPDM E/R (CAN)
- P/N position signal from TCM (CAN)

IPDM E/R confirms the CVT shift selector position with the following 3 signals.

- P position signal from CVT shift selector (detention switch)



# COMPONENT PARTS

[WITH INTELLIGENT KEY SYSTEM]

## < SYSTEM DESCRIPTION >

- P/N position signal from transmission range switch
- P/N position signal from BCM (CAN)

### ECM

INFOID:000000009754580

ECM controls the engine.

When power supply position is turned ON, BCM starts communication with ECM and performs the ID verification between BCM and ECM.

If the verification result is OK, the engine can start. If the verification result is NG, the engine can not start.

When ECM restarts engine by the Stop/Start System (CVT models), ECM transmits the control signals to IPDM E/R and BCM to crank engine.

### IPDM E/R

INFOID:000000009754581

IPDM E/R has starter relay and starter control relay inside. Starter relay and starter control relay are used for the engine starting function. Starter relay is controlled by BCM, and starter control relay is controlled by IPDM E/R while communicating with BCM.

During engine is running, IPDM E/R controls starter control relay according to the cranking request signal from ECM for Stop/Start System.

### NATS Antenna Amp.

INFOID:000000009754582

The ID verification is performed between BCM and transponder in Intelligent Key via NATS antenna amp. when Intelligent Key backside is contacted to push-button ignition switch in case that Intelligent Key battery is discharged. If the ID verification result is OK, the operation of starting engine is available.

### TCM

INFOID:000000009754583

TCM transmits the shift position signal (P/N position) to BCM and IPDM E/R via CAN communication.

BCM confirms the CVT shift selector position with the following 5 signals.

- P position signal from CVT shift selector (detention switch)
- P/N position signal from transmission range switch
- P position signal from IPDM E/R (CAN)
- P/N position signal from IPDM E/R (CAN)
- P/N position signal from TCM (CAN)

IPDM E/R confirms the CVT shift selector position with the following 3 signals.

- P position signal from CVT shift selector (detention switch)
- P/N position signal from transmission range switch
- P/N position signal from BCM (CAN)

### Clutch Interlock Switch

INFOID:000000009754584

Clutch interlock switch detects that clutch pedal is depressed, then provides power source to starter control relay and starter relay, and transmits ON/OFF signal to BCM.

### Combination Meter

INFOID:000000009754585

Combination meter transmits the vehicle speed signal to BCM via CAN communication.

BCM also receives the vehicle speed signal from ABS actuator and electric unit (control unit) via CAN communication. BCM compares both signals to detect the vehicle speed.

### Door Switch

INFOID:000000009754586

Door switch detects door open/close condition and then transmits ON/OFF signal to BCM.

### Inside Key Antenna

INFOID:000000009754587

Inside key antenna detects whether Intelligent Key is inside the vehicle, and transmits the signal to BCM.

Three inside key antennas are installed in the instrument center, console and luggage room.

### Intelligent Key

INFOID:000000009754588

Each Intelligent key has an individual electronic ID, and transmits the ID signal by request from BCM.

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# COMPONENT PARTS

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Carrying the Intelligent Key whose ID is registered in BCM, the driver can perform door lock/unlock operation and push-button ignition switch operation.

## Park/Neutral Position Switch

INFOID:000000009754589

Park/neutral position switch detects that shift lever is in the neutral position, and then transmits ON/OFF signal to BCM.

## Push-button Ignition Switch

INFOID:000000009754590

Push-button ignition switch detects that push-button is pressed, and then transmits the signal to BCM. BCM changes the power supply position with the operation of push-button ignition switch. BCM maintains the power supply position status while push-button is not operated.

## Remote Keyless Entry Receiver

INFOID:000000009754591

Remote keyless entry receiver receives each button operation signal and electronic key ID signal from Intelligent Key, and then transmits the signal to BCM.

## Security Indicator Lamp

INFOID:000000009754592

Security indicator lamp is located on combination meter.  
Security indicator lamp blinks when power supply position is any position other than ON to warn that NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS [NVIS (NATS)] is on board.

## Starter Control Relay

INFOID:000000009754593

Engine starting system functions by controlling both starter relay and starter control relay.  
Both relays are integrated in IPDM E/R. Starter relay is controlled by BCM, and starter control relay is controlled by IPDM E/R on request from BCM.  
IPDM E/R transmits starter relay and starter control relay status signal to BCM via CAN communication.  
During engine is running, starter control relay is controlled by IPDM E/R according to the cranking request signal from ECM for Stop/Start System.

## Starter Relay

INFOID:000000009754594

Engine starting system functions by controlling both starter relay and starter control relay.  
Both relays are integrated in IPDM E/R. Starter relay is controlled by BCM, and starter control relay is controlled by IPDM E/R on request from BCM.  
IPDM E/R transmits starter relay and starter control relay status signal to BCM via CAN communication.  
During engine is running, starter relay is controlled by BCM according to the cranking request signal from ECM for Stop/Start System.

## Stop Lamp Switch

INFOID:000000009754595

Stop lamp switch detects that brake pedal is depressed, and then transmits the signal to BCM.

## Transmission Range Switch

INFOID:000000009754596

Transmission range switch is integrated in CVT assembly, and detects the CVT shift selector position.  
TCM receives the transmission range switch signal and then transmits the P/N position signal to BCM and IPDM E/R.

BCM confirms the CVT shift selector position with the following 5 signals.

- P position signal from CVT shift selector (detention switch)
- P/N position signal from transmission range switch
- P position signal from IPDM E/R (CAN)
- P/N position signal from IPDM E/R (CAN)
- P/N position signal from TCM (CAN)

IPDM E/R confirms the CVT shift selector position with the following 3 signals.

- P position signal from CVT shift selector (detention switch)
- P/N position signal from transmission range switch
- P/N position signal from BCM (CAN)

# COMPONENT PARTS

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

## Vehicle Information Display

INFOID:000000009754597

Vehicle information display is integrated in combination meter.  
Various information and warnings regarding to the Intelligent Key System are displayed.

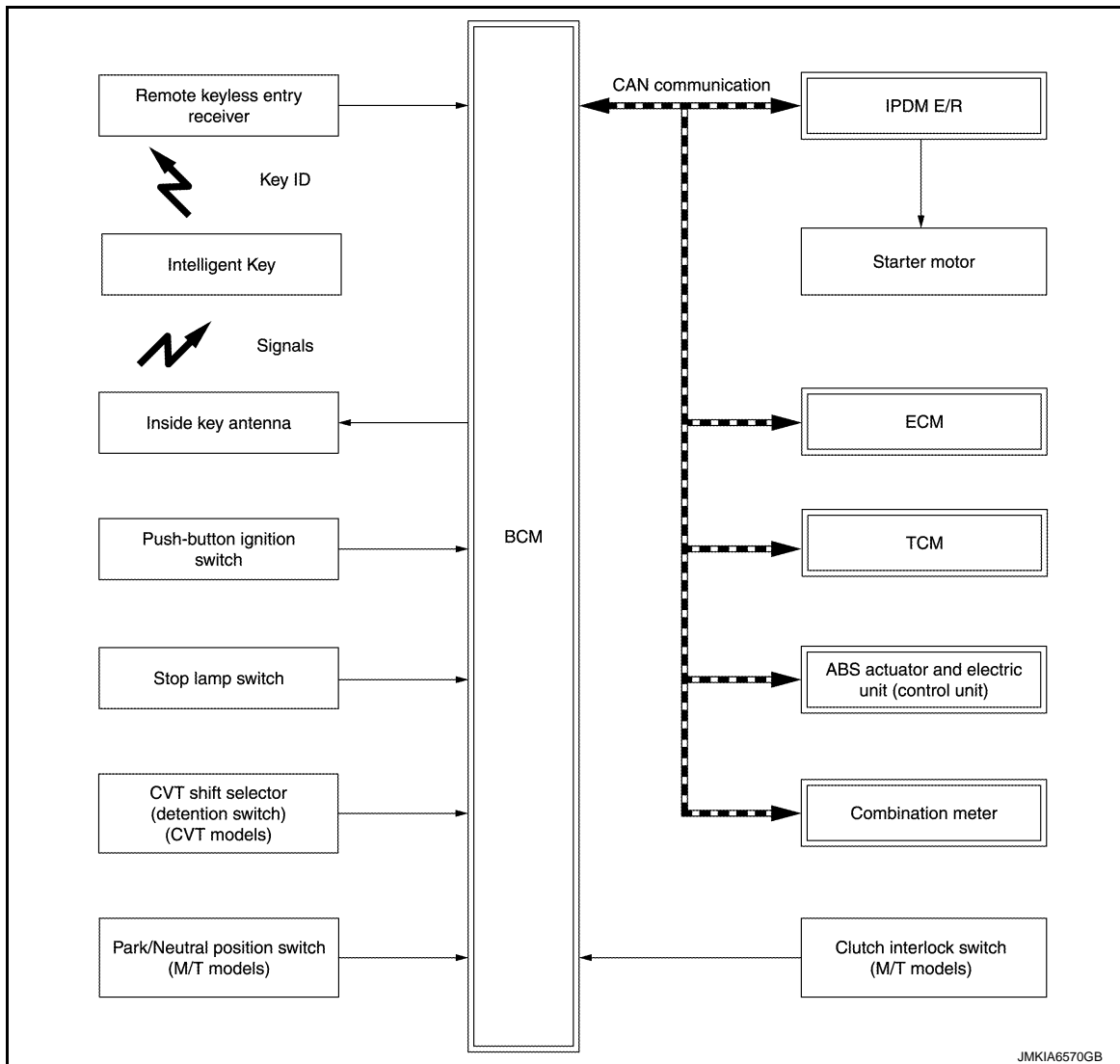
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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION : System Diagram

INFOID:000000009754598



INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION : System Description

INFOID:000000009754599

SYSTEM DESCRIPTION

- The engine start function of Intelligent Key system makes it possible to start and stop the engine without using the key, based on the electronic ID verification. The electronic ID verification is performed between BCM and Intelligent Key when the push-button ignition switch is pressed while the Intelligent Key is within the detection area of inside key antenna.

**NOTE:**

The driver should carry the Intelligent Key at all times.

- Intelligent Key has 2 IDs [Intelligent Key ID and NVIS (NATS) ID]. 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, the NVIS (NATS) ID verification is performed.
- If the ID is successfully verified, engine can be started.
- Up to 4 Intelligent Keys can be registered (Including the standard Intelligent Key) upon request from the customer.

**NOTE:**

Refer to [DLK-16, "INTELLIGENT KEY SYSTEM : System Description"](#) for any functions other than engine start function of Intelligent Key system.

**PRECAUTIONS FOR INTELLIGENT KEY SYSTEM**

**The transponder [the chip for NVIS (NATS) ID verification] is integrated into the Intelligent Key. (For the conventional models, it is integrated into the mechanical key.) Therefore, ID verification cannot be performed by mechanical key only.**

**In that case, the NVIS (NATS) ID verification can be performed when Intelligent Key backside is contacted to push-button ignition switch. If verification result is OK, engine can be started.**

**OPERATION WHEN INTELLIGENT KEY IS CARRIED**

1. When the push-button ignition switch is pressed, BCM activates the inside key antenna and transmits the request signal to the Intelligent Key.
2. The Intelligent Key receives the request signal and transmits the Intelligent Key ID signal to the BCM.
3. BCM receives the Intelligent Key ID signal via remote keyless entry receiver and verifies it with the registered ID.
4. BCM turns ACC relay ON and transmits the ignition power supply ON signal to IPDM E/R.
5. IPDM E/R turns the ignition relay ON to start the ignition power supply.
6. IPDM E/R turns the starter control relay ON for engine starting in advance.
7. BCM detects that the selector lever position and brake pedal operating condition (CVT models), or clutch pedal operation condition (M/T models).
8. BCM transmits the starter request signal to IPDM E/R and turns the starter relay in IPDM E/R ON if BCM judges that the engine start condition\* is satisfied.
9. Power source is supplied to starter motor through the starter relay and the starter control relay.

**CAUTION:**

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

10. 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:**

**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.**

\*: For the engine start condition, refer to "POWER SUPPLY POSITION CHANGE TABLE BY PUSH-BUTTON IGNITION SWITCH OPERATION".

**OPERATION RANGE**

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

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

When Intelligent Key battery is discharged, the NVIS (NATS) ID verification between transponder integrated into Intelligent Key and BCM is performed when Intelligent Key backside is contacted to push-button ignition switch. If the verification result is OK, engine can be started.

**POWER SUPPLY POSITION CHANGE TABLE BY PUSH-BUTTON IGNITION SWITCH OPERATION**

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, they are equivalent to the operations below.
- When starting the engine, the BCM monitors the engine start conditions as per the following,

**CVT models**

- Brake pedal operating condition
- Selector lever position
- Vehicle speed

**M/T models**

# SYSTEM

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

- Clutch pedal operating condition
- Vehicle speed

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

Power supply position	Engine start/stop condition			Push-button ignition switch operation frequency
	CVT models		M/T models	
	Selector lever	Brake pedal operation condition	Clutch pedal operation condition	
OFF → ACC	—	Not depressed	Not depressed	1
OFF → ACC → ON	—	Not depressed	Not depressed	2
OFF → ACC → ON → OFF	—	Not depressed	Not depressed	3
OFF → START ACC → START ON → START	P or N position	Depressed	Depressed	1
Engine is running → OFF	—	—	—	1

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

Power supply position	Engine start/stop condition			Push-button ignition switch operation frequency
	CVT models		M/T models	
	Selector lever	Brake pedal operation condition	Clutch pedal operation condition	
Engine is running → ACC	—	—	—	Emergency stop operation
Engine stall return operation while driving	N position	Not depressed	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.

## NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

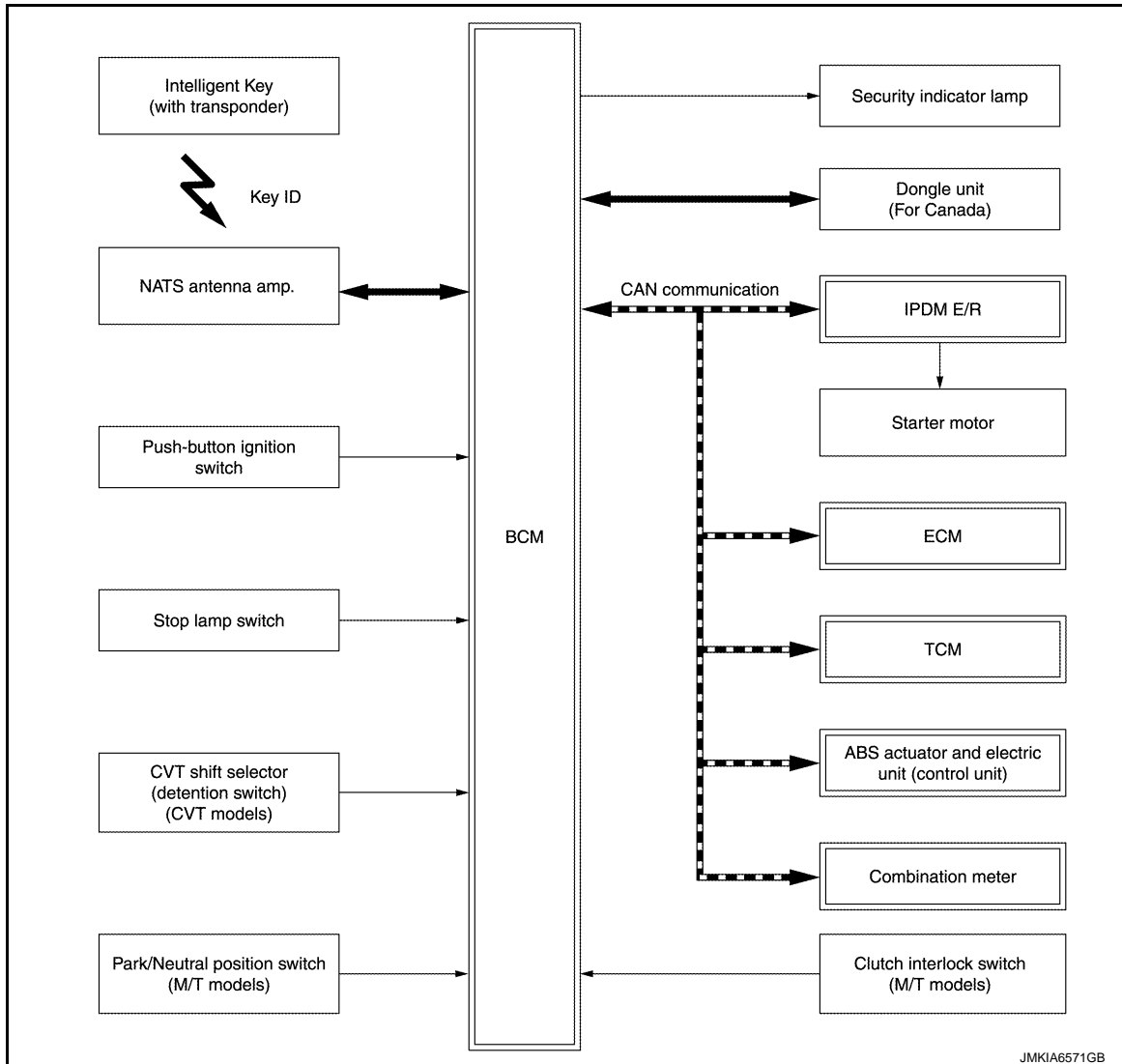
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< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

## NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS : System Diagram

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## NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS : System Description

INFOID:000000009754601

### SYSTEM DESCRIPTION

- The NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS [NVIS (NATS)] prevents the engine from being started by Intelligent Key whose ID is not registered to the vehicle (BCM). It has higher protection against auto theft involving the duplication of mechanical keys.
- The ignition key integrated in the Intelligent Key cannot start the engine. When the Intelligent Key battery is discharged, the NVIS (NATS) ID verification is performed between the transponder integrated into Intelligent Key and BCM via NATS antenna amp. when the 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.
- The security indicator lamp on combination meter always blinks when the power supply position is any position other than ON which warns that the NVIS (NATS) is on board the model.
- Up to 4 Intelligent Keys can be registered (including the standard ignition key) upon request from the owner.
- Specified registration is required when replacing ECM, BCM or Intelligent Key.
- Possible symptom of NVIS (NATS) malfunction is "Engine cannot start". The engine can not be started because of other than NVIS (NATS) malfunction, so start the trouble diagnosis according to [SEC-44, "Work Flow"](#).
- If ECM other than genuine part is installed, the engine cannot be started. For ECM replacement procedure, refer to [EC-140, "Work Procedure"](#).

### PRECAUTIONS FOR KEY REGISTRATION

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# SYSTEM

## < SYSTEM DESCRIPTION >

## [WITH INTELLIGENT KEY SYSTEM]

- The ID registration is a procedure that erases the current NVIS (NATS) ID once, and then registers a new ID. Therefore 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].

### SECURITY INDICATOR LAMP

- Warns that the vehicle is equipped with NVIS (NATS).
- Security indicator lamp always blinks when the power supply position is any position other than ON.

**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 (CVT models), BCM activates NATS antenna amp. that is located behind push-button ignition switch.
2. When Intelligent Key (transponder built-in) backside is contacted to push-button ignition switch, BCM starts NVIS (NATS) ID verification between BCM and Intelligent Key (transponder built-in) via NATS antenna amp.
3. When the NVIS (NATS) ID verification result is OK, buzzer in combination meter sounds and BCM transmits the result to ECM.
4. When push-button ignition switch is pressed, BCM turns ACC relay ON and transmits ignition power supply ON signal to IPDM E/R.
5. IPDM E/R turns the starter control relay ON for engine starting in advance.
6. IPDM E/R turns the ignition relay ON to start the ignition power supply.
7. BCM detects that the selector lever position and brake pedal operating condition (CVT models), or clutch pedal operation condition (M/T models).
8. BCM transmits starter request signal to IPDM E/R and turns the starter relay in IPDM E/R ON if BCM judges that the engine start condition\* is satisfied.
9. Power supply is supplied to the starter motor through the starter relay and the starter control relay.
10. When BCM receives feedback signal from ECM indicating that the engine is started, BCM transmits a stop signal to IPDM E/R to stop cranking by turning off the starter motor relay. (If engine start is unsuccessful, cranking stops automatically within 5 seconds.)

\*: For the engine start condition, refer to "POWER SUPPLY POSITION CHANGE TABLE BY PUSH-BUTTON IGNITION SWITCH OPERATION" below.

### POWER SUPPLY POSITION CHANGE TABLE BY PUSH-BUTTON IGNITION SWITCH OPERATION

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, they are equivalent to the operations below.
- When starting the engine, the BCM monitors the engine start conditions as per the following,

**CVT models**

- Brake pedal operating condition
- Selector lever position
- Vehicle speed

**M/T models**

- Clutch pedal operating condition
- Vehicle speed

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

Power supply position	Engine start/stop condition			Push-button ignition switch operation frequency
	CVT models		M/T models	
	Selector lever	Brake pedal operation condition	Clutch pedal operation condition	
OFF → ACC	—	Not depressed	Not depressed	1
OFF → ACC → ON	—	Not depressed	Not depressed	2



# SYSTEM

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Power supply position	Engine start/stop condition			Push-button ignition switch operation frequency
	CVT models		M/T models	
	Selector lever	Brake pedal operation condition	Clutch pedal operation condition	
OFF → ACC → ON → OFF	—	Not depressed	Not depressed	3
OFF → START ACC → START ON → START	P or N position	Depressed	Depressed	1
Engine is running → OFF	—	—	—	1

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

Power supply position	Engine start/stop condition			Push-button ignition switch operation frequency
	CVT models		M/T models	
	Selector lever	Brake pedal operation condition	Clutch pedal operation condition	
Engine is running → ACC	—	—	—	Emergency stop operation
Engine stall return operation while driving	N position	Not depressed	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.

## VEHICLE SECURITY SYSTEM

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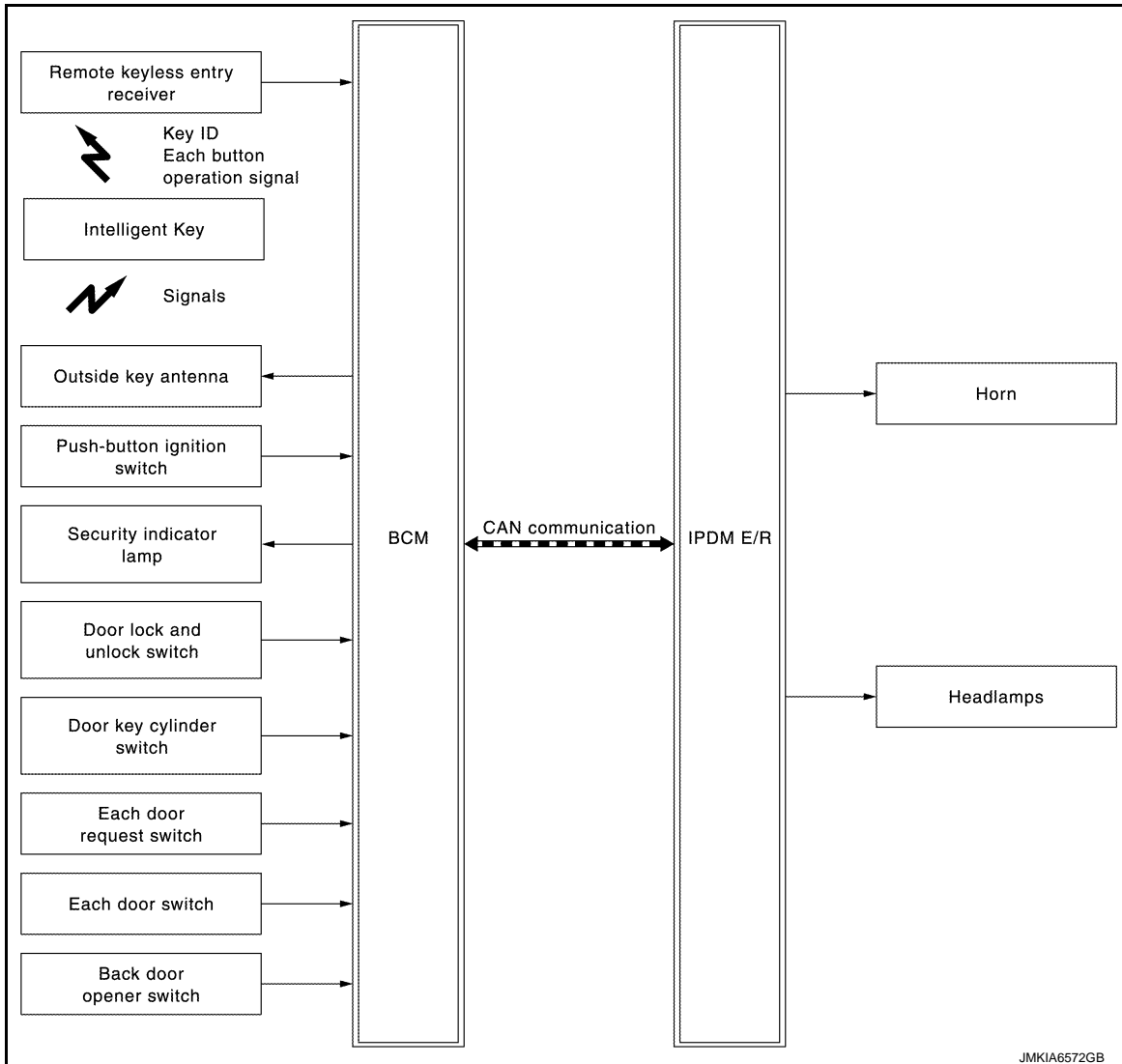
# SYSTEM

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

## VEHICLE SECURITY SYSTEM : System Diagram

INFOID:000000009754602



## VEHICLE SECURITY SYSTEM : System Description

INFOID:000000009754603

- The vehicle security system has two alarm functions (theft warning alarm and panic alarm), and reduces the possibility of a theft or mischief by activating horns and headlamps intermittently.
- The panic alarm does not start when the theft warning alarm is activating, and the panic alarm stops when the theft warning alarm is activated.

The priority of the functions are as per the following.

Priority	Function
1	Theft warning alarm
2	Panic alarm

### THEFT WARNING ALARM

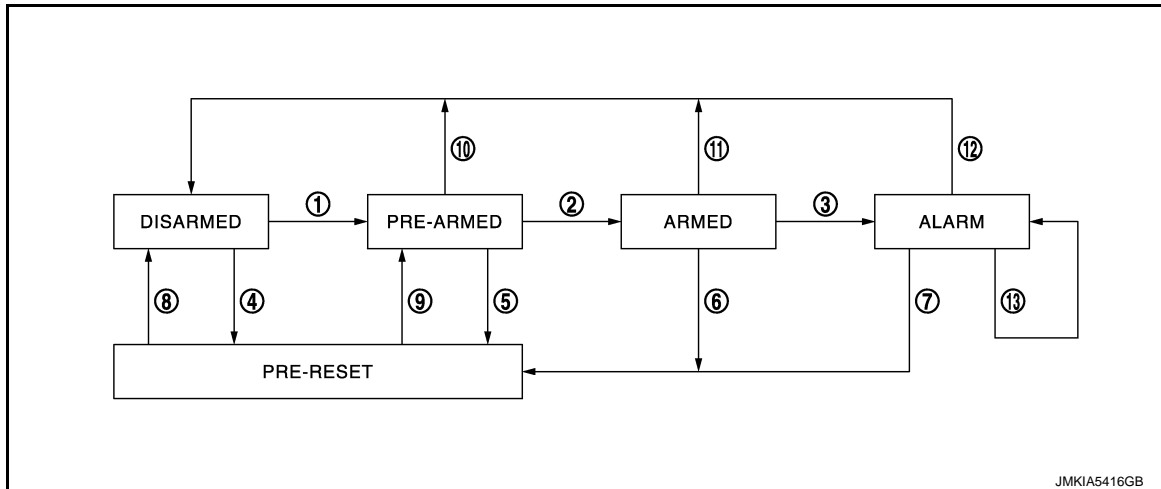
- The theft warning alarm function activates horns and headlamps intermittently when BCM detects that any door is opened by unauthorized means, while the system is in the ARMED state.
- Security indicator lamp on combination meter always blinks when power supply position is any position other than ON. Security indicator lamp blinking warns that the vehicle is equipped with a vehicle security system.

# SYSTEM

## < SYSTEM DESCRIPTION >

## [WITH INTELLIGENT KEY SYSTEM]

### Operation Flow



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No.	System state	Switching condition	Switching condition	
			A	B
1	DISARMED to PRE-ARMED	When all conditions of A and one condition of B is satisfied.	<ul style="list-style-type: none"> <li>Power supply position: OFF</li> <li>All doors: Closed</li> </ul>	<ul style="list-style-type: none"> <li>All doors are locked by:               <ul style="list-style-type: none"> <li>Door key cylinder LOCK switch</li> <li>LOCK button of Intelligent Key</li> <li>Door request switch</li> <li>Door lock and unlock switch</li> </ul> </li> </ul>
2	PRE-ARMED to ARMED	When all of the following conditions are satisfied for 30 seconds.	<ul style="list-style-type: none"> <li>Power supply position: OFF</li> <li>All doors: Locked</li> </ul>	
3	ARMED to ALARM	When all conditions of A and of B are satisfied.	<p style="text-align: center;">A</p> <ul style="list-style-type: none"> <li>Intelligent Key: Not used</li> </ul>	<p style="text-align: center;">B</p> <ul style="list-style-type: none"> <li>Any door: Open</li> </ul>
4	DISARMED to PRE-RESET	No conditions.		
5	PRE-ARMED to PRE-RESET			
6	ARMED to PRE-RESET			
7	ALARM to PRE-RESET			
8	PRE-RESET to DISARMED			
9	PRE-RESET to PRE-ARMED			
10	PRE-ARMED to DISARMED	When one of the following condition is satisfied.	<ul style="list-style-type: none"> <li>Power supply position: ACC/ON/CRANKING/RUN</li> <li>Door key cylinder UNLOCK switch: ON</li> <li>UNLOCK button of Intelligent Key: ON</li> <li>Door request switch: ON</li> <li>Back door opener switch: ON</li> <li>Any door: Open</li> </ul>	
11	ARMED to DISARMED	When one of the following condition is satisfied.	<ul style="list-style-type: none"> <li>Power supply position: ACC/ON/CRANKING/RUN</li> <li>Door key cylinder UNLOCK switch: ON</li> <li>UNLOCK button of Intelligent Key: ON</li> <li>Door request switch: ON</li> <li>Back door opener switch: ON</li> </ul>	
12	ALARM to DISARMED			
13	RE-ALARM	When the following condition is satisfied after the ALARM operation is finished.	<ul style="list-style-type: none"> <li>Any door: Open</li> </ul>	

**NOTE:**

- BCM ignores the door key cylinder UNLOCK switch signal input for 1 second after the door key cylinder LOCK switch signal input.

# SYSTEM

## < SYSTEM DESCRIPTION >

## [WITH INTELLIGENT KEY SYSTEM]

- To lock/unlock all doors by operating remote controller button of Intelligent Key or door request switch, Intelligent Key must be within the detection area of outside key antenna. For details, refer to [DLK-17. "DOOR LOCK FUNCTION : System Description"](#).
- To open back door by operating back door opener switch, Intelligent Key must be within the detection area of outside key antenna. For details, refer to [DLK-17. "DOOR LOCK FUNCTION : System Description"](#).

### DISARMED Phase

The vehicle security system is not set in the DISARMED phase. The vehicle security system stays in this phase while any door is open, because it is assumed that the owner is inside or nearby the vehicle. Security indicator lamp blinks every 2.4 seconds.

When the vehicle security system is reset, each phase switches to the DISARMED phase directly.

### PRE-ARMED Phase

The PRE-ARMED phase is the transient state between the DISARMED phase and the ARMED phase. This phase is maintained for 30 seconds, so that the owner can reset the setting due to a mis-operation. This phase switches to the ARMED phase when vehicle conditions are not changed for 30 seconds. Security indicator lamp illuminates while being in this phase.

To reset the PRE-ARMED phase, refer to the switching condition of No. 10 in the table above.

### ARMED Phase

The vehicle security system is set, and BCM monitors all necessary inputs. If any door is opened without using Intelligent Key, vehicle security system switches to the ALARM phase. Security indicator lamp blinks every 2.4 seconds.

To reset the ARMED phase, refer to the switching condition of No. 11 in the table above.

### ALARM Phase

BCM transmits "Theft Warning Horn Request" signal and "High Beam Request" signal intermittently to IPDM E/R via CAN communication. In this phase, horns and headlamps are activated intermittently for approximately 50 seconds to warn that the vehicle is accessed by unauthorized means. ON/OFF timing of horns and headlamps are synchronized. After 50 seconds, the vehicle security system returns to the ARMED phase. At this time, if BCM still detects unauthorized access to the vehicle, the system is switched to the ALARM phase again. This RE-ALARM operation is carried out a maximum of 2 times.

To cancel the ALARM operation, refer to the switching condition of No. 12 in the table above.

### NOTE:

If a battery terminal is disconnected during the ALARM phase, theft warning alarm stops. But when the battery terminal is reconnected, theft warning alarm is activated again.

### PRE-RESET Phase

The PRE-RESET phase is the transient state between each phase and DISARMED phase.

The PRE-RESET phase is not available for this models.

### PANIC ALARM

- The panic alarm function activates horns and headlamps intermittently when the owner presses the PANIC ALARM button of Intelligent Key outside the vehicle while the power supply position is OFF.
- When BCM receives panic alarm signal from Intelligent Key, BCM transmits "Theft Warning Horn Request" signal and "High Beam Request" signal intermittently to IPDM E/R via CAN communication. To prevent the activation due to mis-operation of Intelligent Key by owner, the panic alarm function is activated when BCM receives the signal for 0.4 - 0.6 seconds.
- Panic alarm operation is maintained for 25 seconds.
- Panic alarm operation is cancelled when BCM receives one of the following signals.
  - LOCK button of Intelligent Key: ON
  - UNLOCK button of Intelligent Key: ON
  - PANIC ALARM button of Intelligent Key: Long pressed
  - Any door request switch: ON

# DIAGNOSIS SYSTEM (BCM)

[WITH INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

## DIAGNOSIS SYSTEM (BCM)

### COMMON ITEM

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

INFOID:000000009754604

#### APPLICATION ITEM

CONSULT 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.
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	<ul style="list-style-type: none"> <li>Read and save the vehicle specification.</li> <li>Write the vehicle specification when replacing BCM.</li> </ul>

#### 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.

×: Applicable item

System	Sub system selection item	Diagnosis mode		
		Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
Air conditioning system	AIR CONDITONER		×	×*
<ul style="list-style-type: none"> <li>Intelligent Key system</li> <li>Engine start system</li> </ul>	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
NVIS - NATS	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open	TRUNK		×	
Theft warning alarm	THEFT ALM	×	×	×
RAP	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	AIR PRESSURE MONITOR	×	×	×

#### NOTE:

\*: For models with automatic A/C, this diagnosis mode is not used.

#### FREEZE FRAME DATA (FFD)

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

# DIAGNOSIS SYSTEM (BCM)

[WITH INTELLIGENT KEY SYSTEM]

## < SYSTEM DESCRIPTION >

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	
Vehicle Condition	SLEEP>LOCK	Power position status of the moment a particular DTC is detected	While turning BCM status from low power consumption mode to normal mode (Power position is "LOCK".)
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power position is "OFF".)
	LOCK>ACC		While turning power position from "LOCK"* to "ACC"
	ACC>ON		While turning power position from "ACC" to "IGN"
	RUN>ACC		While turning power position from "RUN" to "ACC" (Vehicle is stopping and selector lever is except P position.)
	CRANK>RUN		While turning power position from "CRANKING" to "RUN" (From cranking up the engine to run it)
	RUN>URGENT		While turning power position from "RUN" to "ACC" (Emergency stop operation)
	ACC>OFF		While turning power position from "ACC" to "OFF"
	OFF>LOCK		While turning power position from "OFF" to "LOCK"*
	OFF>ACC		While turning power position from "OFF" to "ACC"
	ON>CRANK		While turning power position from "IGN" to "CRANKING"
	OFF>SLEEP		While turning BCM status from normal mode (Power position is "OFF".) to low power consumption mode
	LOCK>SLEEP		While turning BCM status from normal mode (Power position is "LOCK".) to low power consumption mode
	LOCK		Power position is "LOCK"*
	OFF		Power position is "OFF" (Ignition switch OFF)
	ACC		Power position is "ACC" (Ignition switch ACC)
	ON		Power position is "IGN" (Ignition switch ON with engine stopped)
ENGINE RUN	Power position is "RUN" (Ignition switch ON with engine running)		
CRANKING	Power position is "CRANKING" (At engine cranking)		
IGN Counter	0 - 39	The number of times that ignition switch is turned ON after DTC is detected <ul style="list-style-type: none"> <li>• The number is 0 when a malfunction is detected now.</li> <li>• The number increases like 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON.</li> <li>• The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.</li> </ul>	

### NOTE:

\*: Power position shifts to "LOCK" from "OFF", when ignition switch is in the OFF position, selector lever is in the P position (A/T models and CVT models), and any of the following conditions are met.

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

The power position shifts to "ACC" when the push-button ignition switch (push switch) is pushed at "LOCK".

## INTELLIGENT KEY

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

INFOID:000000009754605

### WORK SUPPORT

# DIAGNOSIS SYSTEM (BCM)

[WITH INTELLIGENT KEY SYSTEM]

## < SYSTEM DESCRIPTION >

Monitor item	Description	A
INSIDE ANT DIAGNOSIS	This function allows inside key antenna self-diagnosis	A
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch mode can be changed to operation in this mode <ul style="list-style-type: none"> <li>• On: Operate</li> <li>• Off: Non-operation</li> </ul>	B
ENGINE START BY I-KEY	Engine start function mode can be changed to operation with this mode <ul style="list-style-type: none"> <li>• On: Operate</li> <li>• Off: Non-operation</li> </ul>	C
TRUNK/GLASS HATCH OPEN	<b>NOTE:</b> This item is displayed, but cannot be monitored	D
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 <ul style="list-style-type: none"> <li>• On: Operate</li> <li>• Off: Non-operation</li> </ul>	E
PANIC ALARM SET	Panic alarm button pressing time on Intelligent Key remote control button can be selected from the following with this mode <ul style="list-style-type: none"> <li>• MODE 1: 0.5 sec</li> <li>• MODE 2: Non-operation</li> <li>• MODE 3: 1.5 sec</li> </ul>	F
TRUNK OPEN DELAY	<b>NOTE:</b> This item is displayed, but cannot be monitored	G
LO- BATT OF KEY FOB WARN	Intelligent Key low battery warning mode can be changed to operation with this mode <ul style="list-style-type: none"> <li>• On: Operate</li> <li>• Off: Non-operation</li> </ul>	H
ANTI KEY LOCK IN FUNCTI	Key reminder function mode can be changed to operation with this mode <ul style="list-style-type: none"> <li>• On: Operate</li> <li>• Off: Non-operation</li> </ul>	I
HAZARD ANSWER BACK	Hazard reminder function mode by door request switch and Intelligent Key button can be selected from the following with this mode <ul style="list-style-type: none"> <li>• Lock Only: Door lock operation only</li> <li>• Unlock Only: Door unlock operation only</li> <li>• Lock/Unlock: Lock and unlock operation</li> <li>• Off: Non-operation</li> </ul>	J
ANS BACK I-KEY LOCK	Buzzer reminder function (lock operation) mode by door request switch can be selected from the following with this mode <ul style="list-style-type: none"> <li>• Horn Chirp: Sound horn</li> <li>• Buzzer: Sound Intelligent Key warning buzzer</li> <li>• Off: Non-operation</li> </ul>	L
ANS BACK I-KEY UNLOCK	Buzzer reminder function (unlock operation) mode by door request switch can be changed to operation with this mode <ul style="list-style-type: none"> <li>• On: Operate</li> <li>• Off: Non-operation</li> </ul>	M
SHORT CRANKING OUTPUT	Starter motor can operate during the times below <ul style="list-style-type: none"> <li>• 70 msec</li> <li>• 100 msec</li> <li>• 200 msec</li> </ul>	N
CONFIRM KEY FOB ID	It can be checked whether Intelligent Key ID code is registered or not in this mode	O
AUTO LOCK SET	Auto door lock operation time can be changed in this mode <ul style="list-style-type: none"> <li>• MODE 1: OFF</li> <li>• MODE 2: 30 sec</li> <li>• MODE 3: 1 minute</li> <li>• MODE 4: 2 minutes</li> <li>• MODE 5: 3 minutes</li> <li>• MODE 6: 4 minutes</li> <li>• MODE 7: 5 minutes</li> </ul>	P

SEC

### SELF-DIAG RESULT

Refer to [BCS-59, "DTC Index"](#).

# DIAGNOSIS SYSTEM (BCM)

[WITH INTELLIGENT KEY SYSTEM]

## < SYSTEM DESCRIPTION >

### DATA MONITOR

**NOTE:**

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

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 interlock switch
BRAKE SW 1	Indicates [On/Off]*2 condition of stop lamp switch power supply
BRAKE SW 2	Indicates [On/Off] condition of stop lamp switch
DETE/CANCL SW	Indicates [On/Off] condition of P position
SFT PN/N SW	Indicates [On/Off] condition of P or N position
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	<b>NOTE:</b> This item is displayed, but cannot be monitored
S/L UNLK-IPDM	<b>NOTE:</b> This item is displayed, but cannot be monitored
S/L RELAY-REQ	<b>NOTE:</b> This item is displayed, but cannot be monitored
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	<b>NOTE:</b> This item is displayed, but cannot be monitored
TRNK/HAT MNTR	<b>NOTE:</b> 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	<b>NOTE:</b> 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 Intelligent Key, the numerical value start changing
RKE OPE COUN2	<b>NOTE:</b> This item is displayed, but cannot be monitored



# DIAGNOSIS SYSTEM (BCM)

[WITH INTELLIGENT KEY SYSTEM]

## < SYSTEM DESCRIPTION >

\*1: It is displayed but does not operate on CVT models.

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

## ACTIVE TEST

Test item	Description
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation • On: Operate • Off: 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 screen is touched • Key: Key warning chime sounds when CONSULT screen is touched • Knob: OFF position warning chime sounds when CONSULT screen is touched • Off: Non-operation
INDICATOR	This test is able to check warning lamp operation • KEY ON: "KEY" Warning lamp illuminates when CONSULT screen is touched • KEY IND: "KEY" Warning lamp blinks when CONSULT screen is touched • Off: Non-operation
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 screen is touched • BP I: Engine start operation indicator lamp indicate when CONSULT 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 screen is touched • INSRT: This item is displayed, but cannot be monitored • BATT: Key warning lamp indicator when CONSULT screen is touched • NO KY: Key warning lamp indicator when CONSULT screen is touched • OUTKEY: Engine start operation indicator lamp indicate when CONSULT screen is touched • LK WN: Engine start operation indicator lamp indicate when CONSULT 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 screen is touched
HORN	This test is able to check horn operation The horn is activated after "ON" on CONSULT screen is touched
P RANGE	This test is able to check CVT shift selector power supply • On: Operate • Off: 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 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 screen is touched
BATTERY SAVER	This test is able to check interior room lamp operation. The interior room lamp will be activated after "ON" on CONSULT screen is touched.
TRUNK/BACK DOOR	This test is able to check back door opener actuator open operation. This actuator opens when "Open" on CONSULT screen is touched.

## THEFT ALM

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

INFOID:000000009754606

## WORK SUPPORT

# DIAGNOSIS SYSTEM (BCM)

[WITH INTELLIGENT KEY SYSTEM]

## < SYSTEM DESCRIPTION >

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

## DATA MONITOR

### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

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	<b>NOTE:</b> This is displayed even when it is not equipped.
REQ SW -RL	<b>NOTE:</b> 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
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).
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.
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.
CDL UNLOCK SW	Indicates [ON/OFF] condition of unlock signal from door lock/unlock switch.
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.
TR/BD OPEN SW	Indicates [ON/OFF] condition of back door opener switch.
TRNK/HAT MNTR	<b>NOTE:</b> 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	<b>NOTE:</b> This is displayed even when it is not equipped.

## 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 screen is touched.
VEHICLE SECURITY HORN	This test is able to check horns operation. Horns are activated for 0.5 seconds after "ON" on CONSULT screen is touched.
HEADLAMP(HI)	This test is able to check headlamp operation. Headlamps are activated for 0.5 seconds after "ON" on CONSULT screen is touched.
FLASHER	This test is able to check hazard warning lamp operation. Hazard warning lamps are activated after "ON" on CONSULT screen is touched.

## IMMU

# DIAGNOSIS SYSTEM (BCM)

[WITH INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

## IMMU : CONSULT Function (BCM - IMMU)

INFOID:000000009754607

### WORK SUPPORT

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

### DATA MONITOR

**NOTE:**

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item	Content
CONFIRM ID ALL	Indicates [YET] at all time. Switches to [DONE] when a registered Intelligent Key backside is contacted to push-button ignition switch.
CONFIRM ID4	
CONFIRM ID3	
CONFIRM ID2	
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	Indicates the number of IDs that are registered.
TP 3	
TP 2	
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 screen is touched.

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M  
N  
O  
P

SEC

# DIAGNOSIS SYSTEM (IPDM E/R)

[WITH INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

## DIAGNOSIS SYSTEM (IPDM E/R)

### CONSULT Function (IPDM E/R)

INFOID:000000009754608

#### APPLICATION ITEM

CONSULT performs the following functions via CAN communication with IPDM E/R.

Diagnosis mode	Description
Ecu Identification	Allows confirmation of IPDM E/R part number.
Self Diagnostic Result	Displays the diagnosis results judged by IPDM E/R.
Data Monitor	Displays the real-time input/output data from IPDM E/R input/output data.
Active Test	IPDM E/R can provide a drive signal to electronic components to check their operations.
CAN Diag Support Monitor	The results of transmit/receive diagnosis of CAN communication can be read.

#### SELF DIAGNOSTIC RESULT

Refer to [PCS-24, "DTC Index"](#).

#### DATA MONITOR

##### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor Item [Unit]	MAIN SIGNALS	Description
RAD FAN REQ [%]	×	Displays the value of the cooling fan speed request signal received from ECM via CAN communication.
AC COMP REQ [Off/On]	×	Displays the status of the A/C compressor request signal received from ECM via CAN communication.
TAIL&CLR REQ [Off/On]	×	Displays the status of the position light request signal received from BCM via CAN communication.
HL LO REQ [Off/On]	×	Displays the status of the low beam request signal received from BCM via CAN communication.
HL HI REQ [Off/On]	×	Displays the status of the high beam request signal received from BCM via CAN communication.
FR FOG REQ [Off/On]	×	Displays the status of the front fog light request signal received from BCM via CAN communication.
FR WIP REQ [Stop/1LOW/Low/Hi]	×	Displays the status of the front wiper request signal received from BCM via CAN communication.
WIP AUTO STOP [STOP P/ACT P]	×	Displays the status of the front wiper auto stop signal judged by IPDM E/R.
WIP PROT [Off/BLOCK]	×	Displays the status of the front wiper fail-safe operation judged by IPDM E/R.
IGN RLY1 -REQ [Off/On]		Displays the status of the ignition switch ON signal received from BCM via CAN communication.
IGN RLY [Off/On]	×	Displays the status of the ignition relay judged by IPDM E/R.
PUSH SW [Off/On]		Displays the status of the push-button ignition switch judged by IPDM E/R.
INTER/NP SW [Off/On]		Displays the status of the ignition power supply (M/T models) or shift position (CVT models) judged by IPDM E/R.
ST RLY CONT [Off/On]		Displays the status of the starter relay status signal received from BCM via CAN communication.
IHBT RLY -REQ [Off/On]		Displays the status of the starter control relay signal received from BCM via CAN communication.

# DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Monitor Item [Unit]	MAIN SIGNALS	Description
ST/INHI RLY [Off/ ST ON/INHI ON/UNKWN]		Displays the status of the starter relay and starter control relay judged by IPDM E/R.
DETENT SW [Off/On]		Displays the status of the CVT shift selector (detention switch) judged by IPDM E/R.
S/L RLY -REQ [Off/On]		<b>NOTE:</b> This item is indicated, but not monitored.
S/L STATE [LOCK/UNLK/UNKWN]		<b>NOTE:</b> This item is indicated, but not monitored.
DTRL REQ [Off/On]		Displays the status of the daytime running light request signal received from BCM via CAN communication. <b>NOTE:</b> This item is monitored only for the except for NISMO models.
OIL P SW [Open/Close]		<b>NOTE:</b> This item is indicated, but not monitored.
HOOD SW [Off/On]		<b>NOTE:</b> This item is indicated, but not monitored.
HL WASHER REQ [Off/On]		<b>NOTE:</b> This item is indicated, but not monitored.
THFT HRN REQ [Off/On]		Displays the status of the theft warning horn request signal received from BCM via CAN communication.
HORN CHIRP [Off/On]		Displays the status of the horn reminder request signal received from BCM via CAN communication.

## ACTIVE TEST

Test item

Test item	Operation	Description
HORN	On	Operates horn relay for 20 ms.
REAR DEFOGGER	Off	OFF
	On	Operates the rear window defogger relay.
FRONT WIPER	Off	OFF
	Lo	Operates the front wiper relay.
MOTOR FAN	Hi	Operates the front wiper relay and front wiper high relay.
	1	OFF
	2	Transmits 50% pulse duty signal (PWM signal) to the cooling fan control module.
	3	Transmits 75% pulse duty signal (PWM signal) to the cooling fan control module.
HEAD LAMP WASHER	4	Transmits 100% pulse duty signal (PWM signal) to the cooling fan control module.
	On	<b>NOTE:</b> This item is indicated, but cannot be tested.
EXTERNAL LAMPS	Off	OFF
	TAIL	Operates the tail lamp relay.
	Lo	Operates the headlamp low relay.
	Hi	Operates the headlamp low relay and ON/OFF the headlamp high relay at 1 second intervals.
	Fog	Operates the front fog lamp relay.

# ECU DIAGNOSIS INFORMATION

## ECM, IPDM E/R, BCM

### List of ECU Reference

INFOID:000000009754609

ECU		Reference
ECM	Reference Value	<a href="#">EC-82, "Reference Value"</a>
	Fail-safe	<a href="#">EC-97, "Fail Safe"</a>
	DTC Inspection Priority Chart	<a href="#">EC-99, "DTC Inspection Priority Chart"</a>
	DTC Index	<a href="#">EC-101, "DTC Index"</a>
IPDM E/R	Reference Value	<a href="#">PCS-17, "Reference Value"</a>
	Fail-safe	<a href="#">PCS-23, "Fail-safe"</a>
	DTC Index	<a href="#">PCS-24, "DTC Index"</a>
BCM	Reference Value	<a href="#">BCS-36, "Reference Value"</a>
	Fail-safe	<a href="#">BCS-57, "Fail-safe"</a>
	DTC Inspection Priority Chart	<a href="#">BCS-58, "DTC Inspection Priority Chart"</a>
	DTC Index	<a href="#">BCS-59, "DTC Index"</a>



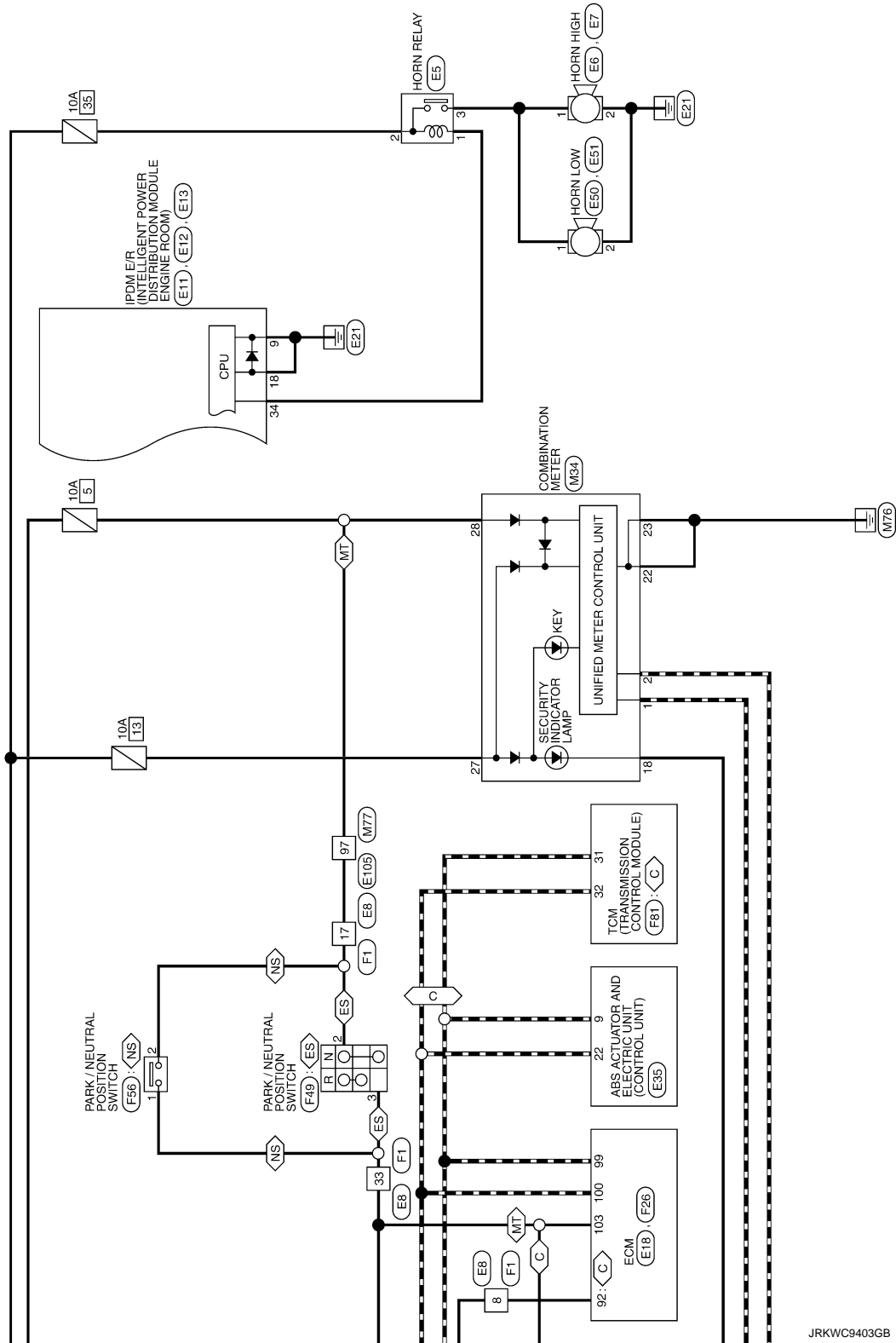




# SECURITY CONTROL SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >



JRKWC9403GB

A  
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C  
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E  
F  
G  
H  
I  
J  
K  
L  
M  
N  
O  
P

SEC

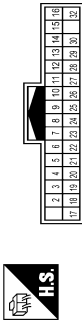
# SECURITY CONTROL SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

## SECURITY CONTROL SYSTEM (WITH INTELLIGENT KEY)

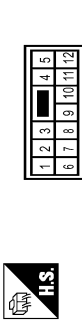
Connector No.	B3
Connector Name	WIRE TO WIRE
Connector Type	TH12MW-NH



Connector No.	B4
Connector Name	WIRE TO WIRE
Connector Type	TH12MW-NH



Connector No.	B18
Connector Name	WIRE TO WIRE
Connector Type	HS12MW-GS



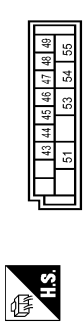
Connector No.	B48
Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)
Connector Type	A03FW



Terminal No.	Color Of Wire	Signal Name [Specification]
1	SHIELD	
2	GR	
3	BR	
4	B	
5	B	
6	Y	
7	W	
8	P	
9	V	
10	SHIELD	
11	R	
12	G	
13	W	
14	B	
15	L	
16	BR	
17	LG	
18	W	
19	G	
20	Y	
21	SHIELD	
22	B	
23	W	
24	R	
25	G	
26	Y	
27	SHIELD	
28	W	
29	R	
30	B	
31	B	
32	R	

Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	
2	LG	
3	BR	
4	GR	
5	L	
6	V	
7	Y	
8	LG	
9	SHIELD	
10	W	
11	R	
12	B	

Connector No.	B10
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FEA0FB-FH48-SA



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	
2	LG	
3	P	
4	GR	
5	P	
6	Y	
7	L	
8	GR	
9	SHIELD	
10	W	
11	R	
12	B	

Terminal No.	2	Color Of Wire	SB	Signal Name [Specification]
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Connector No.	B49
Connector Name	FRONT DOOR SWITCH (PASSENGER SIDE)
Connector Type	A03FW



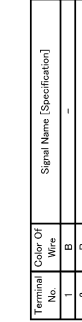
Connector No.	B19
Connector Name	WIRE TO WIRE
Connector Type	M02MB-P-LC



Terminal No.	2	Color Of Wire	R	Signal Name [Specification]
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Terminal No.	Color Of Wire	Signal Name [Specification]
43	P	BACK DOOR SW
44	LG	REAR WIPER STOP POSITION
45	R	PASSENGER DOOR SW
46	LG	REAR RH DOOR SW
47	SB	DRIVER DOOR SW
48	BR	REAR LH DOOR SW
49	Y	LUNAR LOCK CONTROL
50	Y	BACK DOOR REG SW
51	GR	RM DOOR OPEN/CLUT
52	P	REAR WIPER OUTPUT
53	G	RR DOOR UNLK OUTPUT

Connector No.	B53
Connector Name	REAR DOOR SWITCH RH
Connector Type	A03FW



Terminal No.	2	Color Of Wire	R	Signal Name [Specification]
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JRKWC9404GB

# SECURITY CONTROL SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

## SECURITY CONTROL SYSTEM (WITH INTELLIGENT KEY)

Terminal No.	Color Of Wire	Signal Name [Specification]
2	LG	-

Connector No.	B71
Connector Name	REAR DOOR SWITCH-LH
Connector Type	A03FW



Terminal No.	Color Of Wire	Signal Name [Specification]
2	BR	-

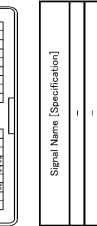
Connector No.	B82
Connector Name	INSIDE KEY ANTENNA (LUGGAGE ROOM)
Connector Type	RK0PFL



Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	-
2	LG	-

Terminal No.	Color Of Wire	Signal Name [Specification]
2	LG	-

Connector No.	D22
Connector Name	WIRE TO WIRE
Connector Type	TH40FW-CS15



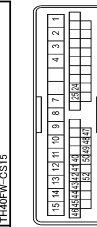
Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	G	-
3	V	-
4	V	-
13	W	-
14	SB	-
15	L	-
24	R	-
25	G	-
40	LG	-
41	Y	-
43	GR	-
44	V	-
45	W	-
46	BG	-
47	P	-
51	B	-
53	B	-

Connector No.	D15
Connector Name	FRONT DOOR REQUEST SWITCH (PASSENGER SIDE)
Connector Type	RK02FGY



Terminal No.	Color Of Wire	Signal Name [Specification]
2	B	-

Connector No.	D22
Connector Name	WIRE TO WIRE
Connector Type	TH40FW-CS15



Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	-
2	W	-
3	SB	-
4	V	-
7	G	-
8	BG	-
9	LG	-
10	BR	-
11	W	-
12	Y	-
13	SB	-
14	L	-
15	P	-
24	G	-
25	R	-
40	V	-
41	P	-
42	L	-
43	GR	-
44	W	-
45	Y	-
46	BG	-
47	G	-
48	B	-
50	LG	-
52	BR	-

Connector No.	D34
Connector Name	FRONT DOOR REQUEST SWITCH (DRIVER SIDE)
Connector Type	RK02FGY



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	-
2	LG	-

Connector No.	D35
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS18FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	-
2	SB	-
3	L	-
4	P	-
5	W	-
6	BR	-
7	LG	-
8	BG	-
9	G	-
10	L	-
12	LG	-
13	G	-
15	BR	-
16	W	-

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JRKWC9405GB

# SECURITY CONTROL SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

## SECURITY CONTROL SYSTEM (WITH INTELLIGENT KEY)

Connector No.	D38
Connector Name	FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE)
Connector Type	ERBEFY-RS



Connector No.	D107
Connector Name	BACK DOOR OPENER SWITCH
Connector Type	TK08MW-1V



Connector No.	D126
Connector Name	WIRE TO WIRE
Connector Type	MOZEL-C



Connector No.	E6
Connector Name	HORN HIGH
Connector Type	PROFEB-A



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	SB	-
3	G	-
4	B	-
5	L	-
6	R	-

Connector No.	D106
Connector Name	BACK DOOR LOCK ASSEMBLY
Connector Type	NSDFW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	-
2	B	-
3	SB	-
4	B	-
5	V	-
6	B	-

Connector No.	D125
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS



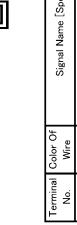
Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	B	-
3	R	-

Connector No.	E5
Connector Name	HORN RELAY
Connector Type	Relay Z4381 G3900



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-

Connector No.	E7
Connector Name	HORN HIGH
Connector Type	PROFEB-A



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	B	-
3	P	-
4	B	-

Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	LG	-
3	R	-
4	GR	-
5	P	-
6	SB	-
7	V	-
8	SHIELD	-
10	Y	-
11	R	-
12	B	-

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	BR	-
3	G	-

Connector No.	E8
Connector Name	WIRE TO WIRE
Connector Type	SAAS8MB-RS1D-SJ22



JRKWC9406GB

# SECURITY CONTROL SYSTEM



[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

## SECURITY CONTROL SYSTEM (WITH INTELLIGENT KEY)



Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	-
2	L	-
3	O	-
4	LG	-
5	O	-
6	V	-
7	BR	-
8	SB	-
10	R	-
11	O	-
12	G	-
13	O	-
14	Y	-
15	B	-
16	SB	-
17	GR	-
18	W	-
19	L/B	-
20	L/W	-
21	G	-
22	G	-
23	SHIELD	-
24	P	-
25	R	-
26	B	-
27	B	-
28	LG	-
29	SB	-
30	SB	-
31	G	-
32	Y	-
33	BR	-
34	W	-
37	L	-
40	P	-
41	V	-
42	L	-
43	BR	-
44	G	-
45	BR	-
46	Y	-
47	SB	-
48	LG	-

Connector No.	E10
Connector Name	IPMALE P- INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM
Connector Type	MSDFW-LC


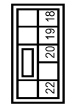
Terminal No.	Color Of Wire	Signal Name [Specification]
3	R	-
6	GR	-

Connector No.	E11
Connector Name	IPMALE P- INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM
Connector Type	MSDFB-LC


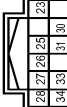
Terminal No.	Color Of Wire	Signal Name [Specification]
9	B/Y	-
14	R	-

Connector No.	E12
Connector Name	IPMALE P- INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM
Connector Type	NSDFBR-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
18	B/Y	-
19	W	- [With front fog lamp]
20	G	- [With front fog lamp]
20	G	- [With front fog lamp]
22	V	-

Connector No.	E13
Connector Name	IPMALE P- INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM
Connector Type	TH12FW-NH


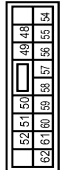
Terminal No.	Color Of Wire	Signal Name [Specification]
23	SB	-
25	BR	-
26	P	-
27	L	-
28	Y	-
30	V	-
31	Y	-
34	L	-

Connector No.	E14
Connector Name	IPMALE P- INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM
Connector Type	NS12PBR-CS

Terminal No.	Color Of Wire	Signal Name [Specification]
35	G	-
39	P	-
41	BR	-
42	Y	-
43	L	-
44	R	-
45	W	-

Connector No.	E15
Connector Name	IPMALE P- INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM
Connector Type	NS12FW-CS

Terminal No.	Color Of Wire	Signal Name [Specification]
48	BR	-
49	Y	-
50	G	-
51	L	-
52	P	-
54	G	-
56	SB	-
57	O	-
58	LG	-
59	V	-
60	SB	-

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# SECURITY CONTROL SYSTEM

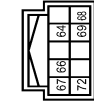
[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

## SECURITY CONTROL SYSTEM (WITH INTELLIGENT KEY)

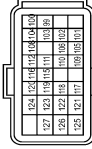
Terminal No.	Color Of Wire	Signal Name [Specification]
E17	LG	—
E2	O	—

Connector No.	E17
Connector Name	IPM L/R INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM
Connector Type	TH10PE-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
64	Y	—
66	L	—
67	L	—
68	O	—
69	BR	—
72	W	—

Connector No.	E18
Connector Name	EOM
Connector Type	EH24ECY-E2B-R-RH



Terminal No.	Color Of Wire	Signal Name [Specification]
99	P	CAN COMMUNICATION LINE (CAN-L)
100	L	CAN COMMUNICATION LINE (CAN-H)
101	Y	STOP PEDAL POSITION SENSOR L
102	R	ACCELERATOR PEDAL POSITION SENSOR L
103	BR	PMP SIGNAL
104	R	DATA LINK CONNECTOR
105	GR	SENSOR GROUND ACCELERATOR PEDAL POSITION SENSOR L
106	Y	POWER SUPPLY FOR EOM (BACKLIP)
108	GR	CLUTCH PEDAL POSITION SWITCH
109	O	IGNITION SWITCH

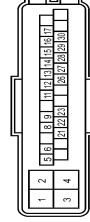
Terminal No.	Color Of Wire	Signal Name [Specification]
110	B	ASCS STEERING SWITCH
111	B	SENSOR GROUND
112	BR	ECM RELAY (SEL-SW-OFF)
113	SB	STOP LAMP SWITCH
115	G	BRAKE PEDAL POSITION SWITCH
116	G	FUEL PUMP RELAY
117	O	SENSOR POWER SUPPLY
118	BR	ACCELERATOR PEDAL POSITION SENSOR Z
119	Y	POWER SUPPLY FOR ECM
120	G	SENSOR GROUND
121	G	THROTTLE CONTROL MOTOR POWER SUPPLY
122	GR	EOM GROUND
123	B/Y	EOM GROUND
124	B/Y	A/V SENSOR HEATER
125	L	HEATED OIL SENSOR HEATER
126	L	HEATED OIL SENSOR HEATER
127	B/Y	EOM GROUND

Connector No.	E29
Connector Name	CLUTCH INTERLOCK SWITCH
Connector Type	MMFV-LC



Terminal No.	Color Of Wire	Signal Name [Specification]
3	LG	—
4	BR	—

Connector No.	E55
Connector Name	ABS ACTUATOR AND ELECTRIC PART (CONTROL UNIT)
Connector Type	RH28EB-N14-LH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	BAT (MTR)
2	Y	BAT (SOCL)
3	B	GND (SOCL)
4	B	GND (MTR)
5	GR	VOG OFF SW
6	GR	BRAKE PEDAL POSITION SW
8	SB	STOP LAMP SW
9	P	CAN-L
11	BR	DP RR
12	W	DS FR
13	G	VCC
14	R	SERIAL+
15	Y	DS RR
16	Y	IGN
17	Y	REVERSE SIGNAL
21	Y	DP FL
22	L	DP FL
23	LG	DP FL
26	SB	DS FL
27	BR	DS FL
28	B	GND
29	W	SERIAL-
30	O	DS RL

Connector No.	E50
Connector Name	HORN LOW
Connector Type	PR1FB-A



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	—

Connector No.	E51
Connector Name	HORN LOW
Connector Type	PR1FB-A



Terminal No.	Color Of Wire	Signal Name [Specification]
2	B/R	—

Connector No.	E102
Connector Name	STOP LAMP SWITCH
Connector Type	MMFV-LC



# SECURITY CONTROL SYSTEM

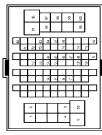
[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

## SECURITY CONTROL SYSTEM (WITH INTELLIGENT KEY)

Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
2	SB	-
3	GR	-
4	LG	-

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH80MM, GS1E-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
4	Y	-
5	GR	-
6	P	-
9	G	-
10	R	-
14	O	-
32	GR	-
33	B	-
37	P	-
52	SB	-
53	BR	-
54	V	-
55	O	-
58	L	-
59	Y	-
64	LG	-
65	GR	-
66	R	-
67	W	-
68	SB	-
70	LG	-
72	V	-
73	L	-
76	R	-
78	B	-
79	W	-



Terminal No.	Color Of Wire	Signal Name [Specification]
2	L	-
3	Y	-
4	RG	-
5	LG	-
6	SB	-
7	G	-
8	R	-
10	BR	-
11	Y	-
12	G	-
13	BL	-
14	US	-
15	US	-
16	SP	-
17	SR	-
18	G	-
19	G	-
20	BR	-
21	G	-
22	BR	-
23	SHIELD	-
24	R	-
25	R	-
26	B	-
27	B	-
28	R	-
29	SB	-
30	R	-
31	RG	-
32	LG	-
33	BR	-
34	G	-
37	G	-
39	B	-
40	P	-
41	BR	-
42	W	-
43	L	-
44	G	-
45	BR	-
46	R	-
47	Y	-
48	GR	-

Connector No.	F26
Connector Name	ECM
Connector Type	RH40BER-2ZS-L-RH



Terminal No.	Color Of Wire	Signal Name [Specification]
89	G	FUEL INJECTOR DRIVER POWER SUPPLY 1
90	R	ESCAPE LOCK CONTROL MOTOR (LOCK)
91	GR	THROTTLE CONTROL MOTOR (CLOSE)
92	BR	THROTTLE CONTROL MOTOR (OPEN)
93	BR	FUEL INJECTOR DRIVER POWER SUPPLY 2
94	R	HIGH PRESSURE FUEL PUMP DRIVER POWER SUPPLY
95	BR	HIGH PRESSURE FUEL PUMP (IH)
96	Y	HIGH PRESSURE FUEL PUMP (LO)
98	G	SENSOR POWER SUPPLY
99	L	SENSOR GROUND
60	W	SENSOR GROUND
62	B	SENSOR POWER SUPPLY
63	BR	CAMSHAFT POSITION SENSOR (PHASE)
64	R	CAMSHAFT POSITION SENSOR (POS)
66	SB	STARTER RELAY CONTROL
67	LG	EMERGENCY SENSOR POWER SUPPLY
68	Y	SENSOR POWER SUPPLY
69	L	EVAP CANISTER VENT CONTROL VALVE
72	GR	SENSOR POWER SUPPLY
73	BR	TURBOCHARGER BOOST CONTROL SOLENOID VALVE
74	R	SENSOR GROUND
75	G	THROTTLE POSITION SENSOR 1
76	W	THROTTLE POSITION SENSOR 2
77	Y	THROTTLE CONTROL RELAY
79	BG	BATTERY TEMPERATURE SENSOR
80	G	BATTERY CURRENT SENSOR
81	W	INTAKE VALVE TIMING CONTROL SOLENOID VALVE
82	R	IGNITION SIGNAL NO.1
83	G	FUEL TANK G SENSOR
84	R	EMERGENCY FUEL TANK CONTROL SOLENOID VALVE
85	C	IGNITION SIGNAL NO.2
86	LG	SENSOR GROUND
87	BR	INTAKE AIR TEMPERATURE SENSOR 2
88	V	IGNITION SIGNAL NO.3
90	P	IGNITION SIGNAL NO.3
92	R	CRANKING ENABLE SIGNAL

Terminal No.	Color Of Wire	Signal Name [Specification]
80	Y	-
82	LG	-
83	GR	-
86	O	-
90	SHIELD	-
91	G	-
92	R	-
95	BR	-
96	P	-
97	GR	-
98	W	-
99	V	-
100	O	-

Connector No.	E118
Connector Name	STOP LAMP SWITCH
Connector Type	M02FB-LC



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	SB	-

Connector No.	F1
Connector Name	WIRE TO WIRE
Connector Type	SAABFB-RS10-SJ22



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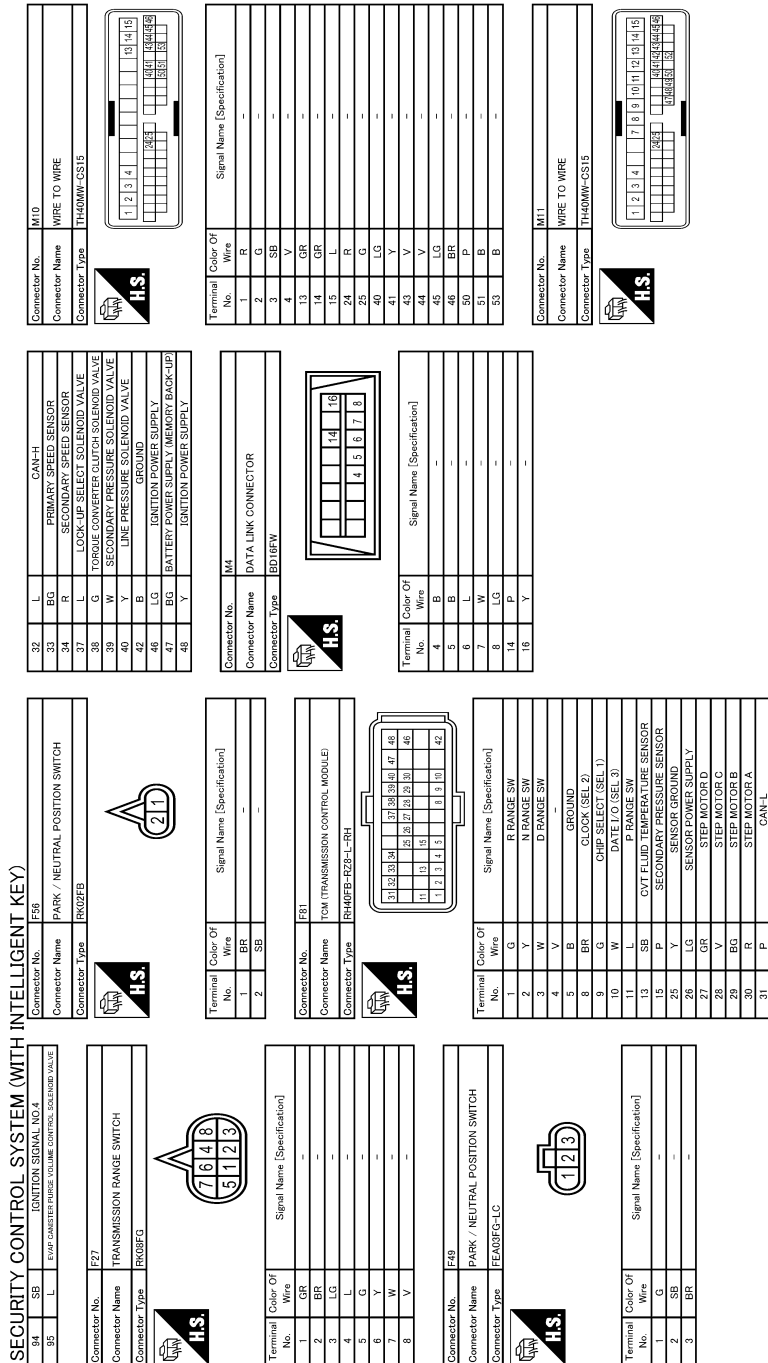
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# SECURITY CONTROL SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >





# SECURITY CONTROL SYSTEM

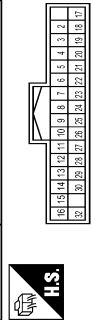
[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

## SECURITY CONTROL SYSTEM (WITH INTELLIGENT KEY)

Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	—
2	W	—
3	W	—
4	V	—
7	R	—
8	G	—
9	LG	—
10	Y	—
11	GR	—
12	GR	—
13	B	—
14	L	—
15	P	—
16	W	—
17	LG	—
18	W	—
19	G	—
20	R	—
21	SHIELD	—
22	L	—
23	W	—
24	R	—
25	G	—
26	R	—
27	SHIELD	—
28	V	—
29	L	—
30	LG	—
31	Y	—
32	W	—

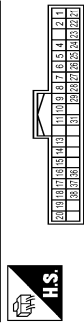
Connector No. M21  
 Connector Name WIRE TO WIRE  
 Connector Type TH48FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	SHIELD	—
2	W	—
3	B	—
4	W	—
5	R	—
6	Y	—

Terminal No.	Color Of Wire	Signal Name [Specification]
7	BR	—
8	L	—
9	SHIELD	—
10	GR	—
11	B	—
12	W	—
13	W	—
14	LG	—
15	L	—
16	P	—
17	LG	—
18	W	—
19	G	—
20	R	—
21	SHIELD	—
22	L	—
23	W	—
24	R	—
25	G	—
26	R	—
27	SHIELD	—
28	V	—
29	L	—
30	LG	—
31	Y	—
32	W	—

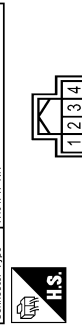
Connector No. M24  
 Connector Name COMBINATION METER  
 Connector Type TH48FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	CAN-H
2	L	CAN-L
3	Y	VEHICLE SPEED SIGNAL (Without front fog lamp)
4	Y	VEHICLE SPEED SIGNAL (With front fog lamp)
5	G	PADDLE SHIFTER (UP SWITCH) SIGNAL
6	BR	FUEL LEVEL SENSOR SIGNAL
7	R	AIR BAG SIGNAL
8	P	— (Without front fog lamp)
9	Y	— (With front fog lamp)

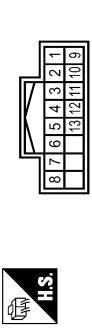
Terminal No.	Color Of Wire	Signal Name [Specification]
8	O	SEA FUEL INJECTION SYSTEM SIGNAL (Without front fog lamp)
9	O	SEA FUEL INJECTION SYSTEM SIGNAL (With front fog lamp)
10	SB	BRAKING BRAKE SWITCH SIGNAL
11	G	BRAKE FLUID LEVEL SWITCH SIGNAL
13	B	ILLUMINATION CONTROL SIGNAL (With front fog lamp)
13	GR	ILLUMINATION CONTROL SIGNAL (Without front fog lamp)
14	R	MANUAL MODE SHIFT (UP SIGNAL) (Without front fog lamp)
14	V	MANUAL MODE SHIFT (UP SIGNAL) (With front fog lamp)
15	L	ACC POWER SUPPLY
16	O	MANUAL MODE SHIFT DOWN SIGNAL (Without front fog lamp)
16	W	MANUAL MODE SHIFT DOWN SIGNAL (With front fog lamp)
17	G	WASHER LEVEL SWITCH SIGNAL (Without front fog lamp)
17	W	WASHER LEVEL SWITCH SIGNAL (With front fog lamp)
18	R	SECURITY SIGNAL
19	GR	AMBIENT SENSOR SIGNAL
20	L	AMBIENT SENSOR SIGNAL (Without front fog lamp)
20	W	AMBIENT SENSOR SIGNAL (With front fog lamp)
21	B	GROUND
22	B	GROUND
23	B	GROUND
24	L	FUEL LEVEL SENSOR GROUND
25	B	VDC GROUND
26	V	PADDLE SHIFTER DOWN SWITCH SIGNAL
27	LG	BATTERY POWER SUPPLY
28	GR	IGNITION SIGNAL
29	LG	PASSENGER SEAT BELT TENSIONER SIGNAL (Without front fog lamp)
29	V	PASSENGER SEAT BELT TENSIONER SIGNAL (With front fog lamp)
31	P	X/CZ AUTO AMP. CONNECTION RECOGNITION SIGNAL
38	LG	MANUAL MODE SIGNAL (With front fog lamp)
38	W	MANUAL MODE SIGNAL (Without front fog lamp)
39	G	NON-MANUAL MODE SIGNAL (With front fog lamp)
39	Y	NON-MANUAL MODE SIGNAL (Without front fog lamp)
38	P	ALTERNATOR SIGNAL

Connector No. M49  
 Connector Name NATS ANTENNA AMP.  
 Connector Type TH48FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	BAT
2	P	CLK
3	LG	DATA
4	B	GND

Connector No. M57  
 Connector Name CVT SHIFT SELECTOR  
 Connector Type TH48FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	—
2	B	—
3	B	—
4	B	—
5	V	—
6	GR	—
7	Y	—
8	W	—
9	B	—
10	B	—
11	G	—
12	SB	— (Without front fog lamp)
12	Y	— (With front fog lamp)
13	G	— (Without front fog lamp)
13	P	— (With front fog lamp)

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SEC

JRKWC9411GB

# SECURITY CONTROL SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

## SECURITY CONTROL SYSTEM (WITH INTELLIGENT KEY)

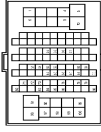
Connector No.	M68
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



Connector No.	M69
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FEA0BFW-F4A6-SA



Terminal No.	38	48	P	CAH-H	CAH-L
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Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Type	TH8BFW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
2	GR	COMBI SW INPUT 5
3	GR	COMBI SW INPUT 4
4	BR	COMBI SW INPUT 3
5	G	COMBI SW INPUT 2
6	W	COMBI SW INPUT 1
7	L	KEY CYL UNLOCK SW
8	R	KEY CYL LOCK SW
9	R	STOP LAMP SW 1
10	W	-
12	GR	DOOR LK & UNLK SW LOCK (Without front fog lamp)
12	Y	DOOR LK & UNLK SW LOCK (With front fog lamp)
13	BR	DOOR LK & UNLK SW UNLOCK
14	P	OPTICAL SENS
15	W	REPEATER SW
16	V	OPTICAL SENS SPRLY
17	Y	REPEATER SW
18	Y	REPEATER SW
21	P	NATS ANT AMP
23	R	SECURITY IND LAMP CONT
24	SB	DOUBLE LINK
25	LG	NATS ANT AMP
26	B	THERMO AMP
27	W	A.C SW (With front fog lamp)
27	Y	A.C SW (Without front fog lamp)
28	LG	BLOWER FAN SW (Without front fog lamp)
28	O	BLOWER FAN SW (With front fog lamp)
29	L	HAZARD SW (With front fog lamp)
29	SB	HAZARD SW (Without front fog lamp)
30	L	BR DOOR OPENER SW
31	W	REPEATER SW
32	LG	COMBI SW OUTPUT 5
33	Y	COMBI SW OUTPUT 4
34	V	COMBI SW OUTPUT 3
35	R	COMBI SW OUTPUT 2
36	P	COMBI SW OUTPUT 1
37	G	DETENT SW
38	SB	RECEIVER COMM

Terminal No.	Color Of Wire	Signal Name [Specification]
75	LG	DR DOOR REG SW
76	LG	PASS DOOR REG SW
76	P	DRIVER DOOR ANT+
79	V	DRIVER DOOR ANT-
80	LG	PASS DOOR ANT+
81	Y	PASS DOOR ANT-
82	W	REAR BMPPR ANT+
83	LG	REAR BMPPR ANT-
84	BR	ROOM ANT 1+
85	GR	ROOM ANT 1-
86	G	ROOM ANT 2+
87	R	ROOM ANT 2-
88	Y	LOCKAGE ROOM ANT+
89	LG	LOCKAGE ROOM ANT-
90	V	PUSH-START SW ILL PWR
91	V	ACC / ON IND
92	R	PUSH-START SW ILL GND
93	GR	F-KEY WARN BUZZER
96	BR	ACC RELAY CONT
97	SB	STARTER RELAY CONT
98	P	IGN RELAY (PDM E/R) CONT
99	R	IGN RELAY (F/B) CONT
100	P	PUSH SW
101	Y	CLUTCH INTERLOCK SW
102	L	NEUTRAL SW
104	SB	CVT SHIF SELEGT PWR SPRLY
105	LG	SHIF SELEGT PWR SPRLY
106	V	SHIF SELEGT PWR SPRLY
108	Y	BLWR RELAY CONT

Connector No.	M75
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Type	TH40FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	POWER
2	SB	SIGNAL
4	V	GND

Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	-
2	V	-
3	V	-
4	W	-
5	W	-
6	P	-
9	R	-
10	R	-
34	LG	-
35	SB	-
36	B	-
37	P	-
52	R	-
53	L	-
54	SB	-
55	P	-
56	LG	-
58	G	-
64	G	-
65	GR	-
66	Y	-
67	V	-
68	R	-
70	V	-
71	R	-
72	GR	-
73	G	-
76	W	-
78	LG	-
79	V	-
80	LG	-
82	LG	-
84	G	-
85	BR	-
86	LG	-
90	SHIELD	-
91	Y	-
92	BR	-

JRKWC9412GB

# SECURITY CONTROL SYSTEM

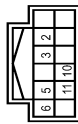
[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

## SECURITY CONTROL SYSTEM (WITH INTELLIGENT KEY)

85	R	- [Without Intelligent Key]
86	Y	- [With Intelligent Key]
87	GR	-
88	G	-
89	W	-
100	LG	-

Connector No.	M179
Connector Name	WIRE TO WIRE
Connector Type	TH12PW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
2	BR	-
3	W	-
5	BR	-
6	L	-
10	V	-
11	LG	-

Connector No.	M166
Connector Name	DONGLE UNIT
Connector Type	NS08FBR-GS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	-
7	SB	-

Connector No.	M101
Connector Name	PUSH-BUTTON IGNITION SWITCH
Connector Type	TK08FBR



Terminal No.	Color Of Wire	Signal Name [Specification]
3	G	-
4	W	-
5	W	-
6	R	-
7	V	-
8	LG	-

Connector No.	M105
Connector Name	INSIDE KEY ANTENNA INSTRUMENT CENTER
Connector Type	RK02FL



Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	-
2	GR	-

Connector No.	M106
Connector Name	INSIDE KEY ANTENNA (CONSOLE)
Connector Type	RK02FL



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	R	-

Connector No.	M324
Connector Name	CVT SHIFT SELECTOR
Connector Type	TH16BMW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
2	Y	-
3	W	-
4	P	-
5	G	-
6	G	-
7	BR	-
8	G	-
9	GR	-
10	Y	-
11	L/W	-
12	LG	-
13	LG	-

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SEC

# DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[WITH INTELLIGENT KEY SYSTEM]

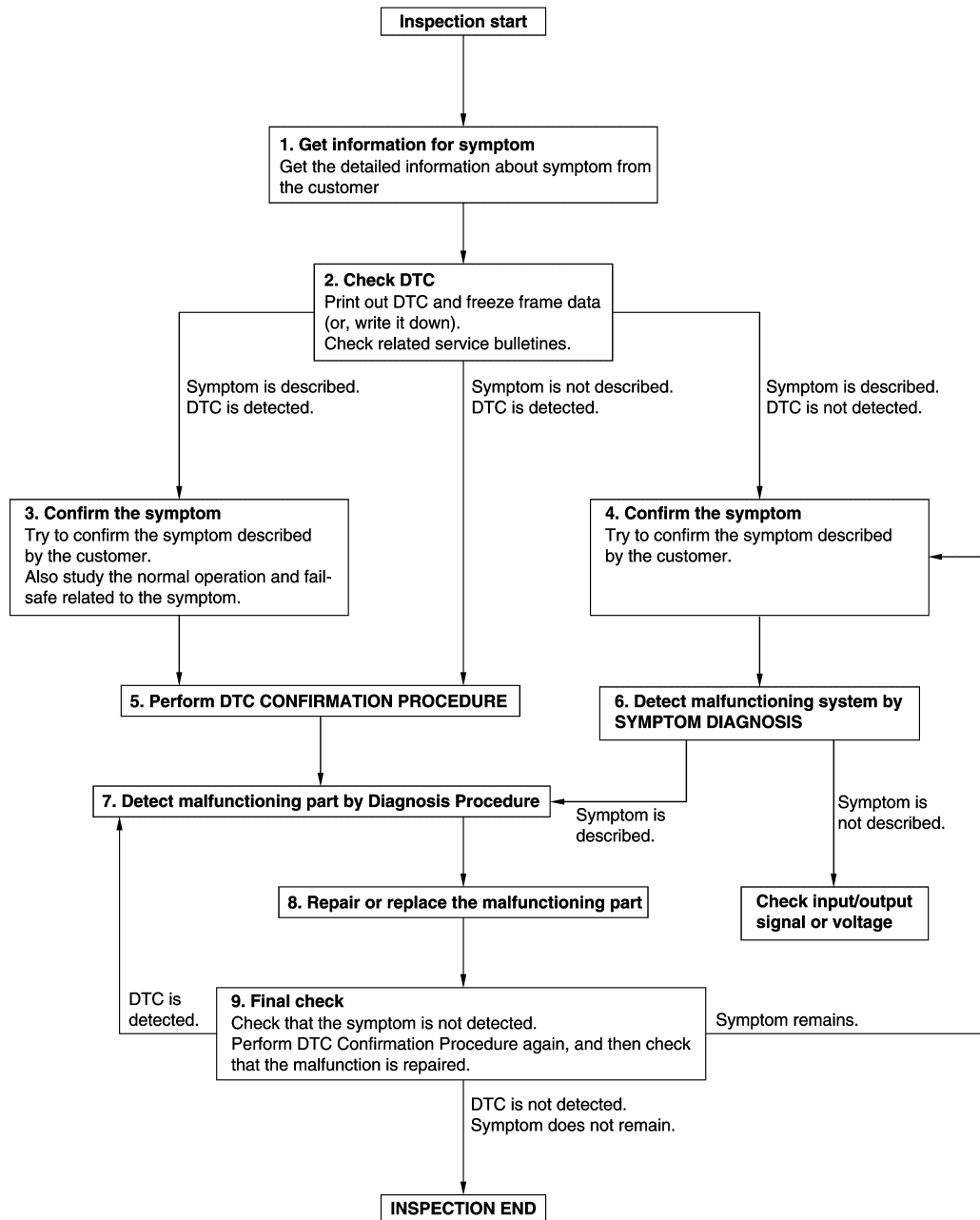
## BASIC INSPECTION

### DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:000000009754611

OVERALL SEQUENCE



JMKIA8652GB

DETAILED FLOW

Revision: 2013 October

SEC-44

2014 JUKE

# DIAGNOSIS AND REPAIR WORK FLOW

[WITH INTELLIGENT KEY SYSTEM]

< BASIC INSPECTION >

## 1.GET INFORMATION FOR SYMPTOM

1. Get detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurs).
2. Check operation condition of the function that is malfunctioning.

>> GO TO 2.

## 2.CHECK DTC

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

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

Try to confirm the symptom described by the customer.

Also study the normal operation and fail-safe related to the symptom.

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

>> GO TO 5.

## 4.CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.

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 to the vehicle, and check self diagnostic results in real time.

If two or more DTCs are detected, refer to [BCS-58. "DTC Inspection Priority Chart"](#) (BCM), and determine trouble diagnosis order.

**NOTE:**

- Freeze frame data is useful if the DTC is not detected.
- Perform Component Function Check if DTC CONFIRMATION PROCEDURE is not included on Service Manual. This simplified check procedure is an effective alternative though DTC cannot be detected during this check.

If the result of Component Function Check is NG, it is the same as the detection of DTC by DTC CONFIRMATION PROCEDURE.

Is DTC detected?

YES >> GO TO 7.

NO >> Check according to [GI-46. "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.

Is the symptom described?

YES >> GO TO 7.

NO >> Monitor input data from related sensors or check voltage of related module terminals using CONSULT.

## 7.DETECT MALFUNCTIONING PART BY DIAGNOSIS PROCEDURE

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## DIAGNOSIS AND REPAIR WORK FLOW

[WITH INTELLIGENT KEY SYSTEM]

< BASIC INSPECTION >

Inspect according to Diagnosis Procedure of the system.

Is malfunctioning part detected?

YES >> GO TO 8.

NO >> Check according to [GI-46. "Intermittent Incident"](#).

### 8. REPAIR OR REPLACE THE MALFUNCTIONING PART

---

1. Repair or replace the malfunctioning part.
2. Reconnect parts or connectors disconnected during Diagnosis 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 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.

Is DTC detected and does symptom remain?

YES-1 >> DTC is detected: GO TO 7.

YES-2 >> Symptom remains: GO TO 4.

NO >> Before returning the vehicle to the customer, always erase DTC.

# ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

< BASIC INSPECTION >

[WITH INTELLIGENT KEY SYSTEM]

## ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

### ECM

#### ECM : Description

INFOID:000000009754612

When replacing ECM, the following procedure must be performed. (For details, refer to [EC-140, "Work Procedure"](#).)

#### PROGRAMMING OPERATION

##### NOTE:

After replacing with a blank ECM, programming is required to write ECM information. Be sure to follow the procedure to perform the programming.

#### ECM : Work Procedure

INFOID:000000009754613

### 1. CHECK ECM PART NUMBER

Check ECM part number to see whether it is blank ECM or not.

##### NOTE:

- Part number of blank ECM is 23703 - xxxxxx.
- Check the part number when ordering ECM or with the one included in the label on the container box.

#### Is the ECM a blank ECM?

YES >> GO TO 2.

NO >> GO TO 4.

### 2. SAVE ECM PART NUMBER

Read out the part number from the old ECM and save the number, following the programming instructions. Refer to "CONSULT Operation Manual".

##### NOTE:

- The ECM part number is saved in CONSULT.
- Even when ECM part number is not saved in CONSULT, go to 3.

>> GO TO 3.

### 3. PERFORM ECM PROGRAMMING

After replacing ECM, perform the ECM programming. Refer to "CONSULT Operation Manual".

##### NOTE:

- Refer to [EC-561, "Removal and Installation"](#) for replacement of ECM.
- During programming, maintain the following conditions:
  - Ignition switch: ON
  - Electric load: OFF
  - Brake pedal: Not depressed
  - Battery voltage: 12 – 13.5 V (Be sure to check the value of battery voltage by selecting "BATTERY VOLT" in "Data monitor" of CONSULT.)

>> GO TO 5.

### 4. REPLACE ECM

Replace ECM. Refer to [EC-561, "Removal and Installation"](#).

>> GO TO 5.

### 5. PERFORM INITIALIZATION OF NVIS (NATS) SYSTEM AND REGISTRATION OF ALL NVIS (NATS) IGNITION KEY IDS

Refer to [SEC-15, "NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS : System Description"](#).

>> GO TO 6.

### 6. PERFORM ACCELERATOR PEDAL RELEASED POSITION LEARNING

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## ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

< BASIC INSPECTION >

[WITH INTELLIGENT KEY SYSTEM]

Refer to [EC-143, "Work Procedure"](#).

>> GO TO 7.

### 7. PERFORM THROTTLE VALVE CLOSED POSITION LEARNING

Refer to [EC-144, "Work Procedure"](#).

>> GO TO 8.

### 8. PERFORM IDLE AIR VOLUME LEARNING

Refer to [EC-145, "Work Procedure"](#).

>> GO TO 9.

### 9. PERFORM G SENSOR CALIBRATION

Refer to [EC-147, "Work Procedure"](#).

>> END

## BCM

### BCM : Description

INFOID:000000009754614

#### BEFORE REPLACEMENT

When replacing BCM, save or print current vehicle specification with CONSULT configuration before replacement.

#### NOTE:

If "READ CONFIGURATION" can not be used, use the "WRITE CONFIGURATION - Manual selection" after replacing BCM.

#### AFTER REPLACEMENT

#### CAUTION:

When replacing BCM, always perform "WRITE CONFIGURATION" with CONSULT. Or not doing so, BCM control function does not operate normally.

- Complete the procedure of "WRITE CONFIGURATION" in order.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.
- If you set incorrect "WRITE CONFIGURATION", incidents might occur.

#### NOTE:

When replacing BCM, perform the system initialization (NATS) (if equipped).

### BCM : Work Procedure

INFOID:000000009754615

### 1. SAVING VEHICLE SPECIFICATION

#### ⓂCONSULT Configuration

Perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to [BCS-76, "Description"](#).

#### NOTE:

If "READ CONFIGURATION" can not be used, use the "WRITE CONFIGURATION - Manual selection" after replacing BCM.

>> GO TO 2.

### 2. REPLACE BCM

Replace BCM. Refer to [BCS-90, "Removal and Installation"](#).

>> GO TO 3.

### 3. WRITING VEHICLE SPECIFICATION



## ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

< BASIC INSPECTION >

[WITH INTELLIGENT KEY SYSTEM]

④ CONSULT Configuration

Perform "WRITE CONFIGURATION - Config file" or "WRITE CONFIGURATION - Manual selection" to write vehicle specification. Refer to [BCS-76, "Work Procedure"](#).

>> GO TO 4.

### 4. INITIALIZE BCM (NATS) (IF EQUIPPED)

Perform BCM initialization. (NATS)

>> WORK END

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SEC

# P1610 LOCK MODE

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## DTC/CIRCUIT DIAGNOSIS

### P1610 LOCK MODE

#### Description

INFOID:000000009754616

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:000000009754617

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1610	LOCK MODE	When ECM detects a communication malfunction between ECM and BCM 5 times or more.	—

#### DTC CONFIRMATION PROCEDURE

##### 1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Check DTC in "Self Diagnostic Result" mode of "ENGINE" using CONSULT.

##### Is DTC detected?

- YES >> Go to [SEC-50. "Diagnosis Procedure"](#).
- NO >> INSPECTION END

#### Diagnosis Procedure

INFOID:000000009754618

##### 1. CHECK ENGINE START FUNCTION

1. Check that DTC except for DTC P1610 is not detected.  
If detected, erase the DTC after fixing.
2. Turn ignition switch OFF.
3. Depress brake pedal and contact the registered Intelligent Key backside to push-button ignition switch, then wait 5 seconds.
4. Turn ignition switch ON.
5. Turn ignition switch OFF and wait 5 seconds.
6. Repeat steps 3 and 5 twice (a total of 3 times).
7. Check that engine can start.

>> INSPECTION END

# P1611 ID DISCORD, IMMUECM

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## P1611 ID DISCORD, IMMUECM

### DTC Logic

INFOID:000000009754619

### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1611	ID DISCORD, IMMUECM	The ID verification results between BCM and ECM are NG.	<ul style="list-style-type: none"><li>• BCM</li><li>• ECM</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Check DTC in "Self Diagnostic Result" mode of "ENGINE" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-51, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754620

#### 1. PERFORM INITIALIZATION

Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

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

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

#### 2. CHECK SELF DIAGNOSTIC RESULT

1. Select "Self Diagnostic Result" mode of "ENGINE" using CONSULT.
2. Erase DTC.
3. Perform DTC CONFIRMATION PROCEDURE for DTC P1611. Refer to [SEC-51, "DTC Logic"](#).

#### Is DTC detected?

- YES >> GO TO 3.  
NO >> INSPECTION END

#### 3. REPLACE BCM

1. Replace BCM. Refer to [BCS-90, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

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

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

#### 4. REPLACE ECM

Replace ECM.  
Refer to [EC-561, "Removal and Installation"](#).

>> INSPECTION END

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SEC

# P1612 CHAIN OF ECM-IMMU

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## P1612 CHAIN OF ECM-IMMU

### DTC Logic

INFOID:000000009754621

### DTC DETECTION LOGIC

#### NOTE:

- If DTC P1612 is displayed with DTC U1000 (for BCM), first perform the trouble diagnosis for DTC U1000. Refer to [BCS-79, "DTC Logic"](#).
- If DTC P1612 is displayed with DTC U1010 (for BCM), first perform the trouble diagnosis for DTC U1010. Refer to [BCS-80, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1612	CHAIN OF ECM-IMMU	Inactive communication between ECM and BCM	<ul style="list-style-type: none"><li>• Harness or connectors (The CAN communication line is open or shorted.)</li><li>• BCM</li><li>• ECM</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Check DTC in "Self Diagnostic Result" mode of "ENGINE" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-52, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754622

#### 1.REPLACE BCM

1. Replace BCM. Refer to [BCS-90, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

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

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

#### 2.REPLACE ECM

Replace ECM.

Refer to [EC-561, "Removal and Installation"](#).

>> INSPECTION END

# B2192 ID DISCORD, IMMUECM

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## B2192 ID DISCORD, IMMUECM

### DTC Logic

INFOID:000000009754623

### DTC DETECTION 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.	<ul style="list-style-type: none"><li>• BCM</li><li>• ECM</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-53, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754624

#### 1. PERFORM INITIALIZATION

Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

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

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

#### 2. CHECK SELF DIAGNOSTIC RESULT

1. Select "Self Diagnostic Result" mode of "BCM" using CONSULT.
2. Erase DTC.
3. Perform DTC CONFIRMATION PROCEDURE for DTC B2192. Refer to [SEC-53, "DTC Logic"](#).

#### Is DTC detected?

- YES >> GO TO 3.  
NO >> INSPECTION END

#### 3. REPLACE BCM

1. Replace BCM. Refer to [BCS-90, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

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

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

#### 4. REPLACE ECM

Replace ECM.  
Refer to [EC-561, "Removal and Installation"](#).

>> INSPECTION END

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SEC

# B2193 CHAIN OF ECM-IMMU

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## B2193 CHAIN OF ECM-IMMU

### DTC Logic

INFOID:000000009754625

### DTC DETECTION LOGIC

#### NOTE:

- If DTC B2193 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-79, "DTC Logic"](#).
- If DTC B2193 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-80, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2193	CHAIN OF BCM-ECM	Inactive communication between BCM and ECM	<ul style="list-style-type: none"><li>• Harness or connectors (The CAN communication line is open or shorted.)</li><li>• BCM</li><li>• ECM</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-54, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754626

#### 1.REPLACE BCM

1. Replace BCM. Refer to [BCS-90, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

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

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

#### 2.REPLACE ECM

Replace ECM.

Refer to [EC-561, "Removal and Installation"](#).

>> INSPECTION END

# B2195 ANTI-SCANNING

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

## B2195 ANTI-SCANNING

### DTC Logic

INFOID:000000009754627

### 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 DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Refer to [SEC-55, "Diagnosis Procedure"](#).  
NO >> INSPECTION END.

### Diagnosis Procedure

INFOID:000000009754628

#### 1. CHECK SELF DIAGNOSTIC RESULT 1

1. Select "Self Diagnostic Result" mode of "BCM" using CONSULT.
2. Erase DTC.
3. Perform DTC CONFIRMATION PROCEDURE for DTC B2195. Refer to [SEC-55, "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 >> GO TO 4.

#### 3. CHECK SELF DIAGNOSTIC RESULT 2

1. Obtain the customers approval to remove unspecified accessory part related to engine start, and then remove it.
2. Select "Self Diagnostic Result" of "BCM" using CONSULT.
3. Erase DTC.
4. Perform DTC CONFIRMATION PROCEDURE for DTC B2195. Refer to [SEC-55, "DTC Logic"](#).

#### Is DTC detected?

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

#### 4. REPLACE BCM

1. Replace BCM. Refer to [BCS-90, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

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SEC

# B2196 DONGLE UNIT

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## B2196 DONGLE UNIT

### Description

INFOID:000000009754629

BCM performs ID verification between BCM and dongle unit.  
When verification result is OK, BCM permits cranking.

### DTC Logic

INFOID:000000009754630

### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2196	DONGLE NG	The ID verification results between BCM and dongle unit is NG.	<ul style="list-style-type: none"><li>• Harness or connectors (Dongle unit circuit is open or shorted.)</li><li>• Dongle unit</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Turn ignition switch OFF.
3. Turn ignition switch ON.
4. Check DTC in "Self-diagnosis result" mode of "BCM" using CONSULT.

#### Is the DTC detected?

- YES >> Refer to [SEC-56. "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754631

#### 1.PERFORM INITIALIZATION

1. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.
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.
3. Check continuity between BCM harness connector and dongle unit harness connector.

BCM		Dongle unit		Continuity
Connector	Terminal	Connector	Terminal	
M68	24	M86	7	Existed

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
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.



# B2196 DONGLE UNIT

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Dongle unit		Ground	Continuity
Connector	Terminal		Existed
M86	1		

Is the inspection result normal?

- YES >> Replace dongle unit.
- NO >> Repair or replace harness.

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# B2198 NATS ANTENNA AMP.

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## B2198 NATS ANTENNA AMP.

### DTC Logic

INFOID:000000009754632

### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2198	NATS ANTENNA AMP	Inactive communication between NATS antenna amp. and BCM is detected when BCM enters in the low power consumption mode (BCM sleep condition)	<ul style="list-style-type: none"> <li>• Harness or connectors (NATS antenna amp. circuit is open or shorted.)</li> <li>• NATS antenna amp.</li> <li>• IPDM E/R</li> </ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

1. Make the conditions that BCM enters in the low power consumption mode (BCM sleep condition). Refer to [BCS-13, "POWER CONSUMPTION CONTROL SYSTEM : System Description"](#).
2. Turn ignition switch ON.
3. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-58, "Diagnosis Procedure"](#).  
 NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754633

#### 1. CHECK FUSE

1. Turn ignition switch OFF.
2. Check that the following fuse in IPDM E/R is not blown.

Signal name	Fuse No.
Battery power supply	43 (20 A)

#### Is the inspection result normal?

- YES >> GO TO 2.  
 NO >> Replace the blown fuse after repairing the cause of blowing.

#### 2. CHECK NATS ANTENNA AMP. POWER SUPPLY

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

(+)		(-)	Voltage (V)
NATS antenna amp.			
Connector	Terminal		
M49	1	Ground	6 - 16

#### Is the inspection result normal?

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

#### 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	
E14	42	M49	1	Existed

## B2198 NATS ANTENNA AMP.

[WITH INTELLIGENT KEY SYSTEM]

### < DTC/CIRCUIT DIAGNOSIS >

#### Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).

NO >> Repair or replace harness.

#### 4. CHECK NATS ANTENNA AMP. GROUND CIRCUIT

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

NATS antenna amp.		Ground	Continuity
Connector	Terminal		
M49	4		Existed

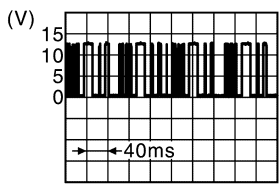
#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

#### 5. CHECK NATS ANTENNA AMP. COMMUNICATION SIGNAL 1

Check voltage signal between NATS antenna amp. harness connector and ground using an oscilloscope.

(+)		(-)	Condition	Voltage (V)
NATS antenna amp.				
Connector	Terminal			
M49	2	Ground	Intelligent Key: Intelligent Key battery is removed  Brake pedal: Depressed <b>NOTE:</b> Waveform varies each time when brake pedal is depressed	
			Brake pedal: Released	12

#### Is the inspection result normal?

YES >> GO TO 7.

NO >> GO TO 6.

#### 6. CHECK NATS ANTENNA AMP. OUTPUT SIGNAL CIRCUIT 1

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

NATS antenna amp.		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M49	2	M68	21	Existed

3. Check continuity between BNATS antenna amp. harness connector and ground.

NATS antenna amp.		Ground	Continuity
Connector	Terminal		
M49	2		Not existed

#### Is the inspection result normal?

YES >> GO TO 9.

NO >> Repair or replace harness.

#### 7. CHECK NATS ANTENNA AMP. COMMUNICATION SIGNAL 2

Check voltage signal between NATS antenna amp. harness connector and ground using an oscilloscope.

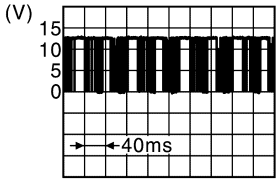
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# B2198 NATS ANTENNA AMP.

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

(+)		(-)	Condition	Voltage (V)
NATS antenna amp.				
Connector	Terminal			
M49	3	Ground	Intelligent Key: Intelligent Key battery is removed	 <p>(V)</p> <p>15 10 5 0</p> <p>← 40ms</p> <p>JMKIA6233JP</p>
			Brake pedal: Depressed <b>NOTE:</b> Waveform varies each time when brake pedal is depressed	12
			Brake pedal: Released	

Is the inspection result normal?

YES >> Replace NATS antenna amp. Refer to [SEC-127, "Removal and Installation"](#).

NO >> GO TO 8.

## 8. CHECK NATS ANTENNA AMP. OUTPUT SIGNAL CIRCUIT 2

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

NATS antenna amp.		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M49	3	M68	25	Existed

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

NATS antenna amp.		Ground	Continuity
Connector	Terminal		
M49	3		Not existed

Is the inspection result normal?

YES >> GO TO 9.

NO >> Repair or replace harness.

## 9. REPLACE BCM

1. Replace BCM. Refer to [BCS-90, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

# B2555 STOP LAMP

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## B2555 STOP LAMP

### DTC Logic

INFOID:000000009754634

### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis 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.	<ul style="list-style-type: none"> <li>Harness or connectors (Stop lamp switch circuit is open or shorted.)</li> <li>Stop lamp switch</li> <li>Fuse</li> <li>BCM</li> </ul>

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

- Depress brake pedal and wait 1 second or more.
- Turn ignition switch ON.
- Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

YES >> Go to [SEC-61, "Diagnosis Procedure"](#).

NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754635

#### 1.CHECK STOP LAMP SWITCH INPUT SIGNAL 1

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

(+)		(-)	Voltage (V) (Approx.)
BCM			
Connector	Terminal		
M70	105	Ground	Battery voltage

#### Is the inspection normal?

YES >> GO TO 2.

NO-1 >> Check 10 A fuse [No. 38, 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

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

(+)		(-)	Voltage (V) (Approx.)
Stop lamp switch			
Connector	Terminal		
E102 (CVT models) E118 (M/T models)	1	Ground	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 3.

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

#### 3.CHECK STOP LAMP SWITCH INPUT SIGNAL 2

- Connect stop lamp switch connector.
- Check voltage between BCM harness connector and ground.

# B2555 STOP LAMP

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

(+)		(-)	Condition		Voltage (V) (Approx.)
BCM					
Connector	Terminal				
M68	9	Ground	Brake pedal	Depressed	Battery voltage
				Not depressed	0

Is the inspecting result normal?

YES >> GO TO 4.

NO >> GO TO 5.

## 4. REPLACE BCM

1. Replace BCM. Refer to [BCS-90, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

## 5. CHECK STOP LAMP SWITCH CIRCUIT

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

Stop lamp switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E102 (CVT models) E118 (M/T models)	2	M68	9	Existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

## 6. CHECK STOP LAMP SWITCH

Refer to [SEC-62, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 7.

NO >> Replace stop lamp switch. Refer to [BR-18, "Removal and Installation"](#).

## 7. CHECK INTERMITTENT INCIDENT

Refer to [GI-46, "Intermittent Incident"](#).

>> INSPECTION END

## Component Inspection

INFOID:000000009754636

### 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
Terminal				
1	2	Brake pedal	Not depressed	Not existed
				Depressed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace stop lamp switch. Refer to [BR-18, "Removal and Installation"](#).

# B2556 PUSH-BUTTON IGNITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## B2556 PUSH-BUTTON IGNITION SWITCH

### DTC Logic

INFOID:000000009754637

### 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.	<ul style="list-style-type: none"> <li>• Harness or connectors (Push-button ignition switch circuit is shorted.)</li> <li>• Push-button ignition switch</li> <li>• BCM</li> </ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

1. Press push-button ignition switch under the following condition.

CVT models

- Brake pedal: Not depressed

M/T models

- Clutch pedal: Not depressed
2. Release push-button ignition switch and wait 100 seconds or more.
  3. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

Is DTC detected?

- YES >> Go to [SEC-63. "Diagnosis Procedure"](#).  
 NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754638

#### 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.

(+)		(-)	Voltage (V) (Approx.)
Push-button ignition switch			
Connector	Terminal	Ground	12
M101	8		

Is the inspection result normal?

- YES >> GO TO 4.  
 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.

Push-button ignition switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M101	8	M70	76	Existed

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

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

# B2556 PUSH-BUTTON IGNITION SWITCH

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

- YES >> GO TO 3.
- NO >> Repair or replace harness.

## 3.REPLACE BCM

1. Replace BCM. Refer to [BCS-90, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

## 4.CHECK PUSH-BUTTON IGNITION SWITCH GROUND CIRCUIT

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

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

Is the inspection result normal?

- YES >> GO TO 5.
- NO >> Repair or replace harness.

## 5.CHECK PUSH-BUTTON IGNITION SWITCH

Refer to [SEC-64, "Component Inspection"](#).

Is the inspection result normal?

- YES >> GO TO 6.
- NO >> Replace push-button ignition switch. Refer to [SEC-128, "Removal and Installation"](#).

## 6.CHECK INTERMITTENT INCIDENT

Refer to [GI-46, "Intermittent Incident"](#).

>> INSPECTION END

## Component Inspection

INFOID:000000009754639

## 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 ignition switch		Condition	Continuity
Terminal			
8	4	Push-button ignition switch	Existed
			Not existed

Is the inspection result normal?

- YES >> INSPECTION END
- NO >> Replace push-button ignition switch. Refer to [SEC-128, "Removal and Installation"](#).



# B2557 VEHICLE SPEED

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

## B2557 VEHICLE SPEED

### DTC Logic

INFOID:000000009754640

### DTC DETECTION LOGIC

#### NOTE:

- If DTC B2557 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-79, "DTC Logic"](#).
- If DTC B2557 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-80, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible causes
B2557	VEHICLE SPEED	BCM detects one of the following conditions for 10 seconds continuously. <ul style="list-style-type: none"><li>• Vehicle speed signal from combination meter is 10 km/h (6.2 MPH) or more, and vehicle speed signal from ABS actuator and electric unit (control unit) is 4 km/h (2.5 MPH) or less.</li><li>• Vehicle speed signal from combination meter is 4 km/h (2.5 MPH) or less, and vehicle speed signal from ABS actuator and electric unit (control unit) is 10 km/h (6.2 MPH) or more.</li></ul>	<ul style="list-style-type: none"><li>• Harness or connectors (The CAN communication line is open or shorted.)</li><li>• Combination meter</li><li>• ABS actuator and electric unit (control unit)</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

1. Start engine and wait 10 seconds or more.
2. Drive the vehicle at a vehicle speed of 10 km/h (6.2 MPH) or more for 10 seconds or more.
3. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-65, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754641

#### 1. CHECK DTC OF "ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)"

Check DTC in "Self Diagnostic Result" mode of "ABS" using CONSULT.

#### Is DTC detected?

- YES >> Perform the trouble diagnosis related to the detected DTC. Refer to [BRC-50, "DTC Index"](#).  
NO >> GO TO 2.

#### 2. CHECK DTC OF "COMBINATION METER"

Check DTC in "Self Diagnostic Result" mode of "METER/M&A" using CONSULT.

#### Is DTC detected?

- YES >> Perform the trouble diagnosis related to the detected DTC. Refer to [MWI-32, "DTC Index"](#).  
NO >> GO TO 3.

#### 3. CHECK INTERMITTENT INCIDENT

Refer to [GI-46, "Intermittent Incident"](#).

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# B2601 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## B2601 SHIFT POSITION

### DTC Logic

INFOID:000000009754642

### DTC DETECTION LOGIC

#### NOTE:

- If DTC B2601 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-79, "DTC Logic"](#).
- If DTC B2601 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-80, "DTC Logic"](#).

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 (detention switch) and P position signal from IPDM E/R (CAN).	<ul style="list-style-type: none"> <li>• Harness or connectors (CAN communication line is open or shorted.)</li> <li>• Harness or connectors [CVT shift selector (detention switch) circuit is open or shorted.]</li> <li>• BCM</li> <li>• IPDM E/R</li> </ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

1. Shift the selector lever to the P position.
2. Turn ignition switch ON and wait 2 seconds or more.
3. Shift the selector lever to any position other than P, and wait 2 seconds or more.
4. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-66, "Diagnosis Procedure"](#).  
 NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754643

#### 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.

(+)		(-)	Voltage (V) (Approx.)
Connector	Terminal		
M57	12	Ground	12

#### Is the inspection result normal?

- YES >> GO TO 4.  
 NO >> GO TO 2.

#### 2. CHECK CVT SHIFT SELECTOR POWER SUPPLY CIRCUIT

1. Disconnect BCM connector.
2. 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	
M57	12	M70	104	Existed

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

# B2601 SHIFT POSITION

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

CVT shift selector (detention switch)		Ground	Continuity
Connector	Terminal		
M57	12		Not existed

Is the inspection result normal?

- YES >> GO TO 3.
- NO >> Repair or replace harness.

### 3.REPLACE BCM

1. Replace BCM. Refer to [BCS-90, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

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

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

CVT shift selector (detention switch)		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M57	13	E17	64	Existed

Is the inspection result normal?

- YES >> GO TO 5.
- NO >> Repair or replace harness.

### 5.CHECK CVT SHIFT SELECTOR CIRCUIT (BCM)

1. Disconnect BCM connector.
2. 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	
M57	13	M68	37	Existed

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

CVT shift selector (detention switch)		Ground	Continuity
Connector	Terminal		
M57	13		Not existed

Is the inspection result normal?

- YES >> GO TO 6.
- NO >> Repair or replace harness.

### 6.REPLACE BCM

1. Replace BCM. Refer to [BCS-90, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.
3. Perform DTC CONFIRMATION PROCEDURE for DTC B2601. Refer to [SEC-66, "DTC Logic"](#).

Is DTC B2601 detected again?

- YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).
- NO >> INSPECTION END

# B2602 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## B2602 SHIFT POSITION

### DTC Logic

INFOID:000000009754644

### DTC DETECTION LOGIC

#### NOTE:

- If DTC B2602 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-79, "DTC Logic"](#).
- If DTC B2602 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-80, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2602	SHIFT POSITION	BCM detects the following status for 10 seconds. <ul style="list-style-type: none"> <li>• Selector lever is in the P position</li> <li>• Vehicle speed is 4 km/h (2.5 MPH) or more</li> <li>• Ignition switch is in the ON position</li> </ul>	<ul style="list-style-type: none"> <li>• Harness or connectors (CAN communication line is open or shorted.)</li> <li>• Harness or connectors [CVT shift selector (detention switch) circuit is open or shorted.]</li> <li>• CVT shift selector (detention switch)</li> <li>• Combination meter</li> <li>• BCM</li> </ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

1. Start engine.
2. Drive vehicle at a speed of 4 km/h (2.5 MPH) or more for 10 seconds or more.
3. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-68, "Diagnosis Procedure"](#).  
 NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754645

#### 1. CHECK DTC OF "ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)"

Check DTC in "Self Diagnostic Result" mode of "ABS" using CONSULT.

#### Is DTC detected?

- YES >> Perform the trouble diagnosis related to the detected DTC. Refer to [BRC-50, "DTC Index"](#).  
 NO >> GO TO 2.

#### 2. CHECK DTC OF COMBINATION METER

Check DTC in "Self Diagnostic Result" mode of "METER/M&A" using CONSULT.

#### Is DTC detected?

- YES >> Perform the trouble diagnosis related to the detected DTC. Refer to [MWI-32, "DTC Index"](#).  
 NO >> GO TO 3.

#### 3. 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.

(+)		(-)	Voltage (V) (Approx.)
Connector	Terminal		
M57	12	Ground	12

#### Is the inspection result normal?

- YES >> GO TO 6.

## B2602 SHIFT POSITION

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

NO >> GO TO 4.

### 4. CHECK CVT SHIFT SELECTOR POWER SUPPLY CIRCUIT

1. Disconnect BCM connector.
2. 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	
M57	12	M70	104	Existed

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

CVT shift selector (detention switch)		Ground	Continuity
Connector	Terminal		
M57	12		Not existed

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

### 5. REPLACE BCM

1. Replace BCM. Refer to [BCS-90, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

### 6. CHECK CVT SHIFT SELECTOR CIRCUIT

1. Disconnect BCM connector and IPDM E/R connector.
2. 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	
M57	13	M68	37	Existed

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

CVT shift selector (detention switch)		Ground	Continuity
Connector	Terminal		
M57	13		Not existed

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness.

### 7. CHECK CVT SHIFT SELECTOR (DETENTION SWITCH)

Refer to [SEC-70, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 8.

NO >> Replace CVT shift selector. Refer to [TM-307, "Removal and Installation"](#).

### 8. CHECK INTERMITTENT INCIDENT

Refer to [GI-46, "Intermittent Incident"](#).

>> INSPECTION END

# B2602 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## Component Inspection

INFOID:000000009754646

### 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.

CVT shift selector (detention switch)		Condition	Continuity	
Terminal				
12	13	Selector lever: P position	Selector button: Released	Not existed
			Selector button: Pressed	Existed
		Selector lever: Except P position		

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace CVT shift selector. Refer to [TM-307, "Removal and Installation"](#).

# B2603 SHIFT POSITION

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

## B2603 SHIFT POSITION

### DTC Logic

INFOID:000000009754647

### DTC DETECTION LOGIC

#### NOTE:

- If DTC B2603 is displayed with DTC B2601, first perform the trouble diagnosis for DTC B2601. Refer to [SEC-66, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible causes
B2603	SHIFT POSI STATUS	BCM detects the following status when ignition switch is in the ON position. <ul style="list-style-type: none"> <li>• Transmission range switch signal: approx. 0 V</li> <li>• CVT shift selector (detention switch) signal: approx. 0 V</li> </ul>	<ul style="list-style-type: none"> <li>• Harness or connector [CVT shift selector (detention switch) circuit is open or shorted.]</li> <li>• Harness or connectors (Transmission range switch circuit is open or shorted.)</li> <li>• CVT shift selector (detention switch)</li> <li>• Transmission range switch</li> <li>• BCM</li> </ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE 1

1. Shift the selector lever to the P position.
2. Turn ignition switch ON and wait 1 second or more.
3. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-71, "Diagnosis Procedure"](#).  
 NO >> GO TO 2.

#### 2. PERFORM DTC CONFIRMATION PROCEDURE 2

1. Shift the selector lever to any position other than P, and wait 1 second or more.
2. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-71, "Diagnosis Procedure"](#).  
 NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754648

#### 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 8.

#### 2. CHECK FUSE

1. Turn power switch OFF.
2. Check that the following fuse in IPDM E/R is not blown.

Signal name	Fuse No.
Ignition power supply	56 (10 A)

#### Is the inspection result normal?

- YES >> GO TO 3.  
 NO >> Replace the blown fuse after repairing the cause of blowing.

#### 3. CHECK TRANSMISSION RANGE SWITCH POWER SUPPLY

1. Disconnect transmission range switch connector.
2. Turn ignition switch ON.

## B2603 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

3. Check voltage between transmission range switch harness connector and ground.

(+)		(-)	Voltage (V)
Transmission range switch			
Connector	Terminal	Ground	6 - 16
F27	1		

Is the inspection result normal?

- YES >> GO TO 5.  
NO >> GO TO 4.

### 4.CHECK TRANSMISSION RANGE SWITCH POWER SUPPLY CIRCUIT

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

Transmission range switch		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
F27	1	E15	58	Existed

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).  
NO >> Repair or replace harness.

### 5.CHECK BCM INPUT SIGNAL

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

(+)		(-)	Condition	Voltage (V) (Approx.)
BCM				
Connector	Terminal	Ground	P or N position	Battery voltage
M70	102		Ground	Other than above

Is the inspection result normal?

- YES >> GO TO 13.  
NO >> GO TO 6.

### 6.CHECK BCM INPUT SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect transmission range switch connector.
3. Disconnect BCM connector.
4. Check continuity between transmission range switch harness connector and BCM harness connector.

Transmission range switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
F27	2	M70	102	Existed

Is the inspection result normal?

- YES >> GO TO 7.  
NO >> Repair or replace harness.

### 7.CHECK TRANSMISSION RANGE SWITCH

Refer to [SEC-74, "Component Inspection \(Transmission Range Switch\)"](#).

Is the inspection result normal?



# B2603 SHIFT POSITION

[WITH INTELLIGENT KEY SYSTEM]

## < DTC/CIRCUIT DIAGNOSIS >

YES >> GO TO 12.

NO >> Replace transmission range switch. Refer to [TM-318, "Removal and Installation"](#).

### 8. 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.

(+)		(-)	Voltage (V) (Approx.)
CVT shift selector (detention switch)			
Connector	Terminal		
M57	12	Ground	12

Is the inspection result normal?

YES >> GO TO 10.

NO >> GO TO 9.

### 9. CHECK CVT SHIFT SELECTOR POWER SUPPLY CIRCUIT

1. Disconnect BCM connector.
2. 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	
M57	12	M70	104	Existed

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

CVT shift selector (detention switch)		Ground	Continuity
Connector	Terminal		
M57	12		Not existed

Is the inspection result normal?

YES >> GO TO 12.

NO >> Repair or replace harness.

### 10. CHECK CVT SHIFT SELECTOR CIRCUIT

1. Disconnect BCM connector.
2. 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	
M57	13	M68	37	Existed

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

CVT shift selector (detention switch)		Ground	Continuity
Connector	Terminal		
M57	13		Not existed

Is the inspection result normal?

YES >> GO TO 11.

NO >> Repair or replace harness.

### 11. CHECK CVT SHIFT SELECTOR (DETENTION SWITCH)

Refer to [SEC-74, "Component Inspection \[CVT Shift Selector \(Detention Switch\)\]"](#).

Is the inspection result normal?

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M  
N  
O  
P

SEC

# B2603 SHIFT POSITION

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

YES >> GO TO 13.

NO >> Replace CVT shift selector. Refer to [TM-307, "Removal and Installation"](#).

## 12.CHECK INTERMITTENT INCIDENT

Refer to [GI-46, "Intermittent Incident"](#).

>> INSPECTION END

## 13.REPLACE BCM

1. Replace BCM. Refer to [BCS-90, "Removal and Installation"](#).

2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

## Component Inspection (Transmission Range Switch)

INFOID:000000009754649

### 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 range switch		Condition	Continuity
Terminal			
1	2	P or N position	Existed
		Other than above	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace transmission range switch. Refer to [TM-318, "Removal and Installation"](#).

## Component Inspection [CVT Shift Selector (Detention Switch)]

INFOID:000000009754650

### 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.

CVT shift selector (detention switch)		Condition	Continuity	
Terminal				
12	13	Selector lever: P position	Selector button: Released	Not existed
			Selector button: Pressed	Existed
		Selector lever: Except P position		

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace CVT shift selector. Refer to [TM-307, "Removal and Installation"](#).

# B2604 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## B2604 SHIFT POSITION

### DTC Logic

INFOID:000000009754651

### DTC DETECTION LOGIC

#### NOTE:

- If DTC B2604 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-79, "DTC Logic"](#).
- If DTC B2604 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-80, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2604	PNP/CLUTCH SW	The following states are detected for 5 seconds while ignition switch is ON. <ul style="list-style-type: none"> <li>• P/N position signal is sent from transmission range switch but shift position signal input (CAN) from TCM is other than P and N</li> <li>• P/N position signal is not sent from transmission range switch but shift position signal input (CAN) from TCM is P or N</li> </ul>	<ul style="list-style-type: none"> <li>• Harness or connectors (CAN communication line is open or shorted.)</li> <li>• Harness or connectors (Transmission range switch circuit is open or shorted.)</li> <li>• Transmission range switch</li> <li>• TCM</li> <li>• BCM</li> </ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

1. Shift the selector lever to the P position.
2. Turn ignition switch ON and wait 5 seconds or more.
3. Shift the selector lever to the N position and wait 5 seconds or more.
4. Shift the selector lever to any position other than P and N, and wait 5 seconds or more.
5. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-75, "Diagnosis Procedure"](#).  
 NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754652

SEC

#### 1. CHECK DTC OF TCM

Check DTC in "Self Diagnostic Result" mode of "TCM" using CONSULT.

#### Is DTC detected?

- YES >> Perform the trouble diagnosis related to the detected DTC. Refer to [TM-198, "DTC Index"](#).  
 NO >> GO TO 2.

#### 2. CHECK BCM INPUT SIGNAL

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

(+)		(-)	Condition	Voltage (V) (Approx.)
BCM				
Connector	Terminal			
M70	102	Ground	Selector lever	P or N position Battery voltage
				Other than above 0

#### Is the inspection result normal?

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

#### 3. REPLACE BCM

1. Replace BCM. Refer to [BCS-90, "Removal and Installation"](#).

## B2604 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

### 4. CHECK BCM INPUT SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect transmission range switch connector.
3. Disconnect BCM connector.
4. Check continuity between transmission range switch harness connector and BCM harness connector.

Transmission range switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
F27	2	M70	102	Existed

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

Transmission range switch		Ground	Continuity
Connector	Terminal		
F27	2		Not existed

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

### 5. CHECK INTERMITTENT INCIDENT

Refer to [GI-46, "Intermittent Incident"](#).

>> INSPECTION END

# B2605 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## B2605 SHIFT POSITION

### DTC Logic

INFOID:000000009754653

### DTC DETECTION LOGIC

#### NOTE:

- If DTC B2605 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-79, "DTC Logic"](#).
- If DTC B2605 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-80, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2605	PNP/CLUTCH SW	When ignition switch is ON, P/N position signal input from transmission range switch and P/N position signal input (CAN) from IPDM E/R do not match.	<ul style="list-style-type: none"><li>• Harness or connectors (CAN communication line is open or shorted.)</li><li>• Harness or connectors (Transmission range switch circuit is open or shorted.)</li><li>• Transmission range switch</li><li>• IPDM E/R</li><li>• BCM</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

1. Shift the selector lever to the P position.
2. Turn ignition switch ON and wait 1 second or more.
3. Shift the selector lever to the N position and wait 1 second or more.
4. Shift the selector lever to any position other than P and N, and wait 1 second or more.
5. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-77, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754654

#### 1. CHECK IPDM E/R INPUT SIGNAL CIRCUIT

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

IPDM E/R		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E15	48	M70	102	Existed

#### Is the inspection result normal?

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

#### 2. REPLACE BCM

1. Replace BCM. Refer to [BCS-90, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.
3. Perform DTC CONFIRMATION PROCEDURE for B2605. Refer to [SEC-77, "DTC Logic"](#).

#### Is DTC B2605 detected again?

- YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).  
NO >> INSPECTION END

# B2608 STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## B2608 STARTER RELAY

### DTC Logic

INFOID:000000009754655

### DTC DETECTION LOGIC

#### NOTE:

- If DTC B2608 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-79, "DTC Logic"](#).
- If DTC B2608 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-80, "DTC Logic"](#).
- If DTC B2608 is displayed with DTC B210D (IPDM E/R), first perform the trouble diagnosis for DTC B210D. Refer to [SEC-109, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2608	STARTER RELAY	BCM outputs starter relay OFF signal but BCM receives starter relay ON signal from IPDM E/R (CAN).	<ul style="list-style-type: none"><li>• Harness or connectors (CAN communication line is open or shorted.)</li><li>• Harness or connectors (Starter relay circuit is open or shorted.)</li><li>• IPDM E/R</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

1. Press push-button ignition switch under the following conditions to start engine.

#### CVT models

- Selector lever: In the P position
- Brake pedal: Depressed

#### M/T models

- Shift lever: In the Neutral position
- Clutch pedal: Depressed

2. Wait 1 second after engine started.
3. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-78, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754656

#### 1. CHECK DTC OF IPDM E/R

Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

#### Is DTC detected?

- YES >> Perform the trouble diagnosis related to the detected DTC. Refer to [PCS-24, "DTC Index"](#).  
NO >> GO TO 2.

#### 2. CHECK STARTER RELAY CIRCUIT

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

IPDM E/R		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E13	30	M70	97	Existed

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

# B2608 STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

IPDM E/R		Ground	Continuity
Connector	Terminal		
E13	30		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## 3. REPLACE IPDM E/R

1. Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).

2. Perform DTC CONFIRMATION PROCEDURE for DTC B2608. Refer to [SEC-78, "DTC Logic"](#).

Is DTC B2608 detected again?

YES >> INSPECTION END

NO >> GO TO 4.

## 4. REPLACE BCM

1. Replace BCM. Refer to [BCS-90, "Removal and Installation"](#).

2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

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SEC

# B260F ENGINE STATUS

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## B260F ENGINE STATUS

### Description

INFOID:000000009754657

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

### DTC Logic

INFOID:000000009754658

### DTC DETECTION LOGIC

#### NOTE:

- If DTC B260F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-79, "DTC Logic"](#).
- If DTC B260F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-80, "DTC Logic"](#).

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.	<ul style="list-style-type: none"><li>• Harness or connectors (CAN communication line is open or shorted.)</li><li>• ECM</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON and wait 2 seconds or more.
2. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-80, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754659

#### 1.INSPECTION START

1. Turn ignition switch ON.
2. Select "Self Diagnostic Result" mode of "BCM" using CONSULT.
3. Touch "ERASE".
4. Perform DTC CONFIRMATION PROCEDURE for DTC B260F. Refer to [SEC-80, "DTC Logic"](#).

#### Is DTC detected?

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

#### 2.REPLACE ECM

Replace ECM.  
Refer to [EC-561, "Removal and Installation"](#).

>> INSPECTION END



# B261A PUSH-BUTTON IGNITION SWITCH

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

## B261A PUSH-BUTTON IGNITION SWITCH

### DTC Logic

INFOID:000000009754660

### DTC DETECTION LOGIC

#### NOTE:

- If DTC B261A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-79, "DTC Logic"](#).
- If DTC B261A is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-80, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B261A	PUSH-BTN IGN SW	BCM detects the mismatch between the following for 1 second or more <ul style="list-style-type: none"> <li>• Push-button ignition switch operation condition judged by push switch signal</li> <li>• Push-button ignition switch status signal from IPDM E/R (CAN)</li> </ul>	<ul style="list-style-type: none"> <li>• Harness or connectors (Push-button ignition switch circuit is open or shorted)</li> <li>• IPDM E/R</li> <li>• BCM</li> </ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

1. Press push-button ignition switch for 1 second under the following condition.

#### CVT models

- Selector lever: In the P position
- Brake pedal: Not depressed

#### M/T models

- Shift lever: In the Neutral position
  - Clutch pedal: Not depressed
2. Release push-button ignition switch and wait 1 second.
  3. Check DTC in "Self diagnostic result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-81, "Diagnosis Procedure"](#)  
 NO >> INSPECTION END

SEC

### Diagnosis Procedure

INFOID:000000009754661

#### 1. CHECK PUSH-BUTTON IGNITION SWITCH POWER SUPPLY CIRCUIT

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

(+)		(-)	Voltage (V) (Approx.)
Push-button ignition switch			
Connector	Terminal		
M101	8	Ground	12

#### Is the inspection result normal?

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

#### 2. CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT 1

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

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Push-button ignition switch		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M101	8	E17	66	Existed

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

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

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).

NO >> Repair harness or connector.

## 3. CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT 2

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

Push-button ignition switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M101	8	M70	76	Existed

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

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

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

## 4. REPLACE BCM

1. Replace BCM. Refer to [BCS-90, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

# B261F ASCD CLUTCH SWITCH

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

## B261F ASCD CLUTCH SWITCH

### DTC Logic

INFOID:000000009754662

### DTC DETECTION LOGIC

#### NOTE:

- If DTC B261F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-79, "DTC Logic"](#).
- If DTC B261F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-80, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detection condition	Possible cause
B261F	ASCD CNCL/CLTCH SW	BCM detects the following status for 10 seconds 3 times <ul style="list-style-type: none"><li>• Clutch pedal position switch input (CAN) from ECM: OFF</li><li>• Vehicle speed: 40 km/h (24.8 MPH) or more</li></ul>	<ul style="list-style-type: none"><li>• Harness or connectors. (CAN communication line is open or shorted.) (Clutch pedal position switch circuit is open or shorted.)</li><li>• ABS actuator and electric unit (control unit)</li><li>• Combination meter</li><li>• BCM</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Drive vehicle at a speed of 40 km/h (24.8 MPH) or more for 10 seconds.
3. Decrease the vehicle speed to below 40 km/h (24.8 MPH).
4. Repeat steps 2 and 3 twice (a total of 3 times).
5. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-83, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754663

#### 1. CHECK DTC OF "ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)"

Check DTC in "Self Diagnostic Result" mode of "ABS" using CONSULT.

#### Is DTC detected?

- YES >> Perform the trouble diagnosis related to the detected DTC. Refer to [BRC-50, "DTC Index"](#).  
NO >> GO TO 2.

#### 2. CHECK DTC OF COMBINATION METER

Check DTC in "Self Diagnostic Result" mode of "METER/M&A" using CONSULT. Refer to [MWI-32, "DTC Index"](#).

#### Is the inspection result normal?

- YES >> GO TO 3.  
NO >> Repair or replace the malfunctioning parts.

#### 3. CHECK CLUTCH PEDAL POSITION SWITCH CIRCUIT

Refer to [EC-543, "Component Function Check"](#).

#### Is the inspection result normal?

- YES >> GO TO 4.  
NO >> Repair or replace the malfunctioning parts.

#### 4. CHECK INTERMITTENT INCIDENT

Refer to [GI-46, "Intermittent Incident"](#).

## B261F ASCD CLUTCH SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

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>> INSPECTION END

# B2620 PARK/NEUTRAL POSITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## B2620 PARK/NEUTRAL POSITION SWITCH

### DTC Logic

INFOID:000000009754664

#### NOTE:

- If DTC B2620 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-79, "DTC Logic"](#).
- If DTC B2620 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-80, "DTC Logic"](#).

### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detection condition	Possible cause
B2620	NEUTRAL SW	BCM detects the following status for 10 seconds 3 times <ul style="list-style-type: none"><li>• Park/neutral position switch input: Battery voltage</li><li>• Vehicle speed: 40 km/h (24.8 MPH) or more</li></ul>	<ul style="list-style-type: none"><li>• Harness or connector (CAN communication line is open or shorted.)</li><li>• Harness or connector (Park/neutral position switch circuit is open or shorted)</li><li>• Park/neutral position switch</li><li>• Combination meter</li><li>• BCM</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Drive vehicle at a speed of 40 km/h (24.8 MPH) or more for 10 seconds.
3. Decrease the vehicle speed to below 40 km/h (24.8 MPH).
4. Repeat steps 2 and 3 twice (a total of 3 times).
5. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-85, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754665

SEC

#### 1. CHECK DTC OF COMBINATION METER

Check DTC in "Self Diagnostic Result" mode of "METER/M&A" using CONSULT.  
Refer to [MWI-32, "DTC Index"](#).

#### Is the inspection result normal?

- YES >> GO TO 2.  
NO >> Repair or replace the malfunctioning parts.

#### 2. CHECK FUSE

1. Turn power switch OFF.
2. Check that the following fuse in the fuse block (J/B) is not blown.

Signal name	Fuse No.
Ignition power supply	5 (10 A)

#### Is the inspection result normal?

- YES >> GO TO 3.  
NO >> Replace the blown fuse after repairing the cause of blowing.

#### 3. CHECK PARK/NEUTRAL POSITION SWITCH POWER SUPPLY

1. Turn ignition switch OFF.
2. Disconnect park/neutral position switch connector.
3. Turn ignition switch ON.
4. Check voltage between park/neutral position switch harness connector and ground.

## B2620 PARK/NEUTRAL POSITION SWITCH

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[WITH INTELLIGENT KEY SYSTEM]

(+)		(-)	Voltage (V) (Approx.)
Park/neutral position switch			
Connector	Terminal	Ground	Battery voltage
F49	2		

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

### 4. CHECK PARK/NEUTRAL POSITION SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Connect park/neutral position switch connector.
3. Turn ignition switch ON.
4. Check voltage between BCM harness connector and ground.

(+)		(-)	Condition	Voltage (V) (Approx.)
BCM				
Connector	Terminal	Ground	Shift lever	Neutral position Except neutral position
M70	102			
		0		

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 6.

### 5. REPLACE BCM

1. Replace BCM. Refer to [BCS-90. "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

### 6. CHECK PARK/NEUTRAL POSITION SWITCH SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect park/neutral position switch connector.
3. Disconnect BCM connector.
4. Check continuity between park/neutral position switch harness connector and BCM harness connector.

Park/neutral position switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
F49	3	M70	102	Existed

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness.

### 7. CHECK PARK/NEUTRAL POSITION SWITCH

Refer to [SEC-87. "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 8.

NO >> Replace park/neutral position switch. Refer to [TM-20. "Removal and Installation"](#).

### 8. CHECK INTERMITTENT INCIDENT

Refer to [GI-46. "Intermittent Incident"](#).

>> INSPECTION END

# B2620 PARK/NEUTRAL POSITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## Component Inspection

INFOID:000000009754666

### 1. CHECK PARK/NEUTRAL POSITION SWITCH

1. Turn ignition switch OFF.
2. Disconnect park/neutral position switch connector.
3. Check continuity between park/neutral position switch terminals.

Park/neutral position switch		Condition		Continuity
Terminal				
2	3	Shift lever	Neutral position	Existed
			Except neutral position	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace park/neutral position switch. Refer to [TM-20, "Removal and Installation"](#).

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# B26E8 CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## B26E8 CLUTCH INTERLOCK SWITCH

### DTC Logic

INFOID:000000009754667

#### NOTE:

- If DTC B26E8 is displayed with DTC B210F, first perform the trouble diagnosis for DTC B210F. Refer to [BCS-79, "DTC Logic"](#).
- If DTC B26E8 is displayed with DTC B2110, first perform the trouble diagnosis for DTC B2110. Refer to [BCS-80, "DTC Logic"](#).

### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detection condition	Possible cause
B26E8	CLUTCH SW	BCM detects the following conditions for 2 seconds or more. <ul style="list-style-type: none"><li>• Clutch pedal position switch input (CAN) from ECM: ON (Clutch pedal is released)</li><li>• Clutch interlock switch signal: ON (Clutch pedal is depressed)</li></ul>	<ul style="list-style-type: none"><li>• Harness or connector (CAN communication line is open or shorted)</li><li>(Clutch interlock switch circuit is open or shorted)</li><li>(Clutch pedal position switch circuit is open or shorted)</li><li>• Clutch interlock switch</li><li>• BCM</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE 1

1. Turn ignition switch ON.
2. Wait 2 seconds or more under the following conditions.
  - Shift lever: In the Neutral position.
  - Clutch pedal: Depressed
3. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-88, "Diagnosis Procedure"](#).  
NO >> GO TO 2.

#### 2. PERFORM DTC CONFIRMATION PROCEDURE 2

1. Release clutch pedal and wait 2 seconds or more.
2. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-88, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754668

#### 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 3.

#### 2. CHECK CLUTCH PEDAL POSITION SWITCH CIRCUIT

Refer to [EC-543, "Component Function Check"](#).

#### Is the inspection result normal?

- YES >> GO TO 8.  
NO >> Repair or replace the malfunctioning parts.

#### 3. CHECK FUSE

1. Turn power switch OFF.
2. Check that the following fuse in the fuse block (J/B) is not blown.



# B26E8 CLUTCH INTERLOCK SWITCH

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Signal name	Fuse No.
Battery power supply	13 (10 A)

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace the blown fuse after repairing the cause of blowing.

## 4. CHECK CLUTCH INTERLOCK SWITCH POWER SUPPLY

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

(+)		(-)	Voltage (V) (Approx.)
Clutch interlock switch			
Connector	Terminal	Ground	Battery voltage
E29	3		

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

## 5. CHECK CLUTCH INTERLOCK SWITCH SIGNAL

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

(+)		(-)	Condition	Voltage (V) (Approx.)
BCM				
Connector	Terminal	Ground	Clutch pedal	Battery voltage
M70	101			
			Not depressed	0

Is the inspection result normal?

YES >> GO TO 9.

NO >> GO TO 6.

## 6. CHECK CLUTCH INTERLOCK SWITCH SIGNAL CIRCUIT

1. Disconnect clutch interlock switch connector.
2. Disconnect BCM connector.
3. Check continuity between clutch interlock switch harness connector and BCM harness connector.

Clutch interlock switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E29	4	M70	101	Existed

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness.

## 7. CHECK CLUTCH INTERLOCK SWITCH

Refer to [SEC-90. "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 8.

NO >> Replace clutch interlock switch. Refer to [TM-20. "Removal and Installation"](#).

## 8. CHECK INTERMITTENT INCIDENT

Refer to [GI-46. "Intermittent Incident"](#).

>> INSPECTION END

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# B26E8 CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## 9. REPLACE BCM

1. Replace BCM. Refer to [BCS-90. "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Key using CONSULT.

>> INSPECTION END

## Component Inspection

INFOID:000000009754669

## 1. CHECK CLUTCH INTERLOCK SWITCH

1. Turn ignition switch OFF.
2. Disconnect clutch interlock switch connector.
3. Check continuity between clutch interlock switch terminals.

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Clutch interlock switch		Condition	Continuity	
Terminal				
3	4	Clutch pedal	Depressed	Existed
			Not depressed	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace clutch interlock switch. Refer to [TM-20. "Removal and Installation"](#).

# B26F3 STARTER CONTROL RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## B26F3 STARTER CONTROL RELAY

### DTC Logic

INFOID:000000009754670

### DTC DETECTION LOGIC

#### NOTE:

- If DTC B26F3 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-79, "DTC Logic"](#).
- If DTC B26F3 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-80, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26F3	START CONT RLY ON	BCM requests IPDM E/R to turn starter control relay OFF, but BCM cannot receive starter control relay OFF state signal from IPDM E/R (CAN).	<ul style="list-style-type: none"><li>• Harness or connectors (CAN communication line is open or shorted.)</li><li>• IPDM E/R</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

1. Press push-button ignition switch under the following conditions to start engine.

#### CVT models

- Selector lever: In the P position
- Brake pedal: Depressed

#### M/T models

- Shift lever: In the Neutral position
- Clutch pedal: Depressed

2. Wait 2 seconds after engine started.
3. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-91, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754671

SEC

#### 1. CHECK DTC OF IPDM E/R

Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

#### Is DTC detected?

- YES >> Perform the diagnosis procedure related to the detected DTC. Refer to [PCS-24, "DTC Index"](#).  
NO >> GO TO 2.

#### 2. CHECK INTERMITTENT INCIDENT

Refer to [GI-46, "Intermittent Incident"](#).

>> INSPECTION END

# B26F4 STARTER CONTROL RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## B26F4 STARTER CONTROL RELAY

### DTC Logic

INFOID:000000009754672

### DTC DETECTION LOGIC

#### NOTE:

- If DTC B26F4 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-79, "DTC Logic"](#).
- If DTC B26F4 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-80, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26F4	START CONT RELAY OFF	BCM requests IPDM E/R to turn starter control relay ON, but BCM cannot receive starter control relay ON state signal from IPDM E/R.	<ul style="list-style-type: none"><li>• Harness or connectors (CAN communication line is open or shorted.)</li><li>• IPDM E/R</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

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

#### CVT models

- Selector lever: In the P position
- Brake pedal: Depressed

#### M/T models

- Shift lever: In the Neutral position
- Clutch pedal: Depressed

2. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-92, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754673

#### 1. CHECK DTC OF IPDM E/R

Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

#### Is DTC detected?

- YES >> Perform the diagnosis procedure related to the detected DTC. Refer to [PCS-24, "DTC Index"](#).  
NO >> GO TO 2.

#### 2. CHECK INTERMITTENT INCIDENT

Refer to [GI-46, "Intermittent Incident"](#).

>> INSPECTION END

B26F7 BCM

DTC Logic

INFOID:000000009754674

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press door request switch.
2. Turn ignition switch ON.
3. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

Is DTC detected?

- YES >> Go to [SEC-94, "Diagnosis Procedure"](#).
- NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000009754675

1.INSPECTION START

1. Turn ignition switch ON.
2. Select "Self Diagnostic Result" mode of "BCM" using CONSULT.
3. Touch "ERASE".
4. Perform DTC CONFIRMATION PROCEDURE for DTC B26F7. Refer to [SEC-93, "DTC Logic"](#).

Is DTC detected?

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

2.REPLACE BCM

1. Replace BCM. Refer to [BCS-90, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

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**B26F8 BCM****DTC Logic**

INFOID:000000009754676

**DTC DETECTION LOGIC****NOTE:**

DTC B26F8 can be detected even though the related circuit is not used in this vehicle.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26F8	BCM	Starter control replay control signal and feedback circuit signal (inside BCM) does not match.	BCM

**DTC CONFIRMATION PROCEDURE****1.PERFORM DTC CONFIRMATION PROCEDURE**

1. Turn ignition switch ON and wait 1 second.
2. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

**Is DTC detected?**

- YES >> Go to [SEC-94, "Diagnosis Procedure"](#).  
 NO >> INSPECTION END

**Diagnosis Procedure**

INFOID:000000009754677

**1.INSPECTION START**

1. Turn ignition switch ON.
2. Select "Self Diagnostic Result" mode of "BCM" using CONSULT.
3. Touch "ERASE".
4. Perform DTC CONFIRMATION PROCEDURE for DTC B26F8.  
Refer to [SEC-94, "DTC Logic"](#).

**Is DTC detected?**

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

**2.REPLACE BCM**

1. Replace BCM. Refer to [BCS-90, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

# B26F9 CRANKING REQUEST CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## B26F9 CRANKING REQUEST CIRCUIT

### DTC Logic

INFOID:000000009754678

### DTC DETECTION LOGIC

#### NOTE:

- If DTC B26F9 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-79, "DTC Logic"](#).
- If DTC B26F9 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-80, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26F9	CRANK REQ CIR SHORT	BCM detects that the status of the following signals does not match. <ul style="list-style-type: none"><li>• Cranking request signal from ECM</li><li>• Starter control relay control signal from ECM (CAN)</li></ul>	<ul style="list-style-type: none"><li>• Harness or connectors (CAN communication line is open or shorted.)</li><li>• Harness or connectors (Cranking request signal circuit is open or shorted.)</li><li>• ECM</li><li>• BCM</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION

1. Perform DTC CONFIRMATION PROCEDURE for DTC P1650. Refer to [EC-470, "DTC Logic"](#).
2. Turn ignition switch ON.
3. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-95, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754679

#### 1. CHECK CRANKING REQUEST SIGNAL

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

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(+)		(-)	Condition	Voltage (V) (Approx.)	
BCM					
Connector	Terminal				
M69	64	Ground	Ignition switch OFF	3.6	
			Ignition switch ON	<ul style="list-style-type: none"><li>• Engine: Stopped</li><li>• Selector lever position: P</li></ul>	0
				<ul style="list-style-type: none"><li>• Engine: Stopped</li><li>• Selector lever position: Other than P</li></ul>	12
			Engine running	12	

#### Is the inspection result normal?

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

#### 2. CHECK CRANKING REQUEST SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Disconnect ECM connector.
4. Check continuity between BCM harness connector and ECM harness connector.

## B26F9 CRANKING REQUEST CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

BCM		ECM		Continuity
Connector	Terminal	Connector	Terminal	
M69	64	F26	92	Existed

5. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M69	64		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

### 3.REPLACE BCM

1. Replace BCM. Refer to [BCS-90, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.
3. Perform DTC CONFIRMATION PROCEDURE for DTC B26F9. Refer to [SEC-95, "DTC Logic"](#).

Is DTC detected?

YES >> GO TO 4.

NO >> INSPECTION END

### 4.REPLACE ECM

Replace ECM.

Refer to [EC-561, "Removal and Installation"](#).

>> INSPECTION END



# B26FA CRANKING REQUEST CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## B26FA CRANKING REQUEST CIRCUIT

### DTC Logic

INFOID:000000009754680

### DTC DETECTION LOGIC

#### NOTE:

- If DTC B26FA is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-79, "DTC Logic"](#).
- If DTC B26FA is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-80, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26FA	CRANK REQ CIR OPEN	BCM detects that the status of the following signals does not match. <ul style="list-style-type: none"><li>• Cranking request signal from ECM</li><li>• Starter control relay control signal from ECM (CAN)</li></ul>	<ul style="list-style-type: none"><li>• Harness or connectors (CAN communication line is open or shorted.)</li><li>• Harness or connectors (Cranking request signal circuit is open or shorted.)</li><li>• BCM</li><li>• ECM</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION

1. Perform DTC CONFIRMATION PROCEDURE for DTC P1650. Refer to [EC-470, "DTC Logic"](#).
2. Turn ignition switch ON.
3. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-97, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754681

#### 1. CHECK CRANKING REQUEST SIGNAL

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

(+)		(-)	Condition	Voltage (V) (Approx.)	
BCM					
Connector	Terminal				
M69	64	Ground	Ignition switch OFF	3.6	
			Ignition switch ON	<ul style="list-style-type: none"><li>• Engine: Stopped</li><li>• Selector lever position: P</li></ul>	0
				<ul style="list-style-type: none"><li>• Engine: Stopped</li><li>• Selector lever position: Other than P</li></ul>	12
			Engine running	12	

#### Is the inspection result normal?

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

#### 2. CHECK CRANKING REQUEST SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Disconnect ECM connector.
4. Check continuity between BCM harness connector and ECM harness connector.

# B26FA CRANKING REQUEST CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

BCM		ECM		Continuity
Connector	Terminal	Connector	Terminal	
M69	64	F26	92	Existed

5. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M69	64		Not existed

Is the inspection result normal?

- YES >> GO TO 3.
- NO >> Repair or replace harness.

## 3.REPLACE BCM

1. Replace BCM. Refer to [EC-561, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.
3. Perform DTC CONFIRMATION PROCEDURE for DTC B26FA. Refer to [SEC-97, "DTC Logic"](#).

Is DTC detected?

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

## 4.REPLACE ECM

Replace ECM.  
Refer to [EC-561, "Removal and Installation"](#).

>> INSPECTION END

# B26FB CLUTCH SWITCH

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

## B26FB CLUTCH SWITCH

### DTC Logic

INFOID:000000009754682

### DTC DETECTION LOGIC

#### NOTE:

- If DTC B26FB is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-79, "DTC Logic"](#).
- If DTC B26FB is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-80, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detection condition	Possible cause
B26FB	CLUTCH SW	BCM receives the abnormal signal of clutch pedal position switch from ECM via CAN communication.	<ul style="list-style-type: none"><li>• Harness or connector (CAN communication line is open or shorted) (Clutch pedal position switch circuit is open or shorted.)</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-99, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754683

#### 1.INSPECTION START

1. Turn ignition switch ON.
2. Select "Self diagnostic result" mode of BCM using CONSULT.
3. Touch "ERASE".
4. Perform DTC CONFIRMATION PROCEDURE for DTC B26FB. Refer to [SEC-99, "DTC Logic"](#).

#### Is DTC detected?

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

#### 2.CHECK CLUTCH PEDAL POSITION SWITCH CIRCUIT

Refer to [EC-543, "Component Function Check"](#).

#### Is the inspection result normal?

- YES >> GO TO 3.  
NO >> Repair or replace the malfunctioning parts.

#### 3.CHECK INTERMITTENT INCIDENT

Refer to [GI-46, "Intermittent Incident"](#).

>> INSPECTION END

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O  
P

SEC

# B26FC KEY REGISTRATION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## B26FC KEY REGISTRATION

### DTC Logic

INFOID:000000009754684

### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26FC	KEY REGISTRATION	Intelligent Key that does not match the vehicle is registered.	<ul style="list-style-type: none"><li>• Improper registration operation</li><li>• Intelligent Key</li><li>• BCM</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

1. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.
2. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-100. "Diagnosis Procedure"](#)  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754685

#### 1.REPLACE INTELLIGENT KEY

1. Prepare Intelligent Key that matches the vehicle.
2. Perform initialization of BCM and registration of Intelligent Key using CONSULT.
3. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

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

#### 2.REPLACE BCM

1. Replace BCM. Refer to [BCS-90. "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

# B209F CRANKING REQUEST CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## B209F CRANKING REQUEST CIRCUIT

### DTC Logic

INFOID:000000009754686

### DTC DETECTION LOGIC

#### NOTE:

If DTC B209F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [PCS-30, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B209F	CRANK REQ CIR OPEN	When the following items do not match, a malfunction is detected. <ul style="list-style-type: none"><li>• Cranking request signal from ECM</li><li>• Starter control relay control signal from ECM (CAN)</li></ul>	<ul style="list-style-type: none"><li>• Harness or connectors (CAN communication line is open or shorted.)</li><li>• Harness or connectors (Cranking request signal circuit is open or shorted.)</li><li>• IPDM E/R</li><li>• ECM</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

1. Perform DTC CONFIRMATION PROCEDURE for DTC P1650. Refer to [EC-470, "DTC Logic"](#).
2. Turn ignition switch ON.
3. Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

Is DTC detected?

- YES >> Refer to [SEC-101, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754687

#### 1. CHECK CRANKING REQUEST SIGNAL

1. Turn ignition switch ON.
2. Check voltage between IPDM E/R harness connector and ground under the following conditions.

(+) IPDM E/R		(-)	Condition	Voltage (V) (Approx.)	
Connector	Terminal				
E13	23	Ground	Ignition switch OFF	3.6	
			Ignition switch ON	<ul style="list-style-type: none"><li>• Engine: Stopped</li><li>• Selector lever position: P</li></ul>	0
				<ul style="list-style-type: none"><li>• Engine: Stopped</li><li>• Selector lever position: Other than P</li></ul>	12
			Engine running	12	

Is the inspection result normal?

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

#### 2. CHECK CRANKING REQUEST SIGNAL CIRCUIT

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

## B209F CRANKING REQUEST CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

IPDM E/R		ECM		Continuity
Connector	Terminal	Connector	Terminal	
E13	23	F26	92	Existed

5. Check continuity between BCM harness connector and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E13	23		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

### 3.REPLACE IPDM E/R

1. Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).

2. Perform DTC CONFIRMATION PROCEDURE for DTC B209F. Refer to [SEC-101, "DTC Logic"](#).

Is DTC detected?

YES >> GO TO 4.

NO >> INSPECTION END

### 4.REPLACE ECM

Replace ECM.

Refer to [EC-561, "Removal and Installation"](#).

>> INSPECTION END

# B20A0 CRANKING REQUEST CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## B20A0 CRANKING REQUEST CIRCUIT

### DTC Logic

INFOID:000000009754688

### DTC DETECTION LOGIC

#### NOTE:

If DTC B20A0 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [PCS-30, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B20A0	CRANKREQ CIR SHORT	When the following items do not match, a malfunction is detected. <ul style="list-style-type: none"> <li>• Cranking request signal from ECM</li> <li>• Starter control relay control signal from ECM (CAN)</li> </ul>	<ul style="list-style-type: none"> <li>• Harness or connectors (CAN communication line is open or shorted.)</li> <li>• Harness or connectors (Cranking request signal circuit is open or shorted.)</li> <li>• IPDM E/R</li> <li>• ECM</li> </ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

1. Perform DTC CONFIRMATION PROCEDURE for DTC P1650. Refer to [EC-470, "DTC Logic"](#).
2. Turn ignition switch ON.
3. Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

Is DTC detected?

- YES >> Refer to [SEC-103, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754689

#### 1. CHECK CRANKING REQUEST SIGNAL

1. Turn ignition switch ON.
2. Check voltage between IPDM E/R harness connector and ground under the following conditions.

(+)		(-)	Condition	Voltage (V) (Approx.)	
IPDM E/R					
Connector	Terminal				
E13	23	Ground	Ignition switch OFF	3.6	
			Ignition switch ON	<ul style="list-style-type: none"> <li>• Engine: Stopped</li> <li>• Selector lever position: P</li> </ul>	0
				<ul style="list-style-type: none"> <li>• Engine: Stopped</li> <li>• Selector lever position: Other than P</li> </ul>	12
				Engine running	12

Is the inspection result normal?

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

#### 2. CHECK CRANKING REQUEST SIGNAL CIRCUIT

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

## B20A0 CRANKING REQUEST CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

IPDM E/R		ECM		Continuity
Connector	Terminal	Connector	Terminal	
E13	23	F26	92	Existed

5. Check continuity between BCM harness connector and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E13	23		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

### 3.REPLACE IPDM E/R

1. Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).

2. Perform DTC CONFIRMATION PROCEDURE for DTC B20A0. Refer to [SEC-103, "DTC Logic"](#).

Is DTC detected?

YES >> GO TO 4.

NO >> INSPECTION END

### 4.REPLACE ECM

Replace ECM.

Refer to [EC-561, "Removal and Installation"](#).

>> INSPECTION END



# B210B STARTER CONTROL RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## B210B STARTER CONTROL RELAY

### DTC Logic

INFOID:000000009754690

### DTC DETECTION LOGIC

#### NOTE:

If DTC B210B is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [PCS-30, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210B	START CONT RLY ON	<p>When comparing the following items, IPDM E/R detects that starter control relay is stuck in the ON position for 5 seconds or more.</p> <ul style="list-style-type: none"> <li>• Starter control relay signal (CAN) from BCM</li> <li>• Starter relay status signal (CAN) from BCM</li> <li>• Starter control relay and starter relay status signal (IPDM E/R input)</li> <li>• Starter control relay control signal (IPDM E/R output)</li> <li>• P/N position signal input</li> <li>• Ignition power supply No.2 signal from BCM</li> </ul>	<ul style="list-style-type: none"> <li>• Harness or connectors (CAN communication line is open or shorted. (Ignition power supply No.2 circuit is open or shorted.)</li> <li>• IPDM E/R</li> <li>• BCM</li> </ul>

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE 1

1. Press push-button ignition switch under the following conditions to start engine, and wait 5 seconds or more.

#### CVT models

- Selector lever: In the P position
- Brake pedal: Depressed

#### M/T models

- Shift lever: In the Neutral position
- Clutch pedal: Depressed

2. Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

#### Is DTC detected?

YES >> Go to [SEC-105, "Diagnosis Procedure"](#).

NO (M/T models)>>INSPECTION END

NO (CVT models)>>GO TO 2.

#### 2.PERFORM DTC CONFIRMATION PROCEDURE 2

1. Stop engine.
2. Perform DTC CONFIRMATION PROCEDURE for DTC P1650. Refer to [EC-470, "DTC Logic"](#).
3. Turn ignition switch ON.
4. Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

#### Is DTC detected?

YES >> Refer to [SEC-105, "Diagnosis Procedure"](#).

NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754691

#### 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 DTC OF BCM

Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

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SEC

# B210B STARTER CONTROL RELAY

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

Is DTC detected?

- YES >> Perform the trouble diagnosis related to the detected DTC. Refer to [BCS-59, "DTC Index"](#).
- NO >> GO TO 3.

## 3.INSPECTION START

1. Turn ignition switch ON.
2. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
3. Touch "ERASE".
4. Perform DTC CONFIRMATION PROCEDURE for DTC B210B. Refer to [SEC-105, "DTC Logic"](#).

Is DTC detected?

- YES >> GO TO 6.
- NO >> INSPECTION END

## 4.CHECK IGNITION POWER SUPPLY NO.2 SIGNAL

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

(+)		(-)	Condition		Voltage (V)
IPDM E/R					
Connector	Terminal	Ground	Power supply position	OFF	0 - 1
E17	69				

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).
- NO >> GO TO 5.

## 5.CHECK BCM INPUT SIGNAL CIRCUIT

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

IPDM E/R		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E17	69	M70	101	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E17	69		Not existed

Is the inspection result normal?

- YES >> GO TO 6.
- NO >> Repair or replace harness.

## 6.REPLACE BCM

1. Replace BCM. Refer to [BCS-90, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.
3. Perform DTC CONFIRMATION PROCEDURE for DTC B210B. Refer to [SEC-105, "DTC Logic"](#).

Is the inspection result normal?

- YES >> INSPECTION END
- NO >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).

# B210C STARTER CONTROL RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## B210C STARTER CONTROL RELAY

### DTC Logic

INFOID:000000009754692

### DTC DETECTION LOGIC

#### NOTE:

- If DTC B210C is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [PCS-30, "DTC Logic"](#).
- 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, IPDM E/R detects that starter control relay is stuck in the OFF position for 5 seconds or more. <ul style="list-style-type: none"><li>• Starter control relay signal (CAN) from BCM</li><li>• Starter relay status signal (CAN) from BCM</li><li>• Starter control relay and starter relay status signal (IPDM E/R input)</li><li>• Starter control relay control signal (IPDM E/R output)</li><li>• P/N position signal input</li><li>• Ignition power supply No.2 signal from BCM</li></ul>	<ul style="list-style-type: none"><li>• Harness or connectors (CAN communication line is open or shorted. (Ignition power supply No.2 circuit is open or shorted.)</li><li>• IPDM E/R</li><li>• BCM</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

1. Press push-button ignition switch under the following conditions to start engine, and wait 5 seconds or more.

#### CVT models

- Selector lever: In the P position
- Brake pedal: Depressed

#### M/T models

- Shift lever: In the Neutral position
- Clutch pedal: Depressed

2. Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

#### Is DTC detected?

YES >> Go to [SEC-107, "Diagnosis Procedure"](#).

NO (M/T models)>>INSPECTION END

NO (CVT models)>>GO TO 2.

#### 2. PERFORM DTC CONFIRMATION PROCEDURE 2

1. Stop engine.
2. Perform DTC CONFIRMATION PROCEDURE for DTC P1650. Refer to [EC-470, "DTC Logic"](#).
3. Turn ignition switch ON.
4. Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

#### Is DTC detected?

YES >> Refer to [SEC-107, "Diagnosis Procedure"](#).

NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754693

#### 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.

# B210C STARTER CONTROL RELAY

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

## 2. CHECK DTC OF BCM

Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

Is DTC detected?

- YES >> Perform the trouble diagnosis related to the detected DTC. Refer to [BCS-59, "DTC Index"](#).
- NO >> GO TO 3.

## 3. INSPECTION START

1. Turn ignition switch ON.
2. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
3. Touch "ERASE".
4. Perform DTC CONFIRMATION PROCEDURE for DTC B210C. Refer to [SEC-107, "DTC Logic"](#).

Is DTC detected?

- YES >> GO TO 6.
- NO >> INSPECTION END

## 4. CHECK IGNITION POWER SUPPLY NO.2 SIGNAL

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

(+)		(-)	Condition	Voltage (V)	
IPDM E/R					
Connector	Terminal				
E17	69	Ground	Power supply position	OFF	0 - 1
				ON	6 - 16

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).
- NO >> GO TO 5.

## 5. CHECK BCM INPUT SIGNAL CIRCUIT

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

IPDM E/R		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E17	69	M70	101	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E17	69		Not existed

Is the inspection result normal?

- YES >> GO TO 6.
- NO >> Repair or replace harness.

## 6. REPLACE BCM

1. Replace BCM. Refer to [BCS-90, "Removal and Installation"](#).
2. Perform DTC CONFIRMATION PROCEDURE for DTC B210C. Refer to [SEC-107, "DTC Logic"](#).

Is the inspection result normal?

- YES >> INSPECTION END
- NO >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).

# B210D STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## B210D STARTER RELAY

### DTC Logic

INFOID:000000009754694

### DTC DETECTION LOGIC

#### NOTE:

If DTC B210D is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [PCS-30. "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210D	STARTER RELAY ON	When comparing the following items, IPDM E/R detects that starter relay is stuck in the ON position for 5 seconds or more. <ul style="list-style-type: none"><li>• Starter control relay signal (CAN) from BCM</li><li>• Starter relay status signal (CAN) from BCM</li><li>• Starter control relay and starter relay status signal (IPDM E/R input)</li><li>• Starter control relay control signal (IPDM E/R output)</li><li>• P/N position signal input</li><li>• Ignition power supply No.2 signal from BCM</li></ul>	<ul style="list-style-type: none"><li>• Harness or connectors (CAN communication line is open or shorted.) (Ignition power supply No.2 circuit is open or shorted.)</li><li>• BCM</li><li>• IPDM E/R</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE 1

1. Press push-button ignition switch under the following conditions to start engine, and wait 5 seconds or more.

CVT models

- Selector lever: In the P position
- Brake pedal: Depressed

M/T models

- Shift lever: In the Neutral position
- Clutch pedal: Depressed

2. Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

Is DTC detected?

YES >> Go to [SEC-109. "Diagnosis Procedure"](#).

NO (M/T models)>>INSPECTION END

NO (CVT models)>>GO TO 2.

#### 2. PERFORM DTC CONFIRMATION PROCEDURE 2

1. Stop engine.
2. Perform DTC CONFIRMATION PROCEDURE for DTC P1650. Refer to [EC-470. "DTC Logic"](#).
3. Turn ignition switch ON.
4. Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

Is DTC detected?

YES >> Refer to [SEC-107. "Diagnosis Procedure"](#).

NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754695

#### 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 3.

#### 2. INSPECTION START

1. Turn ignition switch ON.

# B210D STARTER RELAY

[WITH INTELLIGENT KEY SYSTEM]

## < DTC/CIRCUIT DIAGNOSIS >

2. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
3. Touch "ERASE".
4. Perform DTC CONFIRMATION PROCEDURE for DTC B210D. Refer to [SEC-109, "DTC Logic"](#).

### Is DTC detected?

- YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).  
 NO >> INSPECTION END

## 3.CHECK IGNITION POWER SUPPLY NO.2 SIGNAL

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

(+)		(-)	Condition	Voltage (V)	
IPDM E/R					
Connector	Terminal				
E17	69	Ground	Power supply position	OFF	0 - 1
				ON	6 - 16

### Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).  
 NO >> GO TO 4.

## 4.CHECK BCM INPUT SIGNAL CIRCUIT

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

IPDM E/R		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E17	69	M70	101	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E17	69		Not existed

### Is the inspection result normal?

- YES >> GO TO 5.  
 NO >> Repair or replace harness.

## 5.REPLACE BCM

1. Replace BCM. Refer to [BCS-90, "Removal and Installation"](#).
2. Perform DTC CONFIRMATION PROCEDURE for DTC B210D Refer to [SEC-109, "DTC Logic"](#).

### Is the inspection result normal?

- YES >> INSPECTION END  
 NO >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).

# B210E STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## B210E STARTER RELAY

### DTC Logic

INFOID:000000009754696

### DTC DETECTION LOGIC

#### NOTE:

- If DTC B210E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [PCS-30, "DTC Logic"](#).
- If DTC B210E is displayed with DTC B2605, first perform the trouble diagnosis for DTC B2605. Refer to [SEC-77, "DTC Logic"](#).
- When IPDM E/R power supply voltage is low (Approx. 7 - 8 V for about 1 second), the DTC B210E may be detected.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210E	STARTER RELAY OFF	When comparing the following items, IPDM E/R detects that starter relay is stuck in the OFF position for 5 seconds or more. <ul style="list-style-type: none"><li>• Starter control relay signal (CAN) from BCM</li><li>• Starter relay status signal (CAN) from BCM</li><li>• Starter control relay and starter relay status signal (IPDM E/R input)</li><li>• Starter control relay control signal (IPDM E/R output)</li><li>• P/N position signal input</li><li>• Ignition power supply No.2 signal from BCM</li></ul>	<ul style="list-style-type: none"><li>• Harness or connector (CAN communication line is open or shorted.)</li><li>• Harness or connector (Starter relay circuit is open or shorted.)</li><li>• IPDM E/R</li><li>• BCM</li><li>• Battery</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

1. Press push-button ignition switch under the following conditions to start engine, and wait 5 seconds or more.

##### CVT models

- Selector lever: In the P position
- Brake pedal: Depressed

##### M/T models

- Shift lever: In the Neutral position
- Clutch pedal: Depressed

2. Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

#### Is DTC detected?

YES >> Go to [SEC-111, "Diagnosis Procedure"](#).

NO (M/T models)>>INSPECTION END

NO (CVT models)>>GO TO 2.

#### 2. PERFORM DTC CONFIRMATION PROCEDURE 2

1. Stop engine.
2. Perform DTC CONFIRMATION PROCEDURE for DTC P1650. Refer to [EC-470, "DTC Logic"](#).
3. Turn ignition switch ON.
4. Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

#### Is DTC detected?

YES >> Refer to [SEC-109, "Diagnosis Procedure"](#).

NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754697

#### 1. INSPECTION START

Perform inspection in accordance with procedure that confirms DTC.

#### Which procedure confirms DTC?

DTC confirmation procedure 1>>GO TO 2.

# B210E STARTER RELAY

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

DTC confirmation procedure 2>>GO TO 5.

## 2.CHECK STARTER RELAY OUTPUT SIGNAL

1. Check voltage between BCM harness connector and ground.

(+)		(-)	Condition		Voltage (V) (Approx.)
BCM					
Connector	Terminal				
M70	97	Ground	Selector lever (CVT models)	P or N position	12
				Other than above	0
			Clutch pedal (M/T models)	Depressed	12
				Not depressed	0

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

## 3.CHECK STARTER RELAY OUTPUT SIGNAL CIRCUIT

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

BCM		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M70	97	E13	30	Existed

5. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M70	97		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).

NO >> Repair or replace harness.

## 4.CHECK STARTER RELAY CIRCUIT

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

(+)		(-)	Voltage (V)
IPDM E/R			
Connector	Terminal		
E10	4	Ground	9 - 16

Is the inspection result normal?

YES >> GO TO 7.

NO >> Check harness for open or short between IPDM E/R and battery. Refer to [STR-15, "Wiring Diagram \(M/T Models\)"](#) (M/T models), or [STR-10, "Wiring Diagram \(CVT Models\)"](#) (CVT models).

## 5.CHECK IGNITION POWER SUPPLY NO.2 SIGNAL

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



# B210E STARTER RELAY

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

(+)		(-)	Condition	Voltage (V)
IPDM E/R				
Connector	Terminal			
E17	69	Ground	Power supply position	OFF
				ON
				0 - 1
				6 - 16

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).

NO >> GO TO 6.

## 6. CHECK BCM INPUT SIGNAL CIRCUIT

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

IPDM E/R		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E17	69	M70	101	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E17	69		Not existed

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness.

## 7. REPLACE BCM

1. Replace BCM. Refer to [BCS-90, "Removal and Installation"](#).
2. Perform DTC CONFIRMATION PROCEDURE for DTC B210E. Refer to [SEC-111, "DTC Logic"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).

SEC

# B210F SHIFT POSITION/CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## B210F SHIFT POSITION/CLUTCH INTERLOCK SWITCH

### DTC Logic

INFOID:000000009754698

### DTC DETECTION LOGIC

#### NOTE:

If DTC B210F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [PCS-30, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210F	INTRLCK/PNP SW ON	There is a difference between P/N position signal from transmission range switch and P/N position signal from BCM (CAN).	<ul style="list-style-type: none"><li>• Harness or connectors (CAN communication line is open or shorted.)</li><li>• Harness or connectors (Transmission range switch circuit is open or shorted.)</li><li>• Transmission range switch</li><li>• IPDM E/R</li><li>• BCM</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

1. Shift selector lever to the P position.
2. Turn ignition switch ON and wait 1 second or more.
3. Shift selector lever to the N position and wait 1 second or more.
4. Shift selector lever to any position other than P and N, and wait 1 second or more.
5. Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-114, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754699

#### 1. CHECK DTC OF BCM

Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Perform the trouble diagnosis related to the detected DTC. Refer to [BCS-59, "DTC Index"](#).  
NO >> GO TO 2.

#### 2. CHECK DTC OF TCM

Check DTC in "Self Diagnostic Result" mode of "TCM" using CONSULT.

#### Is DTC detected?

- YES >> Perform the trouble diagnosis related to the detected DTC. Refer to [TM-198, "DTC Index"](#).  
NO >> GO TO 3.

#### 3. CHECK IPDM E/R SIGNAL CIRCUIT OPEN AND SHORT

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

IPDM E/R		Transmission range switch		Continuity
Connector	Terminal	Connector	Terminal	
E15	48	F27	2	Existed

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

# B210F SHIFT POSITION/CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

(+)		(-)	Continuity
IPDM E/R			
Connector	Terminal		
E15	48	Ground	Not existed

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).
- NO >> Repair or replace harness.

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# B2110 SHIFT POSITION/CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## B2110 SHIFT POSITION/CLUTCH INTERLOCK SWITCH

### DTC Logic

INFOID:000000009754700

### DTC DETECTION LOGIC

#### NOTE:

If DTC B2110 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [PCS-30, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2110	INTRLCK/PNP SW OFF	There is a difference between P/N position signal from transmission range switch and P/N position signal from BCM (CAN).	<ul style="list-style-type: none"><li>• Harness or connectors (CAN communication line is open or shorted.)</li><li>• Harness or connectors (Transmission range switch circuit is open or shorted.)</li><li>• Transmission range switch</li><li>• IPDM E/R</li><li>• BCM</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

1. Shift selector lever to the P position.
2. Turn ignition switch ON and wait 1 second or more.
3. Shift selector lever to the N position and wait 1 second or more.
4. Shift selector lever to any position other than P and N, and wait 1 second or more.
5. Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-116, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754701

#### 1. CHECK DTC OF BCM

Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Perform the trouble diagnosis related to the detected DTC. Refer to [BCS-59, "DTC Index"](#).  
NO >> GO TO 2.

#### 2. CHECK DTC OF TCM

Check DTC in "Self Diagnostic Result" mode of "TCM" using CONSULT.

#### Is DTC detected?

- YES >> Perform the trouble diagnosis related to the detected DTC. Refer to [TM-198, "DTC Index"](#).  
NO >> GO TO 3.

#### 3. CHECK IPDM E/R SIGNAL CIRCUIT OPEN AND SHORT

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

IPDM E/R		Transmission range switch		Continuity
Connector	Terminal	Connector	Terminal	
E15	48	F27	2	Existed

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

# B2110 SHIFT POSITION/CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

(+)		(-)	Continuity
IPDM E/R			
Connector	Terminal		
E15	48	Ground	Not existed

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).
- NO >> Repair or replace harness.

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SEC

# HEADLAMP FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## HEADLAMP FUNCTION

### Component Function Check

INFOID:000000009754702

#### 1.CHECK FUNCTION

1. Perform "HEAD LAMP(HI)" in "ACTIVE TEST" mode of "THEFT ALM" of "BCM" using CONSULT.
2. Check headlamps operation.

Test item		Description	
HEAD LAMP (HI)	ON	Headlamps (Hi)	Light
	OFF		Do not light

Is the inspection result normal?

- YES >> INSPECTION END  
NO >> Refer to [SEC-118, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000009754703

#### 1.CHECK HEADLAMP FUNCTION

Refer to [EXL-52, "Component Function Check"](#).

Is the inspection result normal?

- YES >> GO TO 2.  
NO >> Repair or replace the malfunctioning parts.

#### 2.CHECK INTERMITTENT INCIDENT

Refer to [GI-46, "Intermittent Incident"](#).

>> INSPECTION END

# HORN FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## HORN FUNCTION

### Component Function Check

INFOID:000000009754704

#### 1.CHECK FUNCTION

1. Perform "VEHICLE SECURITY HORN" in "ACTIVE TEST" mode of "THEFT ALM" of "BCM" using CONSULT.
2. Check the horn operation.

Test item		Description	
VEHICLE SECURITY HORN	ON	Horn	Sounds (for 0.5 sec)

Is the operation normal?

- YES >> INSPECTION END  
NO >> Go to [SEC-119. "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000009754705

#### 1.CHECK HORN FUNCTION

Check that horn functions properly using horn switch.

Do horns sound?

- YES >> GO TO 2.  
NO >> Check horn circuit. Refer to [HRN-3. "Wiring Diagram"](#).

#### 2.CHECK HORN CONTROL CIRCUIT

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

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

Is the inspection result normal?

- YES >> GO TO 3.  
NO >> Repair or replace harness.

#### 3.CHECK INTERMITTENT INCIDENT

Refer to [GI-46. "Intermittent Incident"](#).

>> INSPECTION END

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SEC

# SECURITY INDICATOR LAMP

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## SECURITY INDICATOR LAMP

### Component Function Check

INFOID:000000009754706

#### 1.CHECK FUNCTION

1. Perform "THEFT IND" in "ACTIVE TEST" mode of "IMMU" of "BCM" using CONSULT.
2. Check security indicator lamp operation.

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

Is the inspection result normal?

- YES >> INSPECTION END  
NO >> Go to [SEC-120, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000009754707

#### 1.CHECK FUSE

1. Turn power switch OFF.
2. Check that the following fuse in the fuse block (J/B) is not blown.

Signal name	Fuse No.
Battery power supply	11 (10 A)

Is the inspection result normal?

- YES >> GO TO 2.  
NO >> Replace the blown fuse after repairing the cause of blowing.

#### 2.CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT

1. Disconnect combination meter connector.
2. Check voltage between combination meter harness connector and ground.

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

Is the inspection result normal?

- YES >> GO TO 3.  
NO >> Repair or replace harness.

#### 3.CHECK SECURITY INDICATOR LAMP SIGNAL

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

(+)		(-)	Voltage (V) (Approx.)
BCM			
Connector	Terminal	Ground	Battery voltage
M68	23		

Is the inspection result normal?

- YES >> GO TO 4.  
NO >> GO TO 5.

#### 4.REPLACE BCM



# SECURITY INDICATOR LAMP

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

1. Replace BCM. Refer to [BCS-90, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

## 5. CHECK SECURITY INDICATOR LAMP CIRCUIT

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

Combination meter		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M34	18	M68	23	Existed

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

Combination meter		Ground	Continuity
Connector	Terminal		
M34	18		Not existed

Is the inspection result normal?

- YES >> Replace combination meter. Refer to [MWI-61, "Removal and Installation"](#).  
NO >> Repair or replace harness.

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SEC

## SYMPTOM DIAGNOSIS

### ENGINE DOES NOT START WHEN INTELLIGENT KEY IS INSIDE OF VEHICLE

#### Description

INFOID:000000009754708

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 systems are operating normally.

#### Conditions of Vehicle (Operating Conditions)

- “ENGINE START BY I-KEY”: ON  
Check the setting of “ENGINE START BY I-KEY” in “Work Support” mode of “INTELLIGENT KEY” of “BCM” using CONSULT.
- One or more of Intelligent Keys with registered Intelligent Key ID are in the vehicle.

#### Diagnosis Procedure

INFOID:000000009754709

#### 1.PERFORM WORK SUPPORT

Perform “INSIDE ANT DIAGNOSIS” in “Work Support” mode of “INTELLIGENT KEY” of BCM using CONSULT.

Refer to [DLK-31, "INTELLIGENT KEY : CONSULT Function \(BCM - INTELLIGENT KEY\)"](#).

>> 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.

Is DTC detected?

YES >> Refer to [BCS-59, "DTC Index"](#).

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 [GI-46, "Intermittent Incident"](#).

NO >> GO TO 1.

# SECURITY INDICATOR LAMP DOES NOT TURN ON OR BLINK

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## SECURITY INDICATOR LAMP DOES NOT TURN ON OR BLINK

### Description

INFOID:000000009754710

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 [SEC-44, "Work Flow"](#).
- Check that vehicle is under the condition shown in "CONDITIONS OF VEHICLE (OPERATING CONDITIONS)" before starting diagnosis, and check each symptom.

### CONDITIONS OF VEHICLE (OPERATING CONDITIONS)

Power supply position is not the ON position.

### Diagnosis Procedure

INFOID:000000009754711

#### 1. CHECK SECURITY INDICATOR LAMP

Check security indicator lamp.

Refer to [SEC-120, "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 [GI-46, "Intermittent Incident"](#).

NO >> GO TO 1.

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SEC

# VEHICLE SECURITY SYSTEM CANNOT BE SET

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## VEHICLE SECURITY SYSTEM CANNOT BE SET INTELLIGENT KEY

### INTELLIGENT KEY : Description

INFOID:000000009754712

Armed phase is not activated when all doors are locked using Intelligent Key.

**NOTE:**

Check that vehicle is under the condition shown in “CONDITIONS OF VEHICLE (OPERATING CONDITIONS)” before starting diagnosis, and check each symptom.

#### CONDITION OF VEHICLE (OPERATING CONDITIONS)

“SECURITY ALARM SET”: ON

Check the setting of “SECURITY ALARM SET” in “Work Support” mode of “THEFT ALM” of “BCM” using CONSULT.

### INTELLIGENT KEY : Diagnosis Procedure

INFOID:000000009754713

#### 1.CHECK INTELLIGENT KEY SYSTEM (REMOTE KEYLESS ENTRY FUNCTION)

Lock/unlock door with Intelligent Key.

Refer to [DLK-21, "REMOTE KEYLESS ENTRY FUNCTION : System Description"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check Intelligent Key system (remote keyless entry function). Refer to [DLK-101, "Diagnosis Procedure"](#).

#### 2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-46, "Intermittent Incident"](#).

NO >> GO TO 1.

## DOOR REQUEST SWITCH

### DOOR REQUEST SWITCH : Description

INFOID:000000009754714

Armed phase is not activated when all doors are locked using door request switch.

**NOTE:**

Check that vehicle is under the condition shown in “CONDITIONS OF VEHICLE (OPERATING CONDITIONS)” before starting diagnosis, and check each symptom.

#### CONDITION OF VEHICLE (OPERATING CONDITIONS)

“SECURITY ALARM SET”: ON

Check the setting of “SECURITY ALARM SET” in “Work Support” mode of “THEFT ALM” of “BCM” using CONSULT.

### DOOR REQUEST SWITCH : Diagnosis Procedure

INFOID:000000009754715

#### 1.CHECK INTELLIGENT KEY SYSTEM (DOOR LOCK FUNCTION)

Lock/unlock door with door request switch.

Refer to [DLK-17, "DOOR LOCK FUNCTION : System Description"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check Intelligent Key system (door lock function). Refer to [DLK-97, "ALL DOOR REQUEST SWITCHES : Diagnosis Procedure"](#).

#### 2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-46, "Intermittent Incident"](#).

# VEHICLE SECURITY SYSTEM CANNOT BE SET

[WITH INTELLIGENT KEY SYSTEM]

< SYMPTOM DIAGNOSIS >

NO >> GO TO 1.

## DOOR KEY CYLINDER

### DOOR KEY CYLINDER : Description

INFOID:000000009754716

ARMED phase is not activated when all doors are 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)

#### • SECURITY ALARM SET: ON

Check the setting of "SECURITY ALARM SET" in "Work Support" mode of "THEFT ALM" of "BCM" using CONSULT.

### DOOR KEY CYLINDER : Diagnosis Procedure

INFOID:000000009754717

#### 1.CHECK POWER DOOR LOCK SYSTEM

Lock or unlock doors using mechanical key.

Refer to [DLK-14. "System Description"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check power door lock system. Refer to [DLK-100. "Diagnosis Procedure"](#).

#### 2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-46. "Intermittent Incident"](#).

NO >> GO TO 1.

## DOOR LOCK AND UNLOCK SWITCH

### DOOR LOCK AND UNLOCK SWITCH : Description

INFOID:000000009754718

Armed phase is not activated when all doors are locked by door lock and unlock switch.

#### NOTE:

Check that vehicle is under the condition shown in "CONDITIONS OF VEHICLE (OPERATING CONDITIONS)" before starting diagnosis, and check each symptom.

### CONDITION OF VEHICLE (OPERATING CONDITIONS)

"SECURITY ALARM SET": ON

Check the setting of "SECURITY ALARM SET" in "Work Support" mode of "THEFT ALM" of "BCM" using CONSULT.

### DOOR LOCK AND UNLOCK SWITCH : Diagnosis Procedure

INFOID:000000009754719

#### 1.CHECK DOOR LOCK FUNCTION

Lock/unlock door using mechanical key inserted into door key cylinder.

Refer to [DLK-14. "System Description"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check Intelligent Key system (remote keyless entry function). Refer to [DLK-94. "ALL DOOR : Diagnosis Procedure"](#).

#### 2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-46. "Intermittent Incident"](#).

NO >> GO TO 1.

A

B

C

D

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J

SEC

L

M

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O

P

# VEHICLE SECURITY ALARM DOES NOT ACTIVATE

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## VEHICLE SECURITY ALARM DOES NOT ACTIVATE

### Description

INFOID:000000009754720

Alarm does not operate when alarm operating condition is satisfied.

**NOTE:**

Check that vehicle is under the condition shown in "CONDITIONS OF VEHICLE (OPERATING CONDITIONS)" before starting diagnosis, and check each symptom.

#### CONDITION OF VEHICLE (OPERATING CONDITIONS)

"SECURITY ALARM SET": ON

Check the setting of "SECURITY ALARM SET" in "Work Support" mode of "THEFT ALM" of "BCM" using CONSULT.

### Diagnosis Procedure

INFOID:000000009754721

#### 1.CHECK DOOR SWITCH

Check door switch.

Refer to [DLK-81, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the malfunctioning door switch

#### 2.CHECK HEADLAMPS FUNCTION

Check head lamps function.

Refer to [SEC-118, "Component Function Check"](#).

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 [SEC-119, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunctioning parts.

#### 4.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-46, "Intermittent Incident"](#).

NO >> GO TO 1.

# NATS ANTENNA AMP.

< REMOVAL AND INSTALLATION >

[WITH INTELLIGENT KEY SYSTEM]

## REMOVAL AND INSTALLATION


### NATS ANTENNA AMP.

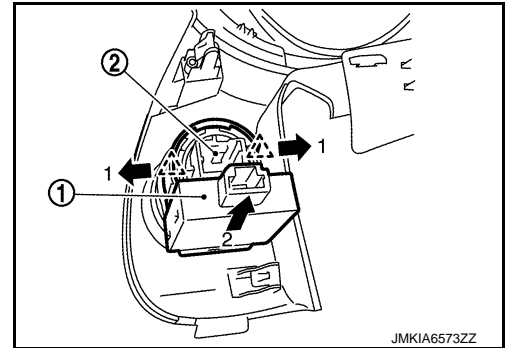
#### Removal and Installation

INFOID:000000009754722

#### REMOVAL

1. Remove the cluster lid A. Refer to [JP-13. "Removal and Installation"](#).
2. Remove the NATS antenna amp.
  1. Disengage the NATS antenna amp. (1) fixing pawls using remover tool.
  2. Pull NATS antenna amp. to remove it from push-button ignition switch (2).

 : Pawl



#### INSTALLATION

Install in the reverse order of removal.

A  
B  
C  
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L  
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SEC

# PUSH-BUTTON IGNITION SWITCH

< REMOVAL AND INSTALLATION >

[WITH INTELLIGENT KEY SYSTEM]


## PUSH-BUTTON IGNITION SWITCH

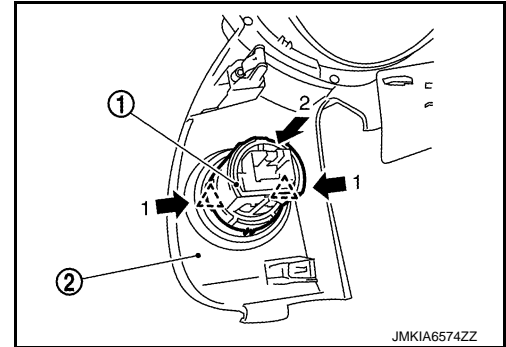
### Removal and Installation

INFOID:000000009754723

#### REMOVAL

1. Remove the NATS antenna amp. Refer to [IP-13. "Removal and Installation"](#).
2. Remove the push-button ignition switch.
  1. Disengage the push-button ignition switch (1) fixing pawls using remover tool.
  2. Press the push-button ignition switch to remove it from cluster lid A (2).

 : Pawl



#### INSTALLATION

Install in the reverse order of removal.



# PRECAUTIONS

< PRECAUTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

## PRECAUTION

### PRECAUTIONS

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

INFOID:000000009754724

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:**

Always observe the following items for preventing accidental activation.

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that 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 "SRS AIR BAG".
- Never 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:**

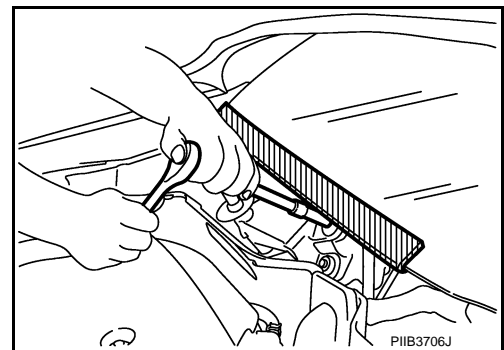
Always observe the following items for preventing accidental activation.

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never 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 for Procedure without Cowl Top Cover

INFOID:000000009754725

When performing the procedure after removing cowl top cover, cover the lower end of windshield with urethane, etc to prevent damage to windshield.



# COMPONENT PARTS

[WITHOUT INTELLIGENT KEY SYSTEM]

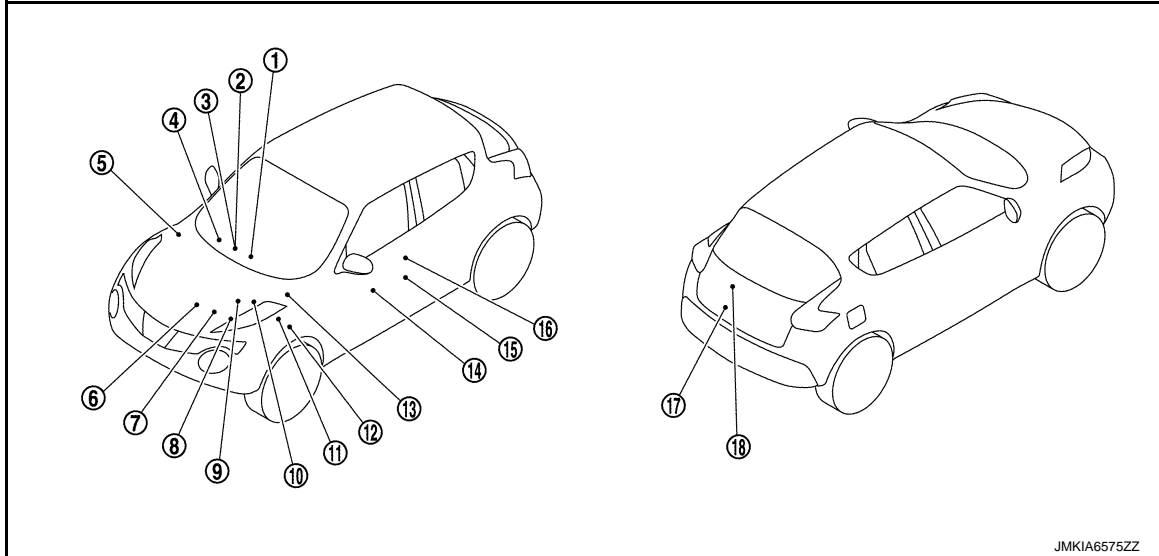
< SYSTEM DESCRIPTION >

## SYSTEM DESCRIPTION

### COMPONENT PARTS

#### Component Parts Location

INFOID:000000009754726



- |   |  |  |
|---|--|--|
| 1. Combination meter<br>Refer to <a href="#">MWI-5, "METER SYSTEM : Component Parts Location"</a> .                             | 2. Ignition switch   | 3. NATS antenna amp.<br>(Behind ignition switch)   |
| 4. Remote keyless entry receiver<br>Refer to <a href="#">DLK-182, "Component Parts Location"</a> .                              | 5. ABS actuator and electric unit (control unit)<br>Refer to <a href="#">BRC-9, "Component Parts Location"</a> . | 6. Park/neutral position switch (M/T models)<br>Refer to <a href="#">TM-13, "Component Parts Location"</a> . |
| 7. Transmission range switch (CVT models)<br>Refer to <a href="#">TM-150, "CVT CONTROL SYSTEM : Component Parts Location"</a> . | 8. ECM<br>Refer to <a href="#">EC-14, "ENGINE CONTROL SYSTEM : Component Parts Location"</a> .                   | 9. IPDM E/R<br>Refer to <a href="#">PCS-37, "Component Parts Location"</a> .                                 |
| 10. TCM (CVT models)<br>Refer to <a href="#">TM-150, "CVT CONTROL SYSTEM : Component Parts Location"</a> .                      | 11. Stop lamp switch<br>Refer to <a href="#">EC-14, "ENGINE CONTROL SYSTEM : Component Parts Location"</a> .     | 12. Clutch interlock switch (M/T models)<br>Refer to <a href="#">TM-13, "Component Parts Location"</a> .     |
| 13. BCM<br>Refer to <a href="#">BCS-93, "BODY CONTROL SYSTEM : Component Parts Location"</a> .                                  | 14. Power window main switch (door lock and unlock switch)   | 15. Front door switch (driver side)  |
| 16. Front door lock assembly  | 17. Back door opener switch  | 18. Back door request switch   |

#### Component Description

INFOID:000000009754727

Component	Reference
BCM	<a href="#">SEC-131</a>
ECM	<a href="#">SEC-131</a>
IPDM E/R	<a href="#">SEC-131</a>
NATS antenna amp.	<a href="#">SEC-131</a>
TCM (CVT models)	<a href="#">SEC-131</a>
Clutch interlock switch (M/T models)	<a href="#">SEC-131</a>

# COMPONENT PARTS

< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Component	Reference
Combination meter	<a href="#">SEC-131</a>
Door switch	<a href="#">SEC-131</a>
Ignition key	<a href="#">SEC-132</a>
Park/neutral position switch (M/T models)	<a href="#">SEC-132</a>
Remote keyless entry receiver	<a href="#">SEC-132</a>
Security indicator lamp	<a href="#">SEC-132</a>
Starter control relay	<a href="#">SEC-132</a>
Starter relay	<a href="#">SEC-132</a>
Stop lamp switch	<a href="#">SEC-132</a>
Transmission range switch (CVT models)	<a href="#">SEC-132</a>

## BCM

INFOID:000000009754728

BCM performs the ID verification between BCM and ECM when ignition switch is turned ON. If the verification result is OK, ECM can start engine. If the verification result is NG, ECM cannot start engine.

## ECM

INFOID:000000009754729

ECM controls the engine.  
When power supply position is turned ON, BCM starts communication with ECM and performs the ID verification between BCM and ECM.  
If the verification result is OK, the engine can start. If the verification result is NG, the engine can not start.  
When ECM restarts engine by the Stop/Start System (CVT models), ECM transmits the control signals to IPDM E/R to crank engine.

## IPDM E/R

INFOID:000000009754730

Starter control relay is integrated in IPDM E/R and used for the engine starting system. Starter control relay is controlled by IPDM E/R while communicating with ECM. IPDM E/R sends the starter control relay status signal to ECM.  
During engine is running, IPDM E/R controls starter control relay according to the cranking request signal from ECM for Stop/Start System.

## NATS Antenna Amp.

INFOID:000000009754731

The ID verification is performed between BCM and ignition key via NATS antenna amp. when ignition switch is turned ON. If an unregistered ID of ignition key is used, the operation of the starting engine is prohibited.

## TCM

INFOID:000000009754732

TCM transmits the shift position signal (P/N position) to IPDM E/R via CAN communication. IPDM E/R uses shift position signal for the starter control relay control.

## Clutch Interlock Switch

INFOID:000000009754733

Clutch interlock switch detects that clutch pedal is depressed, then provides power source to starter control relay.

## Combination Meter

INFOID:000000009754734

Combination meter transmits the vehicle speed signal to BCM via CAN communication. BCM also receives the vehicle speed signal from ABS actuator and electric unit (control unit) via CAN communication. BCM compares both signals to detect the vehicle speed.

## Door Switch

INFOID:000000009754735

Door switch detects door open/close condition and then transmits ON/OFF signal to BCM.

A  
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O  
P



## COMPONENT PARTS

< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

### Ignition Key

INFOID:000000009754736

The ID verification is performed between BCM and ignition key via NATS antenna amp. when ignition switch is turned ON. If an unregistered ID of ignition key is used, the operation of the starting engine is prohibited.

### Park/Neutral Position Switch

INFOID:000000009754737

Park/neutral position switch detects that shift lever is in the neutral position, and then transmits ON/OFF signal to ECM.

### Remote Keyless Entry Receiver

INFOID:000000009754738

Remote keyless entry receiver receives each button operation signal and electronic key ID signal from Keyfob, and then transmits the signal to BCM.

### Security Indicator Lamp

INFOID:000000009754739

Security indicator lamp is located on combination meter.

Security indicator lamp blinks when power supply position is in any position except the ON position to warn that Nissan Anti-Theft System (NATS) is on board.

### Starter Control Relay

INFOID:000000009754740

Starter control relay is integrated in IPDM E/R and used for the engine starting system. Starter control relay is controlled by IPDM E/R while communicating with ECM. IPDM E/R transmits the starter control relay status signal to ECM.

During engine is running, starter control relay is controlled by IPDM E/R according to the cranking request signal from ECM for Stop/Start System.

### Starter Relay

INFOID:000000009754741

Starter relay is integrated in IPDM E/R and controlled by ECM for Stop/Start System. IPDM E/R transmits starter relay status signal to ECM via CAN communication.

### Stop Lamp Switch

INFOID:000000009754742

Stop lamp switch detects that brake pedal is depressed, and then transmits the signal to BCM.

### Transmission Range Switch

INFOID:000000009754743

Transmission range switch is integrated in CVT assembly to detect the selector lever position, and then transmits the P/N position signal to IPDM E/R.

# SYSTEM

< SYSTEM DESCRIPTION >

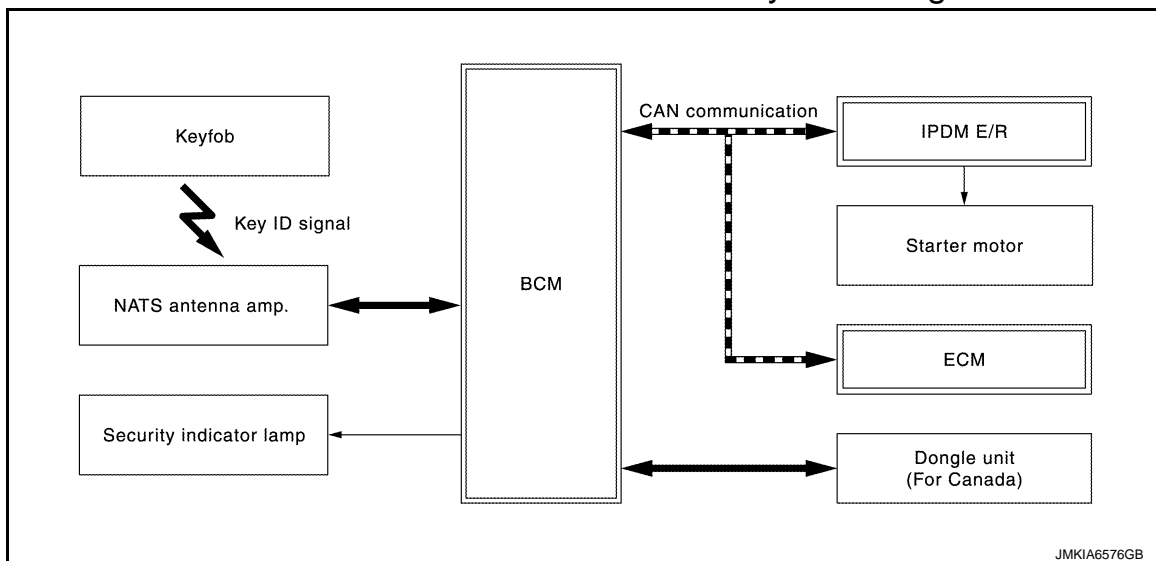
[WITHOUT INTELLIGENT KEY SYSTEM]

## SYSTEM

### NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

#### NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS : System Diagram

INFOID:000000009754744



#### NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS : System Description

INFOID:000000009754745

##### SYSTEM DESCRIPTION

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS [NVIS(NATS)] has the following immobilizer functions:

- NVIS(NATS) shows high anti-theft performance to prevent engine from starting by anyone other than the owner who has the registered ignition key.
- The ignition key has NVIS(NATS) ID and only ignition key which has the same ID as the ID registered in BCM and ECM can start engine. This makes high anti-theft performance to prevent the vehicle from being stolen using a copied ignition key.
- Security indicator lamp always blinks when ignition switch is in any position other than ON. Therefore, NVIS(NATS) warns outsiders that the vehicle is equipped with the anti-theft system.
- If the system detects a malfunction, security indicator lamp illuminates when ignition switch is turned ON.
- If the owner requires, ignition key ID can be registered for up to 5 keys.
- During trouble diagnosis, when additional ignition key is needed, or when the following components are replaced, the ID registration is required.
  - BCM
  - Ignition key
- Possible symptom of NVIS(NATS) malfunction is "Engine cannot start". The engine also can not be started because of other than the NVIS(NATS) malfunction, so start the trouble diagnosis according to [SEC-153, "Work Flow"](#).
- If ECM other than Genuine NISSAN parts is installed, the engine cannot be started. For ECM replacement procedure, refer to [EC-561, "Removal and Installation"](#).

##### SECURITY INDICATOR LAMP

- Security indicator lamp is located on combination meter and warns that the vehicle is equipped with NATS.
- Security indicator lamp always blinks, when the ignition switch is in any position other than ON.
- Security indicator lamp turns OFF when the ignition switch is turned ON.

##### OPERATION WHEN IGNITION KEY IS INSERTED INTO IGNITION KEY CYLINDER

1. When ignition switch is turned ON, BCM activates NATS antenna amp. to start NVIS(NATS) ID verification with the ignition key (transponder is integrated).
2. BCM receives the NVIS(NATS) ID signal from ignition key via NATS antenna amp. and verifies it with the registered ID.
3. When the NATS ID verification result is OK, BCM performs the ID verification between BCM and ECM.
4. When the verification result is OK, BCM transmits the verification OK signal to ECM, and then ECM can start the engine.

# SYSTEM

< SYSTEM DESCRIPTION >

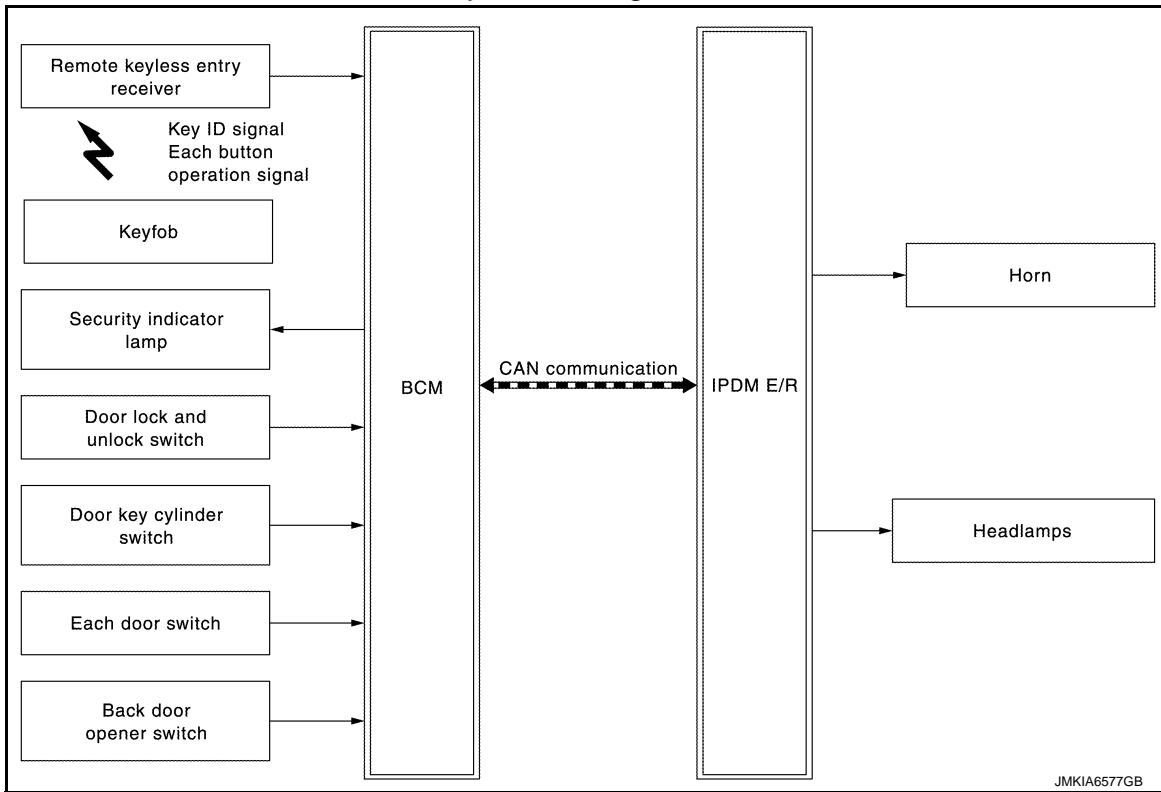
[WITHOUT INTELLIGENT KEY SYSTEM]

5. When the ignition switch is turned to the START position, BCM transmits the starter request signal to IPDM E/R.

## VEHICLE SECURITY SYSTEM

### VEHICLE SECURITY SYSTEM : System Diagram

INFOID:000000009754746



### VEHICLE SECURITY SYSTEM : System Description

INFOID:000000009754747

- The vehicle security system has two alarm functions (theft warning alarm and panic alarm), and reduces the possibility of a theft or mischief by activating horns and headlamps intermittently.
  - The panic alarm does not start when the theft warning alarm is activating, and the panic alarm stops when the theft warning alarm is activated.
- The priority of the functions are as per the following.

Priority	Function
1	Theft warning alarm
2	Panic alarm

#### THEFT WARNING ALARM

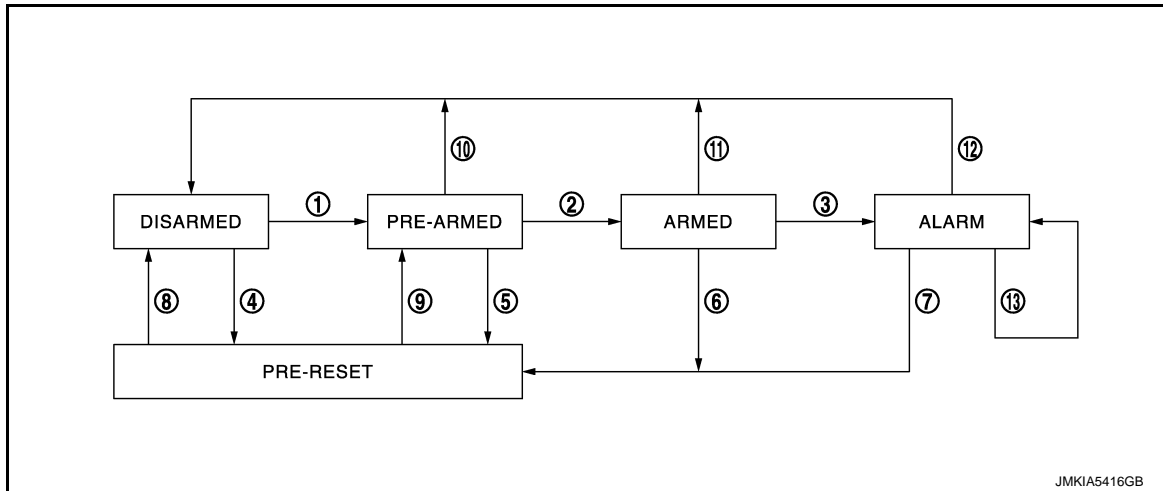
- The theft warning alarm function activates horns and headlamps intermittently when BCM detects that any door is opened by unauthorized means, while the system is in the ARMED state.
- Security indicator lamp on combination meter always blinks when ignition switch is in any position other than ON. Security indicator lamp blinking warns that the vehicle is equipped with a vehicle security system.

# SYSTEM

< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Operation Flow



A  
B  
C  
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E  
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H  
I  
J  
L  
M  
N  
O  
P

SEC

No.	System state	Switching condition		
1	DISARMED to PRE-ARMED	When all conditions of A and one condition of B is satisfied.	A	B
			<ul style="list-style-type: none"> <li>• Ignition switch: OFF</li> <li>• All doors: Closed</li> </ul>	<ul style="list-style-type: none"> <li>• All doors are locked by:               <ul style="list-style-type: none"> <li>• Door key cylinder LOCK switch</li> <li>• LOCK button of Keyfob</li> <li>• Door lock and unlock switch</li> </ul> </li> </ul>
2	PRE-ARMED to ARMED	When all of the following conditions are satisfied for 30 seconds.	<ul style="list-style-type: none"> <li>• Ignition switch: OFF</li> <li>• All doors: Locked</li> </ul>	
3	ARMED to ALARM	When all conditions of A and B are satisfied.	A	B
			Keyfob: Not used	<ul style="list-style-type: none"> <li>• Any door: Open</li> </ul>
4	DISARMED to PRE-RESET	No conditions.		
5	PRE-ARMED to PRE-RESET			
6	ARMED to PRE-RESET			
7	ALARM to PRE-RESET			
8	PRE-RESET to DISARMED			
9	PRE-RESET to PRE-ARMED			
10	PRE-ARMED to DISARMED	When one of the following condition is satisfied.	<ul style="list-style-type: none"> <li>• Ignition switch: ACC/ON</li> <li>• Door key cylinder UNLOCK switch: ON</li> <li>• UNLOCK button of Keyfob: ON</li> <li>• UNLOCK switch of door lock and unlock switch: ON</li> <li>• Any door: Open</li> </ul>	
11	ARMED to DISARMED	When one of the following condition is satisfied.	<ul style="list-style-type: none"> <li>• Ignition switch: ACC/ON</li> <li>• Door key cylinder UNLOCK switch: ON</li> <li>• UNLOCK button of Keyfob: ON</li> </ul>	
12	ALARM to DISARMED			
13	RE-ALARM	When the following condition is satisfied after the ALARM operation is finished.	<ul style="list-style-type: none"> <li>• Any door: Open</li> </ul>	

**NOTE:**

- BCM ignores the door key cylinder UNLOCK switch signal input for 1 second after the door key cylinder LOCK switch signal input.
- To lock/unlock all doors by operating remote controller button of Keyfob, the Keyfob must be within the detection area of remote keyless entry receiver. For details, refer to [DLK-186, "System Description"](#).

# SYSTEM

< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

## DISARMED Phase

The vehicle security system is not set in the DISARMED phase. The vehicle security system stays in this phase while any door is open, because it is assumed that the owner is inside or nearby the vehicle. Security indicator lamp blinks every 2.4 seconds.

When the vehicle security system is reset, each phase switches to the DISARMED phase directly.

## PRE-ARMED Phase

The PRE-ARMED phase is the transient state between the DISARMED phase and the ARMED phase. This phase is maintained for 30 seconds, so that the owner can reset the setting due to a mis-operation. This phase switches to the ARMED phase when vehicle conditions are not changed for 30 seconds. Security indicator lamp illuminates while being in this phase.

To reset the PRE-ARMED phase, refer to the switching condition of No. 10 in the table above.

## ARMED Phase

The vehicle security system is set, and BCM monitors all necessary inputs. If any door is opened without using Keyfob, vehicle security system switches to the ALARM phase. Security indicator lamp blinks every 2.4 seconds.

To reset the ARMED phase, refer to the switching condition of No. 11 in the table above.

## ALARM Phase

BCM transmits "Theft Warning Horn Request" signal and "High Beam Request" signal intermittently to IPDM E/R via CAN communication. In this phase, horns and headlamps are activated intermittently for approximately 50 seconds to warn that the vehicle is accessed by unauthorized means. ON/OFF timing of horns and headlamps are synchronized. After 50 seconds, the vehicle security system returns to the ARMED phase. At this time, if BCM still detects unauthorized access to the vehicle, the system is switched to the ALARM phase again. This RE-ALARM operation is carried out a maximum of 2 times.

To cancel the ALARM operation, refer to the switching condition of No. 12 in the table above.

### **NOTE:**

If a battery terminal is disconnected during the ALARM phase, theft warning alarm stops. But when the battery terminal is reconnected, theft warning alarm is activated again.

## PRE-RESET Phase

The PRE-RESET phase is the transient state between each phase and DISARMED phase.

PRE-ARMED phase is not available for this models.

## PANIC ALARM

- The panic alarm function activates horns and headlamps intermittently when the owner presses the PANIC ALARM button of Keyfob outside the vehicle while the ignition switch is OFF.
- When BCM receives panic alarm signal from Keyfob, BCM transmits "Theft Warning Horn Request" signal and "High Beam Request" signal intermittently to IPDM E/R via CAN communication. To prevent the activation due to mis-operation of Keyfob by owner, the panic alarm function is activated when BCM receives the signal for 0.4 - 0.6 seconds.
- Panic alarm operation is maintained for 25 seconds.
- Panic alarm operation is cancelled when BCM receives one of the following signals.
  - LOCK button of Keyfob: ON
  - UNLOCK button of Keyfob: ON
  - PANIC ALARM button of Keyfob: Long pressed



# DIAGNOSIS SYSTEM (BCM)

[WITHOUT INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

## DIAGNOSIS SYSTEM (BCM)

### COMMON ITEM

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

INFOID:000000009754748

#### APPLICATION ITEM

CONSULT 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.
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	<ul style="list-style-type: none"> <li>Read and save the vehicle specification.</li> <li>Write the vehicle specification when replacing BCM.</li> </ul>

#### 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.

x: Applicable item

System	Sub system selection item	Diagnosis mode		
		Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	x	x	x
Rear window defogger	REAR DEFOGGER		x	x
Warning chime	BUZZER		x	x
Interior room lamp control	INT LAMP	x	x	x
Remote keyless entry system	MULTI REMOTE ENT	x	x	x
Exterior lamp	HEAD LAMP	x	x	x
Wiper and washer	WIPER	x	x	x
Turn signal and hazard warning lamps	FLASHER		x	x
Air conditioning system	AIR CONDITONER		x	x
Combination switch	COMB SW		x	
Body control system	BCM	x		
NATS	IMMU	x		x
Interior room lamp battery saver	BATTERY SAVER	x	x	x
Back door open	TRUNK		x	
Theft warning alarm	THEFT ALM	x	x	x
RAP system	RETAINED PWR		x	x
Signal buffer system	SIGNAL BUFFER		x	x
Panic alarm	PANIC ALARM			x
TPMS	AIR PRESSUE MONITOR	x	x	x

#### THEFT ALM

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

INFOID:000000009754749

#### WORK SUPPORT

# DIAGNOSIS SYSTEM (BCM)

[WITHOUT INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

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

## 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 screen is touched.
VEHICLE SECURITY HORN	This test is able to check horn operation. Horn will be activated for 0.5 seconds after "ON" on CONSULT 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 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 screen is touched.

## IMMU

### IMMU : CONSULT Function (BCM - IMMU)

INFOID:000000009754750

## WORK SUPPORT

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

## 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 screen is touched.

## PANIC ALARM

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

INFOID:000000009754751

## ACTIVE TEST

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

# DIAGNOSIS SYSTEM (IPDM E/R)

[WITHOUT INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

## DIAGNOSIS SYSTEM (IPDM E/R)

### CONSULT Function (IPDM E/R)

INFOID:000000009754752

#### APPLICATION ITEM

CONSULT performs the following functions via CAN communication with IPDM E/R.

Diagnosis mode	Description
Ecu Identification	Allows confirmation of IPDM E/R part number.
Self Diagnostic Result	Displays the diagnosis results judged by IPDM E/R.
Data Monitor	Displays the real-time input/output data from IPDM E/R input/output data.
Active Test	IPDM E/R can provide a drive signal to electronic components to check their operations.
CAN Diag Support Monitor	The results of transmit/receive diagnosis of CAN communication can be read.

#### SELF DIAGNOSTIC RESULT

Refer to [PCS-53. "DTC Index"](#).

#### DATA MONITOR

##### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor Item [Unit]	MAIN SIG- NALS	Description
RAD FAN REQ [%]	×	Displays the value of the cooling fan speed request signal received from ECM via CAN communication.
AC COMP REQ [Off/On]	×	Displays the status of the A/C compressor request signal received from ECM via CAN communication.
TAIL&CLR REQ [Off/On]	×	Displays the status of the position light request signal received from BCM via CAN communication.
HL LO REQ [Off/On]	×	Displays the status of the low beam request signal received from BCM via CAN communication.
HL HI REQ [Off/On]	×	Displays the status of the high beam request signal received from BCM via CAN communication.
FR FOG REQ [Off/On]	×	Displays the status of the front fog light request signal received from BCM via CAN communication.
FR WIP REQ [Stop/1LOW/Low/Hi]	×	Displays the status of the front wiper request signal received from BCM via CAN communication.
WIP AUTO STOP [STOP P/ACT P]	×	Displays the status of the front wiper auto stop signal judged by IPDM E/R.
WIP PROT [Off/BLOCK]	×	Displays the status of the front wiper fail-safe operation judged by IPDM E/R.
IGN RLY [Off/On]	×	Displays the status of the ignition relay judged by IPDM E/R.
INTER/NP SW [Off/On]		Displays the status of the shift position (CVT models) judged by IPDM E/R.
ST RLY REQ [Off/On]		Displays the status of the starter relay status signal received from BCM via CAN communication.
DTRL REQ [Off/On]		Displays the status of the daytime running light request signal received from BCM via CAN communication.
OIL P SW [Open/Close]		<b>NOTE:</b> This item is indicated, but not monitored.
HOOD SW [Off/On]		<b>NOTE:</b> This item is indicated, but not monitored.

# DIAGNOSIS SYSTEM (IPDM E/R)

[WITHOUT INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

Monitor Item [Unit]	MAIN SIG- NALS	Description
HL WASHER REQ [Off/On]		<b>NOTE:</b> This item is indicated, but not monitored.
THFT HRN REQ [Off/On]		Displays the status of the theft warning horn request signal received from BCM via CAN communication.
HORN CHIRP [Off/On]		Displays the status of the horn reminder request signal received from BCM via CAN communication.

## ACTIVE TEST

Test item

Test item	Operation	Description
HORN	On	Operates horn relay for 20 ms.
REAR DEFOGGER	Off	OFF
	On	Operates the rear window defogger relay.
FRONT WIPER	Off	OFF
	Lo	Operates the front wiper relay.
	Hi	Operates the front wiper relay and front wiper high relay.
MOTOR FAN	1	OFF
	2	Transmits 50% pulse duty signal (PWM signal) to the cooling fan control module.
	3	Transmits 75% pulse duty signal (PWM signal) to the cooling fan control module.
	4	Transmits 100% pulse duty signal (PWM signal) to the cooling fan control module.
HEAD LAMP WASHER	On	<b>NOTE:</b> This item is indicated, but cannot be tested.
EXTERNAL LAMPS	Off	OFF
	TAIL	Operates the tail lamp relay.
	Lo	Operates the headlamp low relay.
	Hi	Operates the headlamp low relay and ON/OFF the headlamp high relay at 1 second intervals.
	Fog	Operates the front fog lamp relay.

# ECU DIAGNOSIS INFORMATION

## ECM, IPDM E/R, BCM

### List of ECU Reference

INFOID:000000009754753

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M  
N  
O  
P

ECU		Reference
ECM	Reference Value	<a href="#">EC-82, "Reference Value"</a>
	Fail Safe	<a href="#">EC-97, "Fail Safe"</a>
	DTC Inspection Priority	<a href="#">EC-99, "DTC Inspection Priority Chart"</a>
	DTC Index	<a href="#">EC-101, "DTC Index"</a>
IPDM E/R	Reference Value	<a href="#">PCS-47, "Reference Value"</a>
	Fail Safe	<a href="#">PCS-52, "Fail-safe"</a>
	DTC Index	<a href="#">PCS-53, "DTC Index"</a>
BCM	Reference Value	<a href="#">BCS-118, "Reference Value"</a>
	Fail Safe	<a href="#">BCS-131, "Fail-safe"</a>
	DTC Inspection Priority	<a href="#">BCS-132, "DTC Inspection Priority Chart"</a>
	DTC Index	<a href="#">BCS-132, "DTC Index"</a>

SEC

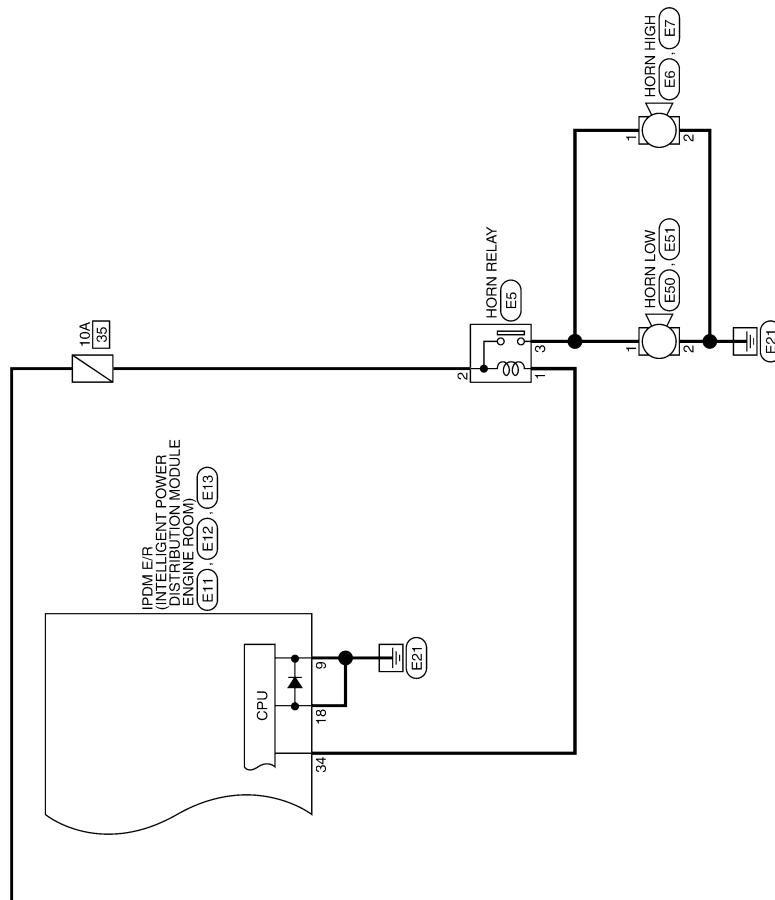




# SECURITY CONTROL SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >



JRKWC9416GB



# SECURITY CONTROL SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

## SECURITY CONTROL SYSTEM (WITHOUT INTELLIGENT KEY)

Connector No.	B3
Connector Name	WIRE TO WIRE
Connector Type	TH22MW-NH



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
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Terminal No.	Color Of Wire	Signal Name [Specification]
2	SHIELD	-
3	W	-
4	B	-
5	B	-
6	Y	-
7	W	-
8	P	-
9	V	-
10	SHIELD	-
11	R	-
12	G	-
13	W	-
14	B	-
15	L	-
16	BR	-
17	G	-
18	V	-
19	G	-
20	Y	-
21	SHIELD	-
22	B	-
23	W	-
24	R	-
25	G	-
26	Y	-
27	SHIELD	-
28	W	-
29	R	-
30	B	-
32	R	-

Connector No.	B9
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FEA08BE-FH06-SA



41	42	43	44	45	47	48	49
50	51	53	55				

Terminal No.	Color Of Wire	Signal Name [Specification]
41	LG	REAR WIPER STOP POSITION
42	G	REAR WIPER SW
43	BR	REAR LH DOOR SW
44	SB	DRIVER DOOR SW
45	R	PASSENGER DOOR SW
47	P	BACK DOOR SW
48	W	TURN SIG RH OUTPUT
49	V	TURN SIG LH OUTPUT
50	GR	BK DOOR OPEN OUTPUT
53	P	REAR WIPER OUTPUT
55	L	LUGGAGE LAMP OUTPUT

Connector No.	B18
Connector Name	WIRE TO WIRE
Connector Type	INS12MM-CS



1	2	3	4	5		
6	7	8	9	10	11	12

Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	LG	-
3	LG	-
4	GR	-
5	P	-
6	Y	-
7	L	-
8	GR	-

9	SHIELD	-
11	B	-
12	B	-



Connector No.	B19
Connector Name	WIRE TO WIRE
Connector Type	MD2MB-P-LC

1	2
---	---

Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	-
2	R	-



1	2
---	---

Terminal No.	2	SB	Signal Name [Specification]
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Connector No.	B48
Connector Name	FRONT DOOR SWITCH (PASSENGER SIDE)
Connector Type	A03FW



1	2
---	---

Terminal No.	2	R	Signal Name [Specification]
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Connector No.	B53
Connector Name	REAR DOOR SWITCH RH
Connector Type	A03FW



1	2
---	---

Terminal No.	2	LG	Signal Name [Specification]
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Connector No.	B71
Connector Name	REAR DOOR SWITCH LH
Connector Type	A03FW



1	2
---	---

JRKWC9417GB

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M  
N  
O  
P

SEC

# SECURITY CONTROL SYSTEM

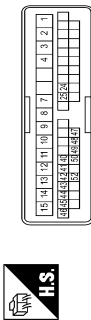
[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

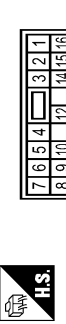
## SECURITY CONTROL SYSTEM (WITHOUT INTELLIGENT KEY)

Terminal No.	Color Of Wire	Signal Name [Specification]
2	BR	-

Connector No.	D22
Connector Name	WIRE TO WIRE
Connector Type	THHPW-CS15



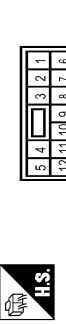
Connector No.	D35
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS16FW-CS



Connector No.	D106
Connector Name	BACK DOOR LOCK ASSEMBLY
Connector Type	NSHAFW-CS



Connector No.	D125
Connector Name	WIRE TO WIRE
Connector Type	NS12FM-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	-
2	W	-
3	SB	-
4	V	-
7	G	-
8	BG	-
9	LG	-
10	BR	-
11	W	-
12	SB	-
14	L	-
15	P	-
24	G	-
25	R	-
40	V	-
41	P	-
42	L	-
43	GR	-
44	W	-
45	Y	-
46	BG	-
47	G	-
48	B	-
50	LG	-
52	BR	-

Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	-
2	W	-
3	SB	-
4	V	-
7	G	-
8	BG	-
9	LG	-
10	BR	-
11	W	-
12	SB	-
14	L	-
15	P	-
24	G	-
25	R	-
40	V	-
41	P	-
42	L	-
43	GR	-
44	W	-
45	Y	-
46	BG	-
47	G	-
48	B	-
50	LG	-
52	BR	-

Terminal No.	Color Of Wire	Signal Name [Specification]
2	SB	-
3	L	-
4	P	-
5	W	-
6	BR	-
7	LG	-
8	BG	-
9	G	-
10	L	-
12	LG	-
14	G	-
15	BR	-
16	W	-

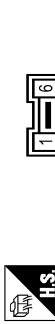
Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	-
2	SB	-
3	G	-
4	B	-
5	L	-
6	R	-

Connector No.	D38
Connector Name	FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE)
Connector Type	EBRFQY-RS



Terminal No.	Color Of Wire	Signal Name [Specification]
2	GR	-
3	P	-
4	B	-

Connector No.	D107
Connector Name	BACK DOOR-OPENER SWITCH
Connector Type	TKOMW-TV



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	B	-
3	SB	-
4	B	-
5	V	-
6	B	-

Connector No.	D126
Connector Name	WIRE TO WIRE
Connector Type	M02FB-LC



Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	-
2	SB	-
3	G	-
4	B	-
5	L	-
6	R	-

Terminal No.	Color Of Wire	Signal Name [Specification]
2	B	-
R	-	-

JRKWC9418GB

# SECURITY CONTROL SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

## SECURITY CONTROL SYSTEM (WITHOUT INTELLIGENT KEY)

Connector No.	E5
Connector Name	HORN RELAY
Connector Type	Relay_24351_C3900

Terminal No.	1	2	3
Color Of Wire	G	B	LG
Signal Name [Specification]			



2	3	1
---	---	---

Connector No.	E7
Connector Name	HORN HIGH
Connector Type	P01EB-A

Terminal No.	2
Color Of Wire	B/R
Signal Name [Specification]	



2
---

Terminal No.	1	2	3
Color Of Wire	L	BR	G
Signal Name [Specification]			



Connector No.	E6
Connector Name	HORN HIGH
Connector Type	P01EB-A

1
---

Terminal No.	2
Color Of Wire	B/R
Signal Name [Specification]	



Connector No.	E8
Connector Name	WIRE TO WIRE
Connector Type	SAA36MS-RS1P-SJZZ



Terminal No.	1	2	3	4	5	6	7	8	10	11	12	13	14	15	16	17	18	19	20	
Color Of Wire	P	L	O	LG	O	V	BR	SB	R	O	G	Y	R	R	SB	GR	W	W	L/B	L/W
Signal Name [Specification]																				

Connector No.	E11
Connector Name	FRM E/R INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM
Connector Type	M08FB-LC



9	14
---	----

Terminal No.	9
Color Of Wire	B/Y
Signal Name [Specification]	



Connector No.	E12
Connector Name	FRM E/R INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM
Connector Type	NS08FER-GS



22	20	19	18
----	----	----	----

Terminal No.	18	19	19	20	20	22
Color Of Wire	B/Y	R	W	G	V	G
Signal Name [Specification]		- (Without front fog lamp)	- (With front fog lamp)	- (Without front fog lamp)	- (With front fog lamp)	

21	G	
22	SHIELD	
24	P	
25	R	
26	B	
27	B	
28	LG	
29	SB	
30	R	
31	G	
32	Y	
33	BR	
34	W	
37	L	
38	P	
39	B	
41	V	
42	L	
43	BR	
44	G	
45	BR	
46	Y	
47	SB	
48	LG	

Connector No.	E10
Connector Name	FRM E/R INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM
Connector Type	M08FW-LC



4	3	6
---	---	---

Terminal No.	3	4	6
Color Of Wire	R	R	GR
Signal Name [Specification]			

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
L  
M  
N  
O  
P

SEC

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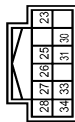
# SECURITY CONTROL SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

## SECURITY CONTROL SYSTEM (WITHOUT INTELLIGENT KEY)

Connector No.	E13
Connector Name	INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM
Connector Type	TH12EW-NH



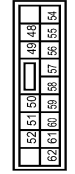
Terminal No.	Color Of Wire	Signal Name [Specification]
23	GR	—
25	BR	—
26	P	—
27	L	—
28	Y	—
30	V	—
31	Y	—
33	G	—
34	L	—

Connector No.	E14
Connector Name	INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM
Connector Type	NS12PER-CS



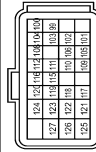
Terminal No.	Color Of Wire	Signal Name [Specification]
39	L	—
41	P	—
42	Y	—
43	L	—
44	R	—
45	W	—

Connector No.	E15
Connector Name	INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM
Connector Type	NS16FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
34	P	—
35	G	—
36	SB	—
37	O	—
38	LG	—
39	V	—
40	SB	—
41	LG	—
42	O	—
43	—	—
44	—	—
45	—	—
46	—	—
47	—	—
48	—	—
49	—	—
50	—	—
51	L	—
52	P	—
54	P	—
55	G	—
56	SB	—
57	O	—
58	LG	—
59	V	—
60	SB	—
61	LG	—
62	O	—

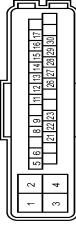
Connector No.	E18
Connector Name	ECM
Connector Type	RH4MFGY-R28-R-RH



Terminal No.	Color Of Wire	Signal Name [Specification]
98	P	CAN COMMUNICATION LINE (CAN-L)
100	L	CAN COMMUNICATION LINE (CAN-H)
101	V	SENSOR POWER SUPPLY
102	R	ACCELERATOR PEDAL POSITION SENSOR I
103	BR	PHP SIGNAL
104	R	DATA LINK CONNECTOR

105	GR	SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 2)
106	Y	POWER SUPPLY FOR ECM (BLACK) (P)
108	GR	CLUTCH PEDAL POSITION SWITCH
109	O	IGNITION SWITCH
110	P	ASD STEERING SWITCH
111	B	SENSOR GROUND
112	BR	ECM RELAY (SELF SHUT-OFF)
115	SB	STOP LAMP SWITCH
116	G	BRAKE PEDAL POSITION SWITCH
117	Y	FUEL PUMP RELAY
118	O	SENSOR POWER SUPPLY
119	BR	ACCELERATOR PEDAL POSITION SENSOR 2
120	Y	SENSOR GROUND
121	G	POWER SUPPLY FOR ECM
122	GR	THROTTLE POSITION SWITCH
123	SB	ECM GROUND
124	B/Y	ECM GROUND
125	L	A/F SENSOR 1 HEATER
126	W	HEATED OXYGEN SENSOR 2 HEATER
127	B/Y	ECM GROUND

Connector No.	E35
Connector Name	ABS ACTIVATOR AND ELECTRIC PART CONTROL UNIT
Connector Type	RH28EE-NH4-UH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	BAT (MFR)
2	W	BAT (SO)
3	B	GND (SO)
4	B	GND (MFR)
5	GR	VDC OFF SW
6	GR	BRAKE PEDAL POSITION SW
8	SB	STOP LAMP SW
9	P	CAN-L
11	BR	DP RR
12	W	DS RR
13	G	VCC
14	R	SERIAL*
15	Y	DS RR
16	V	IGN
17	W	REFLECT SIGNAL
21	L	DP RL
22	L	CAN-H
23	LG	DP FL
26	SB	DP RL
27	BR	DS FL
28	B	GND
29	W	SERIAL*
30	O	DS RL

Connector No.	E29
Connector Name	CLUTCH INTERLOCK SWITCH
Connector Type	MMFW-LC



Terminal No.	Color Of Wire	Signal Name [Specification]
3	LG	—
4	BR	—

# SECURITY CONTROL SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

## SECURITY CONTROL SYSTEM (WITHOUT INTELLIGENT KEY)

Connector No.	E50
Connector Name	HORN LOW
Connector Type	P01FB-A



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-

Connector No.	E51
Connector Name	HORN LOW
Connector Type	P01FB-A



Terminal No.	Color Of Wire	Signal Name [Specification]
2	B/R	-

Connector No.	E102
Connector Name	STOP LAMP SWITCH
Connector Type	M04FW-LC



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	SB	-
3	GR	-
4	LG	-

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	T180MW-CS18-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
4	Y	-
5	GR	-
6	P	-
9	G	-
10	R	-
18	GR	-
28	B	-
37	P	-
52	SB	-
53	BR	-
54	V	-
55	O	-
58	L	-
59	Y	-
64	LG	-
65	GR	-
66	R	-
67	W	-
98	SB	-
99	W	-
121	LG	-
122	V	-
73	L	-
76	R	-
78	B	-
79	W	-

Terminal No.	Color Of Wire	Signal Name [Specification]
80	L	-
84	LG	-
85	GR	-
86	O	-
89	SHIELD	-
91	G	-
92	R	-
95	BR	-
96	P	-
97	GR	-
98	W	-
99	V	-
100	O	-

Connector No.	E118
Connector Name	STOP LAMP SWITCH
Connector Type	M07FE-LC



Terminal No.	Color Of Wire	Signal Name [Specification]
2	SB	-

Connector No.	F1
Connector Name	WIRE TO WIRE
Connector Type	SAA38FB-RS10-SJ22



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	L	-
3	Y	-
4	EG	-
5	LG	-
6	SB	-
7	G	-
8	R	-
10	BR	-
11	Y	-
12	G	-
13	EG	-
14	L	-
15	BR	-
16	SB	-
17	SB	-
18	G	-
19	G	-
20	BR	-
21	G	-
22	BR	-
23	SHIELD	-
24	R	-
25	R	-
26	B	-
27	B	-
28	R	-
29	W	-
30	B	-
31	EG	-
32	LG	-
33	BR	-
34	G	-
37	G	-
39	B	-
40	P	-
41	BR	-
42	W	-
43	L	-
44	G	-
45	BR	-
46	Y	-
47	Y	-
48	GR	-

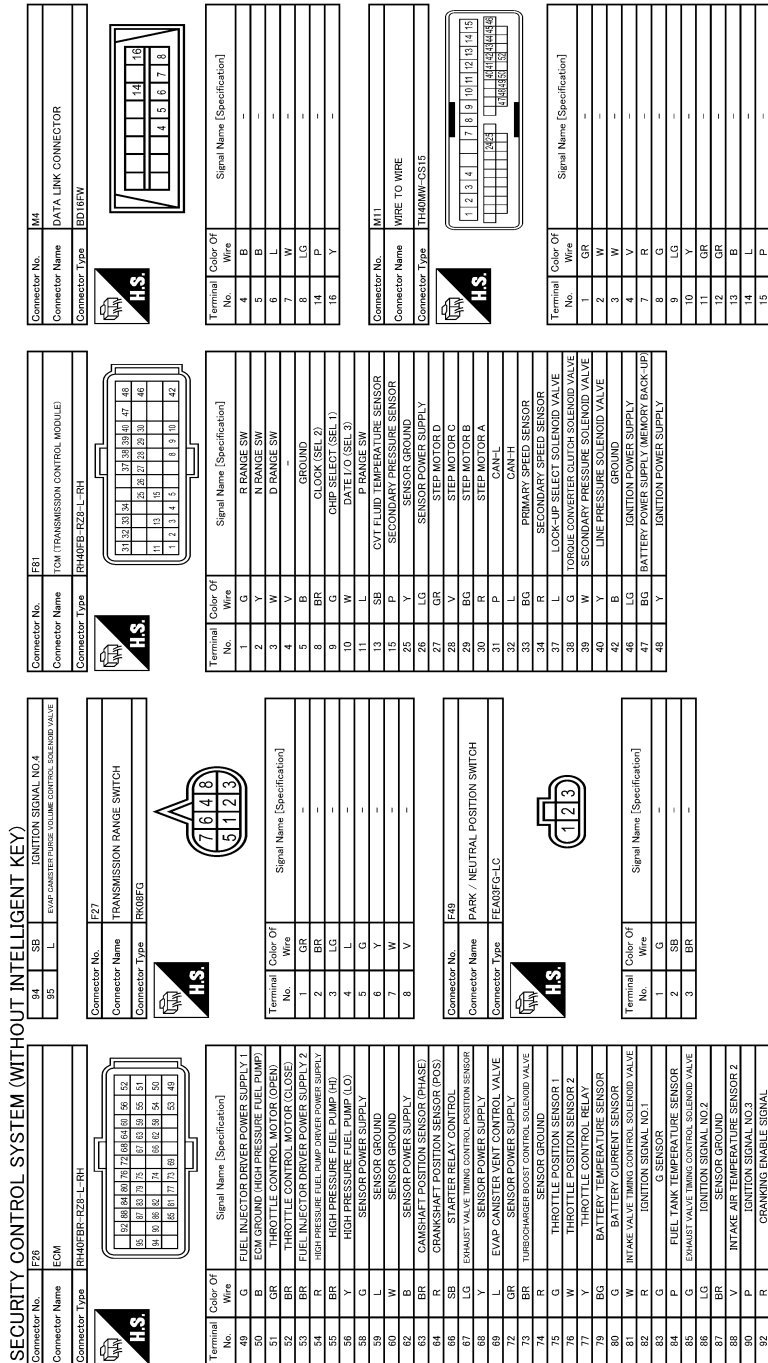
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SEC

# SECURITY CONTROL SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >



JRWKC9422GB

# SECURITY CONTROL SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

## SECURITY CONTROL SYSTEM (WITHOUT INTELLIGENT KEY)

24	BR	-	-
25	V	-	-
26	V	-	-
27	P	-	-
28	GR	-	-
29	V	-	-
30	G	-	-
31	LG	-	-
32	BR	-	-

Connector No. M21  
Connector Name WIRE TO WIRE  
Connector Type TH32FW-NH



22	L	-	-
23	R	-	-
24	G	-	-
25	R	-	-
26	R	-	-
27	SHIELD	-	-
28	V	-	-
29	LG	-	-
30	LG	-	-
31	W	-	-
32	W	-	-

Connector No. M28  
Connector Name NATS ANTENNA AMP  
Connector Type TH65FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
1	V	BAT	
2	P	CLK	
3	B	GRD	
4	LG	DATA	

Connector No. M34  
Connector Name COMBINATION METER  
Connector Type TH40FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
1	L	CAN-H	
2	P	CAN-L	
4	V	VEHICLE SPEED SIGNAL (B=PULSE) [With front fog lamp]	
	Y	VEHICLE SPEED SIGNAL (B=PULSE) [Without front fog lamp]	

Terminal No.	Color	Wire	Signal Name [Specification]
3	SHIELD	-	-
4	W	-	-
5	R	-	-
6	Y	-	-
7	BR	-	-
8	P	-	-
9	L	-	-
10	SHIELD	-	-
11	B	-	-
12	W	-	-
13	W	-	-
14	LG	-	-
15	GR	-	-
16	B	-	-
17	LG	-	-
18	W	-	-
19	G	-	-
20	R	-	-
21	SHIELD	-	-

Connector No. M65  
Connector Name BCM (BODY CONTROL MODULE)  
Connector Type TH40FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
2	L	COMBI SW INHBIT 5	
3	G	COMBI SW INHBIT 4	
4	BR	COMBI SW INHBIT 3	
5	G	COMBI SW INHBIT 2	
6	W	COMBI SW INHBIT 1	
7	L	KEY CYL UNLOCK SW	
8	R	KEY CYL LOCK SW	
9	R	STOP LAMP SW	
10	W	REAR WINDOW DEF SW	
11	L	IGN SW ACC	
12	Y	DOOR LK & UNLK SW LOCK	
13	BR	DOOR LK & UNLK SW UNLOCK	
15	W	-	
18	V	RECEIVER GND	
19	BR	RECEIVER PWS SWLY	
20	G	RECEIVER PWS SWLY	
21	B	NATS ANTENNA	
23	R	SECURITY IND LAMP CONT	
24	SB	DOUBLE LINK	
25	LG	NATS ANT AMP	
26	B	THERMO CONT AMP	
27	W	A/C SW	
28	O	BLOWER FAN SW	
29	L	HAZARD SW	
30	L	BK DOOR OPENER SW	
31	G	FR DEFROST SW	
32	LG	COMBI SW OUTPUT 3	
33	Y	COMBI SW OUTPUT 4	
34	V	COMBI SW OUTPUT 3	
35	V	COMBI SW OUTPUT 4	
36	S	COMBI SW OUTPUT 1	
37	GR	KEY SW	
38	R	IGN SW ON	
39	L	CAN-H	
40	P	CAN-L	

Terminal No.	Color	Wire	Signal Name [Specification]
5	G	PADDLE SHIFTER UP SWITCH SIGNAL	
6	BL	FUEL LEAK SIGNAL	
7	BR	ACC FUSE SIGNAL	
8	P	- [With front fog lamp]	
8	Y	- [Without front fog lamp]	
9	O	SEAT BELT UNLOCK SWITCH SIGNAL (Without front fog lamp)	
9	W	SEAT BELT UNLOCK SWITCH SIGNAL (With front fog lamp)	
10	SB	PARKING BRAKE SWITCH SIGNAL	
11	G	BRAKE FLUID LEVEL SWITCH SIGNAL	
13	B	ILLUMINATION CONTROL SIGNAL (With front fog lamp)	
13	GR	ILLUMINATION CONTROL SIGNAL (Without front fog lamp)	
14	R	MANUAL MOOT SHIF UP SIGNAL (With front fog lamp)	
14	V	MANUAL MOOT SHIF UP SIGNAL (Without front fog lamp)	
15	L	ACC POWER SUPPLY	
16	O	WASHER LEVEL SWITCH SIGNAL (With front fog lamp)	
16	V	WASHER LEVEL SWITCH SIGNAL (Without front fog lamp)	
17	C	WASHER LEVEL SWITCH SIGNAL (With front fog lamp)	
17	W	WASHER LEVEL SWITCH SIGNAL (Without front fog lamp)	
18	R	SECURITY SIGNAL	
19	GR	AMBIENT SENSOR SIGNAL	
20	LG	AMBIENT SENSOR GROUND (With front fog lamp)	
20	R	AMBIENT SENSOR GROUND (Without front fog lamp)	
21	B	GROUND	
22	B	GROUND	
23	B	FUEL LEVEL SENSOR GROUND	
24	L	VDC GROUND	
25	B	VDC GROUND	
26	V	PADDLE SHIFTER DOWN SWITCH SIGNAL	
27	LG	BATTERY POWER SUPPLY	
28	LG	IGNITION SIGNAL	
29	V	PASSENGER SEAT BELT WARNER SIGNAL (With front fog lamp)	
29	V	PASSENGER SEAT BELT WARNER SIGNAL (Without front fog lamp)	
31	P	A/C AUTO AMP CONNECTION RECOGNITION SIGNAL	
36	LG	MANUAL MODE SIGNAL (With front fog lamp)	
36	Y	MANUAL MODE SIGNAL (Without front fog lamp)	
37	G	NON-MANUAL MODE SIGNAL (With front fog lamp)	
37	Y	NON-MANUAL MODE SIGNAL (Without front fog lamp)	
38	P	ALTERNATOR SIGNAL	

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SEC

JRKWC9423GB

# SECURITY CONTROL SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

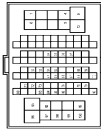
< WIRING DIAGRAM >

## SECURITY CONTROL SYSTEM (WITHOUT INTELLIGENT KEY)

Connector No.	M66
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FEABSEW-FHAG-SA



Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-GS16-TM4



56	R	-	[Without Intelligent Key]
56	Y	-	[With Intelligent Key]
56	L	-	
57	GR	-	
58	G	-	
59	W	-	
100	LG	-	

Connector No.	M89
Connector Name	DONGLE UNIT
Connector Type	HS8FBFR-CS



Terminal No.	1	2	7
Color Of Wire	B	-	-
Signal Name [Specification]			

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
4	Y	-
5	W	-
6	P	-
9	R	-
10	R	-
34	LG	-
35	SB	-
36	B	-
37	P	-
52	R	-
53	L	-
54	SB	-
55	P	-
56	G	-
58	G	-
64	G	-
65	GR	-
66	Y	-
67	V	-
68	R	-
70	V	-
71	R	-
72	GR	-
73	G	-
78	W	-
78	LG	-
79	V	-
80	G	-
84	G	-
85	BR	-
85	LG	-
86	LG	-
90	SHIELD	-
91	Y	-
92	BR	-

Terminal No.	Color Of Wire	Signal Name [Specification]
59	W	BR DOOR UNLK OUTPUT
59	W	BAT (EUS)
58	LG	INT ROOM LAMP PWR SPLY
80	BR	INT ROOM LAMP CONT
63	SB	A/C IND OUTPUT
65	Y	BAT (F/L)
66	P	PW PWR SPLY (BAT)
67	L	PW PWR SPLY (IGN)
68	SB	PASS. RR DOOR UNLK OUTPUT
69	V	ALL DOOR LOCK OUTPUT
70	B	GND

Connector No.	M73
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Type	TK0FW



Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	GND
2	G	SIGNAL
4	BR	POWER

JRKWC9424GB



# DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

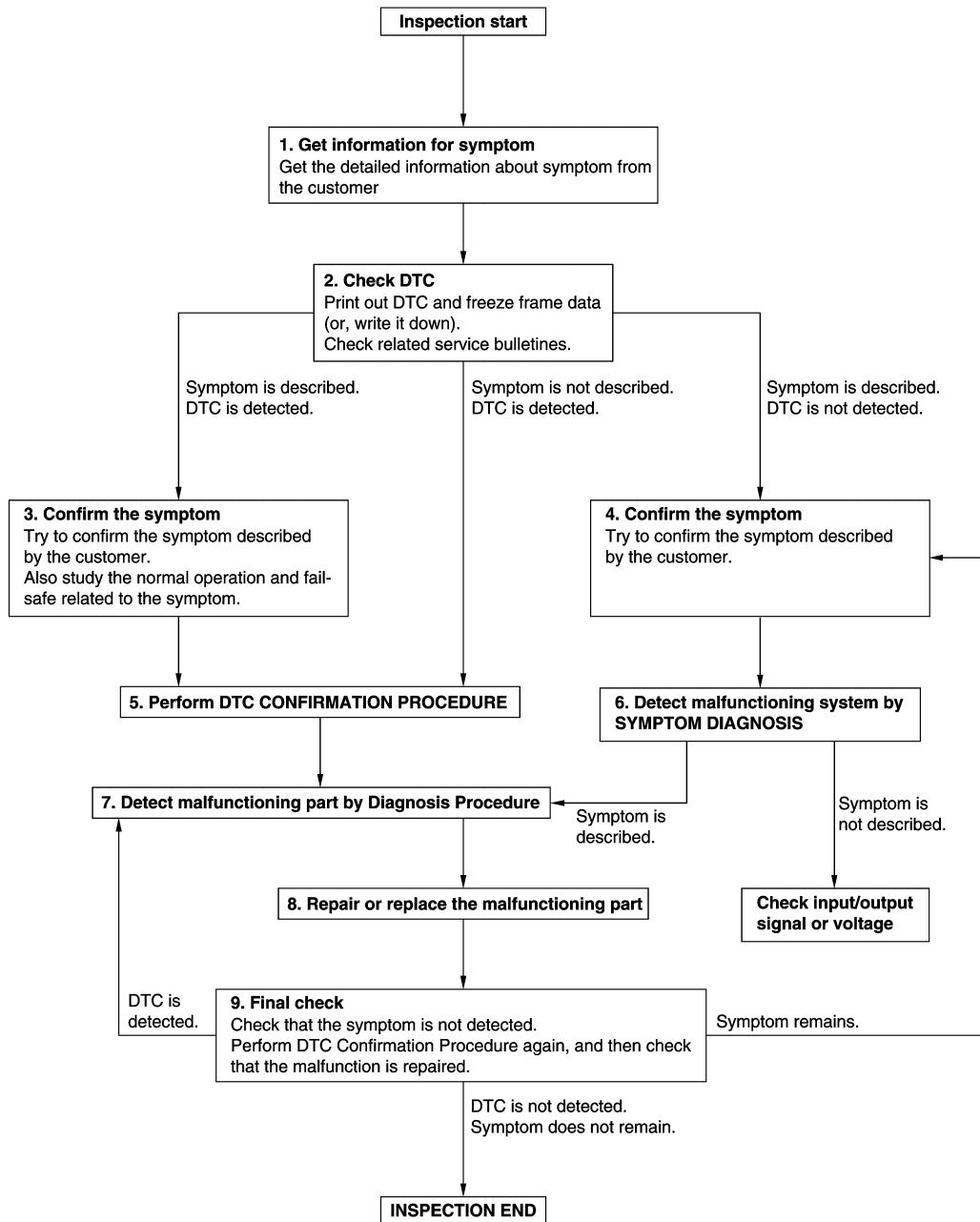
## BASIC INSPECTION

### DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:000000009754755

OVERALL SEQUENCE



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DETAILED FLOW

Revision: 2013 October

SEC-153

2014 JUKE

JMKIA8652GB

# DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

---

## 1. GET INFORMATION FOR SYMPTOM

---

1. Get detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurs).
2. Check operation condition of the function that is malfunctioning.

>> GO TO 2.

---

## 2. CHECK DTC

---

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

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

---

Try to confirm the symptom described by the customer.

Also study the normal operation and fail-safe related to the symptom.

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

>> GO TO 5.

---

## 4. CONFIRM THE SYMPTOM

---

Try to confirm the symptom described by the customer.

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 to the vehicle, and check self diagnostic results in real time.

If two or more DTCs are detected, refer to [BCS-132. "DTC Inspection Priority Chart"](#) (BCM), and determine trouble diagnosis order.

**NOTE:**

- Freeze frame data is useful if the DTC is not detected.
- Perform Component Function Check if DTC CONFIRMATION PROCEDURE is not included on Service Manual. This simplified check procedure is an effective alternative though DTC cannot be detected during this check.

If the result of Component Function Check is NG, it is the same as the detection of DTC by DTC CONFIRMATION PROCEDURE.

Is DTC detected?

YES >> GO TO 7.

NO >> Check according to [GI-46. "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.

Is the symptom described?

YES >> GO TO 7.

NO >> Monitor input data from related sensors or check voltage of related module terminals using CONSULT.

---

## 7. DETECT MALFUNCTIONING PART BY DIAGNOSIS PROCEDURE

---

# DIAGNOSIS AND REPAIR WORK FLOW

[WITHOUT INTELLIGENT KEY SYSTEM]

< BASIC INSPECTION >

Inspect according to Diagnosis Procedure of the system.

Is malfunctioning part detected?

YES >> GO TO 8.

NO >> Check according to [GI-46. "Intermittent Incident"](#).

## 8. REPAIR OR REPLACE THE MALFUNCTIONING PART

1. Repair or replace the malfunctioning part.
2. Reconnect parts or connectors disconnected during Diagnosis 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 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.

Is DTC detected and does symptom remain?

YES-1 >> DTC is detected: GO TO 7.

YES-2 >> Symptom remains: GO TO 4.

NO >> Before returning the vehicle to the customer, always erase DTC.

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SEC

## ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

< BASIC INSPECTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

---

### ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

#### ECM

##### ECM : Description

INFOID:000000009754756

When replacing ECM, the following procedure must be performed. (For details, refer to [SEC-156, "ECM : Work Procedure"](#).)

##### PROGRAMMING OPERATION

###### NOTE:

After replacing with a blank ECM, programming is required to write ECM information. Be sure to follow the procedure to perform the programming.

##### ECM : Work Procedure

INFOID:000000009754757

---

#### 1. CHECK ECM PART NUMBER

Check ECM part number to see whether it is blank ECM or not.

###### NOTE:

- Part number of blank ECM is 23703 - xxxxx.
- Check the part number when ordering ECM or with the one included in the label on the container box.

###### Is the ECM a blank ECM?

YES >> GO TO 2.

NO >> GO TO 4.

---

#### 2. SAVE ECM PART NUMBER

Read out the part number from the old ECM and save the number, following the programming instructions. Refer to "CONSULT Operation Manual".

###### NOTE:

- The ECM part number is saved in CONSULT.
- Even when ECM part number is not saved in CONSULT, go to 3.

>> GO TO 3.

---

#### 3. PERFORM ECM PROGRAMMING

After replacing ECM, perform the ECM programming. Refer to "CONSULT Operation Manual".

###### NOTE:

- Refer to [EC-561, "Removal and Installation"](#) for replacement of ECM.
- During programming, maintain the following conditions:
  - Ignition switch: ON
  - Electric load: OFF
  - Brake pedal: Not depressed
  - Battery voltage: 12 – 13.5 V (Be sure to check the value of battery voltage by selecting "BATTERY VOLT" in "Data monitor" of CONSULT.)

>> GO TO 5.

---

#### 4. REPLACE ECM

Replace ECM. Refer to [EC-561, "Removal and Installation"](#).

>> GO TO 5.

---

#### 5. PERFORM INITIALIZATION OF NVIS (NATS) SYSTEM AND REGISTRATION OF ALL NVIS (NATS) IGNITION KEY IDS

Refer to [SEC-157, "BCM : Work Procedure"](#).

>> GO TO 6.

---

#### 6. PERFORM ACCELERATOR PEDAL RELEASED POSITION LEARNING

# ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

< BASIC INSPECTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Refer to [EC-143, "Work Procedure"](#).

>> GO TO 7.

## 7. PERFORM THROTTLE VALVE CLOSED POSITION LEARNING

Refer to [EC-144, "Work Procedure"](#).

>> GO TO 8.

## 8. PERFORM IDLE AIR VOLUME LEARNING

Refer to [EC-145, "Work Procedure"](#).

>> GO TO 9.

## 9. PERFORM G SENSOR CALIBRATION

Refer to [EC-147, "Work Procedure"](#).

>> END

## BCM

### BCM : Description

INFOID:000000009754758

#### BEFORE REPLACEMENT

When replacing BCM, save or print current vehicle specification with CONSULT configuration before replacement.

#### NOTE:

If "READ CONFIGURATION" can not be used, use the "WRITE CONFIGURATION - Manual selection" after replacing BCM.

#### AFTER REPLACEMENT

#### CAUTION:

When replacing BCM, always perform "WRITE CONFIGURATION" with CONSULT. Or not doing so, BCM control function does not operate normally.

- Complete the procedure of "WRITE CONFIGURATION" in order.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.
- If you set incorrect "WRITE CONFIGURATION", incidents might occur.

#### NOTE:

When replacing BCM, perform the system initialization (NATS) (if equipped).

### BCM : Work Procedure

INFOID:000000009754759

## 1. SAVING VEHICLE SPECIFICATION

### CONSULT Configuration

Perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to [BCS-144, "Description"](#).

#### NOTE:

If "READ CONFIGURATION" can not be used, use the "WRITE CONFIGURATION - Manual selection" after replacing BCM.

>> GO TO 2.

## 2. REPLACE BCM

Replace BCM. Refer to [BCS-157, "Removal and Installation"](#).

>> GO TO 3.

## 3. WRITING VEHICLE SPECIFICATION

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## ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

< BASIC INSPECTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

---

④CONSULT Configuration

Perform "WRITE CONFIGURATION - Config file" or "WRITE CONFIGURATION - Manual selection" to write vehicle specification. Refer to [BCS-144, "Work Procedure"](#).

>> GO TO 4.

### 4.INITIALIZE BCM (NATS) (IF EQUIPPED)

---

Perform BCM initialization. (NATS)

>> WORK END

# P1610 LOCK MODE

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## DTC/CIRCUIT DIAGNOSIS

### P1610 LOCK MODE

#### Description

INFOID:000000009754760

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, or when engine start operation is performed 5 times or more using the unregistered ignition key.

#### DTC Logic

INFOID:000000009754761

#### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1610	LOCK MODE	When ECM detects a communication malfunction between ECM and BCM 5 times or more.	—

#### DTC CONFIRMATION PROCEDURE

##### 1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Check DTC in "Self Diagnostic Result" mode of "ENGINE" using CONSULT.

##### Is DTC detected?

- YES >> Refer to [SEC-159, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

#### Diagnosis Procedure

INFOID:000000009754762

##### 1. CHECK ENGINE START FUNCTION

1. Perform that DTC except DTC P1610 is not detected.  
If detected, erase the DTC after fixing.
2. Turn ignition switch OFF.
3. Turn ignition switch ON using the registered ignition key and wait for 5 seconds.
4. Turn the ignition switch OFF and wait 5 seconds.
5. Repeat steps 4 and 5 twice (a total of 3 times).
6. Check that engine can start using the registered ignition key.

>> INSPECTION END

# P1611 ID DISCORD, IMMUECM

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## P1611 ID DISCORD, IMMUECM

### DTC Logic

INFOID:000000009754763

### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1611	ID DISCORD IMMUECM	The ID verification results between BCM and ECM are NG.	<ul style="list-style-type: none"><li>• BCM</li><li>• ECM</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Check DTC in "Self Diagnostic Result" mode of "ENGINE" using CONSULT.

#### Is DTC detected?

- YES >> Refer to [SEC-160, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754764

#### 1. PERFORM INITIALIZATION

Perform initialization of BCM and registration of all ignition keys using CONSULT.

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

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

#### 2. CHECK SELF DIAGNOSTIC RESULT

1. Select "Self Diagnostic Result" mode of "ENGINE" using CONSULT.
2. Erase DTC.
3. Perform DTC CONFIRMATION PROCEDURE for DTC P1611. Refer to [SEC-160, "DTC Logic"](#).

#### Is DTC detected?

- YES >> GO TO 3.  
NO >> INSPECTION END

#### 3. REPLACE BCM

1. Replace BCM. Refer to [BCS-157, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all ignition keys using CONSULT.

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

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

#### 4. REPLACE ECM

Replace ECM.

Refer to [EC-561, "Removal and Installation"](#).

>> INSPECTION END



# P1612 CHAIN OF ECM-IMMU

[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

## P1612 CHAIN OF ECM-IMMU

### DTC Logic

INFOID:000000009754765

### DTC DETECTION LOGIC

#### NOTE:

- If DTC P1612 is displayed with DTC U1000 (for BCM), first perform the trouble diagnosis for DTC U1000. Refer to [BCS-147, "DTC Logic"](#).
- If DTC P1612 is displayed with DTC U1010 (for BCM), first perform the trouble diagnosis for DTC U1010. Refer to [BCS-148, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1612	CHAIN OF ECM-IMMU	Inactive communication between ECM and BCM	<ul style="list-style-type: none"><li>• Harness or connectors (The CAN communication line is open or shorted.)</li><li>• BCM</li><li>• ECM</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Check DTC in "Self Diagnostic Result" mode of "ENGINE" using CONSULT.

#### Is DTC detected?

- YES >> Refer to [SEC-161, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754766

#### 1.REPLACE BCM

1. Replace BCM. Refer to [BCS-157, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all ignition keys using CONSULT.
3. Start engine.

#### Does the engine start?

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

#### 2.REPLACE ECM

Replace ECM.  
Refer to [EC-561, "Removal and Installation"](#).

>> INSPECTION END

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# P1614 CHAIN OF IMMU-KEY

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## P1614 CHAIN OF IMMU-KEY

### DTC Logic

INFOID:000000009754767

### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1614	CHAIN OF IMMU-KEY	<ul style="list-style-type: none"> <li>Inactive communication between NATS antenna amp. and BCM</li> <li>Ignition key is malfunctioning</li> </ul>	<ul style="list-style-type: none"> <li>Harness or connectors (The NATS antenna amp. circuit is open or shorted.)</li> <li>Ignition key</li> <li>NATS antenna amp.</li> <li>BCM</li> </ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

- Turn ignition switch ON.
- Check DTC in "Self Diagnostic Result" mode of "ENGINE" using CONSULT.

#### Is DTC detected?

- YES >> Refer to [SEC-162. "Diagnosis Procedure"](#).  
 NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754768

#### 1. CHECK NATS ANTENNA AMP. INSTALLATION

Check NATS antenna amp. Installation. Refer to [SEC-197. "Removal and Installation"](#).

#### Is the inspection result normal?

- YES >> GO TO 2.  
 NO >> Reinstall NATS antenna amp. correctly.

#### 2. CHECK IGNITION KEY

Start engine using another registered ignition key.

#### Does the engine start?

- YES-1 >> Replace ignition key.  
 YES-2 >> Perform initialization of BCM and registration of all ignition keys using CONSULT.  
 NO >> GO TO 3.

#### 3. CHECK FUSE

- Turn ignition switch OFF.
- Check that the following IPDM E/R fuse is not blown.

Signal name	Fuse No.
Battery power supply	43 (20 A)

#### Is the fuse fusing?

- YES >> Replace the blown fuse after repairing the cause of blowing.  
 NO >> GO TO 4.

#### 4. CHECK NATS ANTENNA AMP. POWER SUPPLY

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

(+)		(-)	Voltage (V)
NATS antenna amp.			
Connector	Terminal	Ground	6 - 16
M26	1		

# P1614 CHAIN OF IMMU-KEY

[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

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	
E14	42	M26	1	Existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-62. "Removal and Installation"](#).

NO >> Repair or replace harness.

## 6. CHECK NATS ANTENNA AMP. GROUND CIRCUIT

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

NATS antenna amp.		Ground	Continuity
Connector	Terminal		
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.

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

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

BCM		NATS antenna amp.		Continuity
Connector	Terminal	Connector	Terminal	
M65	21	M26	2	Existed
	25		4	

3. Check continuity between BCM harness connector and ground.

A  
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H  
I  
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L  
M  
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O  
P

SEC

# P1614 CHAIN OF IMMU-KEY

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

BCM		Ground	Continuity
Connector	Terminal		
M65	21		Not existed
	25		

Is the inspection result normal?

YES >> Replace NATS antenna amp. Refer to [SEC-197. "Removal and Installation"](#).

NO >> Repair or replace harness.

## 9.CHECK INTERMITTENT INCIDENT

Refer to [GI-46. "Intermittent Incident"](#).

>> INSPECTION END

# P1615 DIFFERENCE OF KEY

[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

## P1615 DIFFERENCE OF KEY

### DTC Logic

INFOID:000000009754769

### 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.	<ul style="list-style-type: none"><li>• Ignition key</li><li>• BCM</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Check DTC in "Self Diagnostic Result" mode of "ENGINE" using CONSULT.

#### Is DTC detected?

- YES >> Refer to [SEC-165. "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754770

#### 1.PERFORM INITIALIZATION

Perform initialization of BCM and registration of all ignition keys using CONSULT.

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

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

#### 2.REPLACE IGNITION KEY

1. Replace ignition key.
2. Perform initialization of BCM and registration of all ignition keys using CONSULT.

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

- YES >> INSPECTION END  
NO >> GO TO 3.

#### 3.REPLACE BCM

1. Replace BCM. Refer to [BCS-157. "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all ignition keys using CONSULT.

>> INSPECTION END

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M  
N  
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P

SEC

# B2190 NATS ANTENNA AMP.

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## B2190 NATS ANTENNA AMP.

### DTC Logic

INFOID:000000009754771

### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2190	NATS ANTENNA AMP	<ul style="list-style-type: none"><li>Inactive communication between NATS antenna amp. and BCM.</li><li>Ignition key is malfunctioning.</li></ul>	<ul style="list-style-type: none"><li>Harness or connectors (The NATS antenna amp. circuit is open or shorted.)</li><li>Ignition key</li><li>NATS antenna amp.</li><li>BCM</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

- Turn ignition switch ON.
- Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Refer to [SEC-166. "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754772

#### 1. CHECK NATS ANTENNA AMP. INSTALLATION

Check NATS antenna amp. Installation. Refer to [SEC-197. "Removal and Installation"](#).

#### Is the inspection result normal?

- YES >> GO TO 2.  
NO >> Reinstall NATS antenna amp. correctly.

#### 2. CHECK IGNITION KEY

Start engine using another registered ignition key.

#### Does the engine start?

- YES-1 >> Replace ignition key.  
YES-2 >> Perform initialization of BCM and registration of all ignition keys using CONSULT.  
NO >> GO TO 3.

#### 3. CHECK FUSE

- Turn ignition switch OFF.
- Check that the following IPDM E/R fuse is not blown.

Signal name	Fuse No.
Battery power supply	43 (20 A)

#### Is the fuse fusing?

- YES >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.  
NO >> GO TO 4.

#### 4. CHECK NATS ANTENNA AMP. POWER SUPPLY

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

(+)		(-)	Voltage (V)
NATS antenna amp.			
Connector	Terminal		
M26	1	Ground	6 - 16

# B2190 NATS ANTENNA AMP.

[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

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	
E14	42	M26	1	Existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-62. "Removal and Installation"](#).

NO >> Repair or replace harness.

## 6. CHECK NATS ANTENNA AMP. GROUND CIRCUIT

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

NATS antenna amp.		Ground	Continuity
Connector	Terminal		
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.

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

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

BCM		NATS antenna amp.		Continuity
Connector	Terminal	Connector	Terminal	
M65	21	M26	2	Existed
	25		4	

3. Check continuity between BCM harness connector and ground.

SEC

# B2190 NATS ANTENNA AMP.

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

BCM		Ground	Continuity
Connector	Terminal		
M65	21		Not existed
	25		

Is the inspection result normal?

YES >> Replace NATS antenna amp. Refer to [SEC-197. "Removal and Installation"](#).

NO >> Repair or replace harness.

## 9.CHECK INTERMITTENT INCIDENT

Refer to [GI-46. "Intermittent Incident"](#).

>> INSPECTION END



# B2191 DIFFERENCE OF KEY

[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

## B2191 DIFFERENCE OF KEY

### DTC Logic

INFOID:000000009754773

### 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.	<ul style="list-style-type: none"><li>Ignition key</li><li>BCM</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Refer to [SEC-169. "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754774

#### 1.PERFORM INITIALIZATION

Perform initialization of BCM and registration of all ignition keys using CONSULT.

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

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

#### 2.REPLACE IGNITION KEY

1. Replace ignition key.
2. Perform initialization of BCM and registration of all ignition keys using CONSULT.

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

- YES >> INSPECTION END  
NO >> GO TO 3.

#### 3.REPLACE BCM

1. Replace BCM. Refer to [BCS-157. "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all ignition keys using CONSULT.

>> INSPECTION END

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SEC

# B2192 ID DISCORD, IMMUECM

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## B2192 ID DISCORD, IMMUECM

### DTC Logic

INFOID:000000009754775

### DTC DETECTION 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.	<ul style="list-style-type: none"><li>• BCM</li><li>• ECM</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Refer to [SEC-170, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754776

#### 1. PERFORM INITIALIZATION

Perform initialization of BCM and registration of all ignition keys using CONSULT.

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

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

#### 2. CHECK SELF DIAGNOSTIC RESULT

1. Select "Self Diagnostic Result" mode of "ENGINE" using CONSULT.
2. Erase DTC.
3. Perform DTC CONFIRMATION PROCEDURE for DTC B2192. Refer to [SEC-170, "DTC Logic"](#).

#### Is DTC detected?

- YES >> GO TO 3.  
NO >> INSPECTION END

#### 3. REPLACE BCM

1. Replace BCM. Refer to [BCS-157, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all ignition keys using CONSULT.

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

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

#### 4. REPLACE ECM

Replace ECM.

Refer to [EC-561, "Removal and Installation"](#).

>> INSPECTION END

# B2193 CHAIN OF ECM-IMMU

[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

## B2193 CHAIN OF ECM-IMMU

### DTC Logic

INFOID:000000009754777

### DTC DETECTION LOGIC

#### NOTE:

- If DTC B2193 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-147, "DTC Logic"](#).
- If DTC B2193 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-148, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2193	CHAIN OF BCM-ECM	Inactive communication between ECM and BCM	<ul style="list-style-type: none"><li>• Harness or connectors (The CAN communication line is open or shorted.)</li><li>• BCM</li><li>• ECM</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

Is DTC detected?

- YES >> Refer to [SEC-171, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754778

#### 1.REPLACE BCM

1. Replace BCM. Refer to [BCS-157, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all ignition keys using CONSULT.

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

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

#### 2.REPLACE ECM

Replace ECM.  
Refer to [EC-561, "Removal and Installation"](#).

>> INSPECTION END

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SEC

# B2195 ANTI-SCANNING

[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

## B2195 ANTI-SCANNING

### DTC Logic

INFOID:000000009754779

### 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 DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Refer to [SEC-172, "Diagnosis Procedure"](#).  
NO >> INSPECTION END.

### Diagnosis Procedure

INFOID:000000009754780

#### 1. CHECK SELF DIAGNOSTIC RESULT 1

1. Select "Self Diagnostic Result" of "BCM" using CONSULT.
2. Erase DTC.
3. Perform DTC Confirmation Procedure for DTC P2195. Refer to [SEC-172, "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 >> GO TO 4.

#### 3. CHECK SELF DIAGNOSTIC RESULT 2

1. Obtain the customers approval to remove unspecified accessory part related to engine start, and then remove it.
2. Select "Self Diagnostic Result" of "BCM" using CONSULT.
3. Erase DTC.
4. Perform DTC CONFIRMATION PROCEDURE for DTC B2195. Refer to [SEC-172, "DTC Logic"](#).

#### Is DTC detected?

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

#### 4. REPLACE BCM

1. Replace BCM. Refer to [BCS-157, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all ignition keys using CONSULT.

>> INSPECTION END

# B2196 DONGLE UNIT

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## B2196 DONGLE UNIT

### Description

INFOID:000000009754781

BCM performs ID verification between BCM and dongle unit.  
When verification result is OK, BCM permits cranking.

### DTC Logic

INFOID:000000009754782

### DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2196	DONGLE NG	The ID verification results between BCM and dongle unit is NG.	<ul style="list-style-type: none"><li>• Harness or connectors (Dongle unit circuit is open or shorted.)</li><li>• Dongle unit</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Turn ignition switch OFF.
3. Turn ignition switch ON.
4. Check DTC in "Self-diagnosis result" mode of "BCM" using CONSULT.

Is the DTC detected?

- YES >> Refer to [SEC-173, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754783

#### 1.PERFORM INITIALIZATION

1. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.
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.
3. Check continuity between BCM harness connector and dongle unit harness connector.

BCM		Dongle unit		Continuity
Connector	Terminal	Connector	Terminal	
M68	24	M86	7	Existed

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
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.

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SEC

# B2196 DONGLE UNIT

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

Dongle unit		Ground	Continuity
Connector	Terminal		Existed
M86	1		

Is the inspection result normal?

- YES >> Replace dongle unit.
- NO >> Repair or replace harness.

# B209F CRANKING REQUEST CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## B209F CRANKING REQUEST CIRCUIT

### DTC Logic

INFOID:000000009754784

### DTC DETECTION LOGIC

#### NOTE:

If DTC B209F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [PCS-58. "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B209F	CRANK REQ CIR OPEN	When the following items do not match, a malfunction is detected. <ul style="list-style-type: none"> <li>• Cranking request signal from ECM</li> <li>• Starter control relay control signal from ECM (CAN)</li> </ul>	<ul style="list-style-type: none"> <li>• Harness or connectors (CAN communication line is open or shorted.)</li> <li>• Harness or connectors (Cranking request signal circuit is open or shorted.)</li> <li>• IPDM E/R</li> <li>• ECM</li> </ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

1. Perform DTC CONFIRMATION PROCEDURE for DTC P1650. Refer to [EC-470. "DTC Logic"](#).
2. Turn ignition switch ON.
3. Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

Is DTC detected?

- YES >> Refer to [SEC-175. "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754785

#### 1. CHECK CRANKING REQUEST SIGNAL

1. Turn ignition switch ON.
2. Check voltage between IPDM E/R harness connector and ground under the following conditions.

(+) IPDM E/R		(-)	Condition	Voltage (V) (Approx.)	
Connector	Terminal				
E13	23	Ground	Ignition switch OFF	3.6	
			Ignition switch ON	<ul style="list-style-type: none"> <li>• Engine: Stopped</li> <li>• Selector lever position: P</li> </ul>	0 – 1
				<ul style="list-style-type: none"> <li>• Engine: Stopped</li> <li>• Selector lever position: Other than P</li> </ul>	12 – 16
			Engine running	12 – 16	

Is the inspection result normal?

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

#### 2. CHECK CRANKING REQUEST SIGNAL CIRCUIT

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

## B209F CRANKING REQUEST CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

IPDM E/R		ECM		Continuity
Connector	Terminal	Connector	Terminal	
E13	23	F26	92	Existed

5. Check continuity between BCM harness connector and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E13	23		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

### 3.REPLACE IPDM E/R

1. Replace IPDM E/R. Refer to [PCS-62, "Removal and Installation"](#).

2. Perform DTC CONFIRMATION PROCEDURE for DTC B209F. Refer to [SEC-175, "DTC Logic"](#).

Is DTC detected?

YES >> GO TO 4.

NO >> INSPECTION END

### 4.REPLACE ECM

Replace ECM.

Refer to [EC-561, "Removal and Installation"](#).

>> INSPECTION END



# B20A0 CRANKING REQUEST CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## B20A0 CRANKING REQUEST CIRCUIT

### DTC Logic

INFOID:000000009754786

### DTC DETECTION LOGIC

#### NOTE:

If DTC B20A0 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [PCS-58, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B20A0	CRANKREQ CIR SHORT	When the following items do not match, a malfunction is detected. <ul style="list-style-type: none"> <li>• Cranking request signal from ECM</li> <li>• Starter control relay control signal from ECM (CAN)</li> </ul>	<ul style="list-style-type: none"> <li>• Harness or connectors (CAN communication line is open or shorted.)</li> <li>• Harness or connectors (Cranking request signal circuit is open or shorted.)</li> <li>• IPDM E/R</li> <li>• ECM</li> </ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

1. Perform DTC CONFIRMATION PROCEDURE for DTC P1650. Refer to [EC-470, "DTC Logic"](#).
2. Turn ignition switch ON.
3. Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

Is DTC detected?

- YES >> Refer to [SEC-177, "Diagnosis Procedure"](#).  
 NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754787

#### 1. CHECK CRANKING REQUEST SIGNAL

1. Turn ignition switch ON.
2. Check voltage between IPDM E/R harness connector and ground under the following conditions.

(+)		(-)	Condition	Voltage (V) (Approx.)	
IPDM E/R					
Connector	Terminal				
E13	23	Ground	Ignition switch OFF	3.6	
			Ignition switch ON	<ul style="list-style-type: none"> <li>• Engine: Stopped</li> <li>• Selector lever position: P</li> </ul>	0 – 1
				<ul style="list-style-type: none"> <li>• Engine: Stopped</li> <li>• Selector lever position: Other than P</li> </ul>	12 – 16
			Engine running	12 – 16	

Is the inspection result normal?

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

#### 2. CHECK CRANKING REQUEST SIGNAL CIRCUIT

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

## B20A0 CRANKING REQUEST CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

IPDM E/R		ECM		Continuity
Connector	Terminal	Connector	Terminal	
E13	23	F26	92	Existed

5. Check continuity between BCM harness connector and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E13	23		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

### 3.REPLACE IPDM E/R

1. Replace IPDM E/R. Refer to [PCS-62, "Removal and Installation"](#).

2. Perform DTC CONFIRMATION PROCEDURE for DTC B20A0. Refer to [SEC-177, "DTC Logic"](#).

Is DTC detected?

YES >> GO TO 4.

NO >> INSPECTION END

### 4.REPLACE ECM

Replace ECM.

Refer to [EC-561, "Removal and Installation"](#).

>> INSPECTION END

# B210B STARTER CONTROL RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## B210B STARTER CONTROL RELAY

### DTC Logic

INFOID:000000009754788

### DTC DETECTION LOGIC

#### NOTE:

If DTC B210B is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [PCS-58, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210B	START CONT RLY ON	<p>When comparing the following items, IPDM E/R detects that starter control relay is stuck in the ON position for 5 seconds or more.</p> <ul style="list-style-type: none"><li>• Starter control relay control signal (CAN) from BCM</li><li>• Starter control relay control signal (CAN) from ECM</li><li>• Starter control relay and starter relay status signal (IPDM E/R input)</li><li>• Starter control relay control signal (IPDM E/R output)</li><li>• Ignition switch START signal</li><li>• Ignition power supply signal</li><li>• Cranking request signal from ECM</li></ul>	<ul style="list-style-type: none"><li>• Harness or connectors (CAN communication line is open or shorted. (Ignition switch START signal circuit is open or shorted.)</li><li>• IPDM E/R</li><li>• BCM</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE 1

1. Press push-button ignition switch under the following conditions to start engine, and wait 5 seconds or more.

CVT models

- Selector lever: In the P position
- Brake pedal: Depressed

M/T models

- Shift lever: In the Neutral position
- Clutch pedal: Depressed

2. Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

Is DTC detected?

YES >> Go to [SEC-179, "Diagnosis Procedure"](#).

NO-1 (M/T models)>>INSPECTION END

NO-2 (CVT models)>>GO TO 2.

#### 2. PERFORM DTC CONFIRMATION PROCEDURE 2

1. Stop engine.
2. Perform DTC CONFIRMATION PROCEDURE for DTC P1650. Refer to [EC-470, "DTC Logic"](#).
3. Turn ignition switch ON.
4. Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

Is DTC detected?

YES >> Refer to [SEC-179, "Diagnosis Procedure"](#).

NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754789

#### 1. INSPECTION START

Perform inspection in accordance with procedure that confirms DTC.

Which procedure confirms DTC?

DTC confirmation procedure 1>>GO TO 2.

# B210B STARTER CONTROL RELAY

[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

DTC confirmation procedure 2>>GO TO 5.

## 2.CHECK DTC OF BCM

Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT.

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to [BCS-132. "DTC Index"](#).

NO >> GO TO 3.

## 3.CHECK IGNITION SWITCH START SIGNAL

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

(+)		(-)	Condition	Voltage (V)	
IPDM E/R					
Connector	Terminal				
E10	6	Ground	Ignition switch	START position	6 – 16
				Except START position	0 – 1

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness. Refer to [STR-19. "Wiring Diagram \(CVT Models\)"](#).

## 4.PERFORM DTC CONFIRMATION PROCEDURE AGAIN

1. Reconnect IPDM E/R harness connector.
2. Turn ignition switch ON.
3. Select “Self Diagnostic Result” mode of “IPDM E/R” using CONSULT.
4. Touch “ERASE”.
5. Perform DTC CONFIRMATION PROCEDURE for DTC B210B. Refer to [SEC-179. "DTC Logic"](#).

Is DTC detected?

YES >> Replace IPDM E/R. Refer to [PCS-62. "Removal and Installation"](#).

NO >> INSPECTION END

## 5.PERFORM DTC CONFIRMATION PROCEDURE AGAIN

1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “IPDM E/R” using CONSULT.
3. Touch “ERASE”.
4. Perform DTC CONFIRMATION PROCEDURE for DTC B210B. Refer to [SEC-179. "DTC Logic"](#).

Is DTC detected?

YES >> Replace IPDM E/R. Refer to [PCS-62. "Removal and Installation"](#).

NO >> INSPECTION END

# B210C STARTER CONTROL RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## B210C STARTER CONTROL RELAY

### DTC Logic

INFOID:000000009754790

### DTC DETECTION LOGIC

#### NOTE:

- If DTC B210C is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [PCS-58, "DTC Logic"](#).
- 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, IPDM E/R detects that starter control relay is stuck in the OFF position for 5 seconds or more. <ul style="list-style-type: none"><li>• Starter control relay control signal (CAN) from BCM</li><li>• Starter control relay control signal (CAN) from ECM</li><li>• Starter control relay and starter relay status signal (IPDM E/R input)</li><li>• Starter control relay control signal (IPDM E/R output)</li><li>• Ignition switch START signal</li><li>• Ignition power supply signal</li><li>• Cranking request signal from ECM</li></ul>	<ul style="list-style-type: none"><li>• Harness or connectors (CAN communication line is open or shorted. (Transmission range switch circuit is open or shorted.) (Clutch interlock switch circuit is open or shorted.) (Ignition switch START signal circuit is open or shorted.) (Ignition power supply circuit is open or shorted.)</li><li>• IPDM E/R</li><li>• BCM</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE 1

1. Press push-button ignition switch under the following conditions to start engine, and wait 5 seconds or more.

CVT models

- Selector lever: In the P position
- Brake pedal: Depressed

M/T models

- Shift lever: In the Neutral position
- Clutch pedal: Depressed

2. Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

Is DTC detected?

YES >> Go to [SEC-181, "Diagnosis Procedure"](#).

NO-1 (M/T models)>>INSPECTION END

NO-2 (CVT models)>>GO TO 2.

#### 2. PERFORM DTC CONFIRMATION PROCEDURE 2

1. Stop engine.
2. Perform DTC CONFIRMATION PROCEDURE for DTC P1650. Refer to [EC-470, "DTC Logic"](#).
3. Turn ignition switch ON.
4. Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

Is DTC detected?

YES >> Refer to [SEC-181, "Diagnosis Procedure"](#).

NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754791

#### 1. INSPECTION START

Perform inspection in accordance with procedure that confirms DTC.

Which procedure confirms DTC?

# B210C STARTER CONTROL RELAY

[WITHOUT INTELLIGENT KEY SYSTEM]

## < DTC/CIRCUIT DIAGNOSIS >

- DTC confirmation procedure 1>>GO TO 2.
- DTC confirmation procedure 2>>GO TO 7.

### 2.CHECK DTC OF BCM

Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Perform the trouble diagnosis related to the detected DTC. Refer to [BCS-132, "DTC Index"](#).
- NO-1 (M/T models)>>GO TO 4.
- NO-2 (CVT models)>>GO TO 3.

### 3.CHECK DTC OF TCM

Check DTC in "Self Diagnostic Result" mode of "TRANSMISSION" using CONSULT.

#### Is DTC detected?

- YES >> Perform the trouble diagnosis related to the detected DTC. Refer to [TM-198, "DTC Index"](#).
- NO >> GO TO 4.

### 4.CHECK TRANSMISSION RANGE SWITCH SIGNAL

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

(+)		(-)	Condition		Voltage (V)	
IPDM E/R						
Connector	Terminal					
E15	48	Ground	M/T models	Clutch pedal	Depressed	9 – 16
				Clutch pedal	Not depressed	0 – 1
			CVT models	Selector lever	P or N position	9 – 16
					Except above position	0 – 1

#### Is the inspection result normal?

- YES >> GO TO 5.
- NO >> Repair or replace harness.

### 5.CHECK IGNITION SWITCH START SIGNAL

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

(+)		(-)	Condition		Voltage (V) (Approx.)
IPDM E/R					
Connector	Terminal				
E10	6	Ground	Ignition switch	START position	6 – 16
				Except START position	0 – 1

#### Is the inspection result normal?

- YES >> GO TO 6.
- NO >> Repair or replace harness. Refer to [STR-19, "Wiring Diagram \(CVT Models\)"](#).

### 6.PERFORM DTC CONFIRMATION PROCEDURE AGAIN

- Reconnect IPDM E/R harness connector.
- Turn ignition switch ON.
- Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
- Touch "ERASE".
- Perform DTC CONFIRMATION PROCEDURE for DTC B210C. Refer to [SEC-181, "DTC Logic"](#).

#### Is DTC detected?

- YES >> Replace IPDM E/R. Refer to [PCS-62, "Removal and Installation"](#).
- NO >> INSPECTION END

# B210C STARTER CONTROL RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## 7. CHECK IGNITION POWER SUPPLY SIGNAL

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

(+)		(-)	Condition		Voltage (V) (Approx.)
IPDM E/R					
Connector	Terminal				
E17	69	Ground	Ignition switch	ON position	6 – 16
				ACC or OFF position	0 – 1

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-62. "Removal and Installation"](#).  
NO >> Repair or replace harness. Refer to [STR-19. "Wiring Diagram \(CVT Models\)"](#).

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SEC

# B210D STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## B210D STARTER RELAY

### DTC Logic

INFOID:000000009754792

### DTC DETECTION LOGIC

#### NOTE:

- If DTC B210D is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [PCS-58, "DTC Logic"](#).
- If DTC B210D is displayed with DTC B209F, first perform the trouble diagnosis for DTC B209F. Refer to [SEC-175, "DTC Logic"](#).
- If DTC B210D is displayed with DTC B20A0, first perform the trouble diagnosis for DTC B20A0. Refer to [SEC-177, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210D	STARTER RELAY ON	<p>When comparing the following items, IPDM E/R detects that starter relay is stuck in the ON position for 5 seconds or more.</p> <ul style="list-style-type: none"><li>• Starter control relay control signal (CAN) from BCM</li><li>• Starter control relay control signal (CAN) from ECM</li><li>• Starter control relay and starter relay status signal (IPDM E/R input)</li><li>• Starter control relay control signal (IPDM E/R output)</li><li>• Ignition switch START signal</li><li>• Ignition power supply signal</li><li>• Cranking request signal from ECM</li></ul>	<ul style="list-style-type: none"><li>• Harness or connectors (CAN communication line is open or shorted. (Starter relay circuit is open or shorted.</li><li>• IPDM E/R</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE 1

1. Press push-button ignition switch under the following conditions to start engine, and wait 5 seconds or more.
  - Selector lever: In the P position
  - Brake pedal: Depressed
2. Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-184, "Diagnosis Procedure"](#).  
NO >> GO TO 2.

#### 2. PERFORM DTC CONFIRMATION PROCEDURE 2

1. Stop engine.
2. Perform DTC CONFIRMATION PROCEDURE for DTC P1650. Refer to [EC-470, "DTC Logic"](#).
3. Turn ignition switch ON.
4. Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

#### Is DTC detected?

- YES >> Refer to [SEC-184, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754793

#### 1. CHECK STARTER RELAY CONTROL SIGNAL

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



# B210D STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

(+)		(-)	Voltage (V)
IPDM E/R			
Connector	Terminal		
E13	30	Ground	6 – 16

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

## 2. CHECK CRANKING REQUEST SIGNAL CIRCUIT

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

IPDM E/R		ECM		Continuity
Connector	Terminal	Connector	Terminal	
E13	30	F26	66	Existed

5. Check continuity between BCM harness connector and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E13	30		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## 3. REPLACE IPDM E/R

1. Replace IPDM E/R. Refer to [PCS-62, "Removal and Installation"](#).
2. Perform DTC CONFIRMATION PROCEDURE for DTC B210D. Refer to [SEC-184, "DTC Logic"](#).

Is DTC detected?

YES >> GO TO 4.

NO >> INSPECTION END

## 4. REPLACE ECM

Replace ECM.  
Refer to [EC-561, "Removal and Installation"](#).

>> INSPECTION END

## 5. PERFORM DTC CONFIRMATION PROCEDURE AGAIN

1. Turn ignition switch ON.
2. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
3. Touch "ERASE".
4. Perform DTC CONFIRMATION PROCEDURE for DTC B210D. Refer to [SEC-184, "DTC Logic"](#).

Is DTC detected?

YES >> Replace IPDM E/R. Refer to [PCS-62, "Removal and Installation"](#).

NO >> INSPECTION END

# B210E STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## B210E STARTER RELAY

### DTC Logic

INFOID:000000009754794

### DTC DETECTION LOGIC

#### NOTE:

- If DTC B210E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [PCS-58, "DTC Logic"](#).
- If DTC B210E is displayed with DTC B209F, first perform the trouble diagnosis for DTC B209F. Refer to [SEC-175, "DTC Logic"](#).
- If DTC B210E is displayed with DTC B20A0, first perform the trouble diagnosis for DTC B20A0. Refer to [SEC-177, "DTC Logic"](#).
- When IPDM E/R power supply voltage is low (Approx. 7 - 8 V for about 1 second), the DTC B210E may be detected.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210E	STARTER RELAY OFF	When comparing the following items, IPDM E/R detects that starter relay is stuck in the OFF position for 5 seconds or more. <ul style="list-style-type: none"><li>• Starter control relay control signal (CAN) from BCM</li><li>• Starter control relay control signal (CAN) from ECM</li><li>• Starter control relay and starter relay status signal (IPDM E/R input)</li><li>• Starter control relay control signal (IPDM E/R output)</li><li>• Ignition switch START signal</li><li>• Ignition power supply signal</li><li>• Cranking request signal from ECM</li></ul>	<ul style="list-style-type: none"><li>• Harness or connector (CAN communication line is open or shorted.)</li><li>• Harness or connector (Starter relay circuit is open or shorted.)</li><li>• IPDM E/R</li><li>• BCM</li><li>• Battery</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1. PERFORM DTC CONFIRMATION PROCEDURE

1. Press push-button ignition switch under the following conditions to start engine, and wait 5 seconds or more.
  - Selector lever: In the P position
  - Brake pedal: Depressed
2. Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

#### Is DTC detected?

- YES >> Go to [SEC-186, "Diagnosis Procedure"](#).  
NO >> GO TO 2.

#### 2. PERFORM DTC CONFIRMATION PROCEDURE 2

1. Stop engine.
2. Perform DTC CONFIRMATION PROCEDURE for DTC P1650. Refer to [EC-470, "DTC Logic"](#).
3. Turn ignition switch ON.
4. Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

#### Is DTC detected?

- YES >> Refer to [SEC-186, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000009754795

#### 1. CHECK STARTER RELAY CONTROL SIGNAL

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

# B210E STARTER RELAY

[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

(+)		(-)	Voltage (V)
IPDM E/R			
Connector	Terminal	Ground	6 – 16
E13	30		

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

## 2. CHECK CRANKING REQUEST SIGNAL CIRCUIT

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

IPDM E/R		ECM		Continuity
Connector	Terminal	Connector	Terminal	
E13	30	F26	66	Existed

5. Check continuity between BCM harness connector and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E13	30		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## 3. REPLACE IPDM E/R

1. Replace IPDM E/R. Refer to [PCS-62, "Removal and Installation"](#).
2. Perform DTC CONFIRMATION PROCEDURE for DTC B210E. Refer to [SEC-186, "DTC Logic"](#).

Is DTC detected?

YES >> GO TO 4.

NO >> INSPECTION END

## 4. REPLACE ECM

Replace ECM.

Refer to [EC-561, "Removal and Installation"](#).

>> INSPECTION END

## 5. CHECK STARTER RELAY POWER SUPPLY

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

(+)		(-)	Voltage (V)
IPDM E/R			
Connector	Terminal	Ground	9 – 16
E10	4		

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness. Refer to [STR-19, "Wiring Diagram \(CVT Models\)"](#).

## 6. PERFORM DTC CONFIRMATION PROCEDURE AGAIN

1. Turn ignition switch ON.

## B210E STARTER RELAY

[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

2. Select "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.
3. Touch "ERASE".
4. Perform DTC CONFIRMATION PROCEDURE for DTC B210E. Refer to [SEC-186, "DTC Logic"](#).

Is DTC detected?

- YES >> Replace IPDM E/R. Refer to [PCS-62, "Removal and Installation"](#).  
NO >> INSPECTION END

# HEADLAMP FUNCTION

[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

## HEADLAMP FUNCTION

### Component Function Check

INFOID:000000009754796

#### 1.CHECK FUNCTION

1. Perform "HEAD LAMP(HI)" in "ACTIVE TEST" mode of "THEFT ALM" of "BCM" using CONSULT.
2. Check headlamps operation.

Test item		Description	
HEAD LAMP (HI)	ON	Headlamps (Hi)	Light
	OFF		Do not light

Is the inspection result normal?

- YES >> INSPECTION END  
NO >> Refer to [SEC-189, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000009754797

#### 1.CHECK HEADLAMP FUNCTION

Refer to [EXL-52, "Component Function Check"](#).

Is the inspection result normal?

- YES >> GO TO 2.  
NO >> Repair or replace the malfunctioning parts.

#### 2.CHECK INTERMITTENT INCIDENT

Refer to [GI-46, "Intermittent Incident"](#).

>> INSPECTION END

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# HORN FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## HORN FUNCTION

### Component Function Check

INFOID:000000009754798

#### 1.CHECK FUNCTION

1. Perform "VEHICLE SECURITY HORN" in "ACTIVE TEST" mode of "THEFT ALM" of "BCM" using CONSULT.
2. Check the horns operation.

Test item		Description	
VEHICLE SECURITY HORN	ON	Horns	Sounds (for 0.5 sec)

Is the operation normal?

- YES >> INSPECTION END  
NO >> Go to [SEC-190. "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000009754799

#### 1.CHECK HORN FUNCTION

Check that horn functions properly using horn switch.

Do horns sound?

- YES >> GO TO 2.  
NO >> Check horn circuit. Refer to [HRN-3. "Wiring Diagram"](#).

#### 2.CHECK HORN CONTROL CIRCUIT

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

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

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E13	34		Not existed

Is the inspection result normal?

- YES >> GO TO 3.  
NO >> Repair or replace harness.

#### 3.CHECK INTERMITTENT INCIDENT

Refer to [GI-46. "Intermittent Incident"](#).

>> INSPECTION END

# SECURITY INDICATOR LAMP

[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

## SECURITY INDICATOR LAMP

### Component Function Check

INFOID:000000009754800

#### 1.CHECK FUNCTION

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

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

Is the inspection result normal?

YES >> INSPECTION END

NO >> Go to [SEC-191, "Diagnosis Procedure"](#).

#### Diagnosis Procedure

INFOID:000000009754801

#### 1.CHECK FUSE

1. Turn power switch OFF.
2. Check that the following fuse in the fuse block (J/B) is not blown.

Signal name	Fuse No.
Battery power supply	11 (10 A)

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the blown fuse after repairing the cause of blowing.

#### 2.CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT

1. Disconnect combination meter connector.
2. Check voltage between combination meter harness connector and ground.

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

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

#### 3.CHECK SECURITY INDICATOR LAMP SIGNAL

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

(+)		(-)	Voltage (V) (Approx.)
BCM			
Connector	Terminal	Ground	Battery voltage
M68	23		

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 5.

#### 4.REPLACE BCM

# SECURITY INDICATOR LAMP

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

1. Replace BCM. Refer to [BCS-157, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

## 5. CHECK SECURITY INDICATOR LAMP CIRCUIT

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

Combination meter		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M34	18	M68	23	Existed

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

Combination meter		Ground	Continuity
Connector	Terminal		
M34	18		Not existed

Is the inspection result normal?

- YES >> Replace combination meter. Refer to [MWI-61, "Removal and Installation"](#).  
NO >> Repair or replace harness.



# SECURITY INDICATOR LAMP DOES NOT TURN ON OR BLINK

< SYMPTOM DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## SYMPTOM DIAGNOSIS

### SECURITY INDICATOR LAMP DOES NOT TURN ON OR BLINK

#### Description

INFOID:000000009754802

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 [SEC-153. "Work Flow"](#).
- Check that vehicle is under the condition shown in "CONDITIONS OF VEHICLE (OPERATING CONDITIONS)" before starting diagnosis, and check each symptom.

#### CONDITIONS OF VEHICLE (OPERATING CONDITIONS)

Ignition switch is not in the ON position.

#### Diagnosis Procedure

INFOID:000000009754803

#### 1. CHECK SECURITY INDICATOR LAMP

Check security indicator lamp function.

Refer to [SEC-191. "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 [GI-46. "Intermittent Incident"](#).

NO >> GO TO 1.

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# VEHICLE SECURITY SYSTEM CANNOT BE SET

< SYMPTOM DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## VEHICLE SECURITY SYSTEM CANNOT BE SET

### KEY FOB

#### KEY FOB : Description

INFOID:000000009754804

Armed phase is not activated when all doors are locked using keyfob.

**NOTE:**

Check that vehicle is under the condition shown in “CONDITIONS OF VEHICLE (OPERATING CONDITIONS)” before starting diagnosis, and check each symptom.

#### CONDITION OF VEHICLE (OPERATING CONDITIONS)

“SECURITY ALARM SET”: ON

Check the setting of “SECURITY ALARM SET” in “Work Support” mode of “THEFT ALM” of “BCM” using CONSULT.

#### KEY FOB : Diagnosis Procedure

INFOID:000000009754805

#### 1.CHECK REMOTE KEYLESS ENTRY SYSTEM

Lock/unlock door with keyfob.

Refer to [DLK-186, "System Description"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check remote keyless entry system. Refer to [DLK-234, "Diagnosis Procedure"](#).

#### 2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-46, "Intermittent Incident"](#).

NO >> GO TO 1.

### DOOR KEY CYLINDER

#### DOOR KEY CYLINDER : Description

INFOID:000000009754806

ARMED phase is not activated when all doors are locked by door key cylinder operation using ignition 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)

• SECURITY ALARM SET: ON

Check the setting of “SECURITY ALARM SET” in “Work Support” mode of “THEFT ALM” of “BCM” using CONSULT.

#### DOOR KEY CYLINDER : Diagnosis Procedure

INFOID:000000009754807

#### 1.CHECK POWER DOOR LOCK SYSTEM

Lock or unlock doors using ignition key inserted into door key cylinder.

Refer to [DLK-184, "System Description"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check power door lock system. Refer to [DLK-233, "Diagnosis Procedure"](#).

#### 2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-46, "Intermittent Incident"](#).

NO >> GO TO 1.

### DOOR LOCK AND UNLOCK SWITCH

# VEHICLE SECURITY SYSTEM CANNOT BE SET

[WITHOUT INTELLIGENT KEY SYSTEM]

< SYMPTOM DIAGNOSIS >

## DOOR LOCK AND UNLOCK SWITCH : Description

INFOID:000000009754808

Armed phase is not activated when all doors are locked using door lock and unlock switch.

### NOTE:

Check that vehicle is under the condition shown in "CONDITIONS OF VEHICLE (OPERATING CONDITIONS)" before starting diagnosis, and check each symptom.

### CONDITION OF VEHICLE (OPERATING CONDITIONS)

"SECURITY ALARM SET": ON

Check the setting of "SECURITY ALARM SET" in "Work Support" mode of "THEFT ALM" of "BCM" using CONSULT.

## DOOR LOCK AND UNLOCK SWITCH : Diagnosis Procedure

INFOID:000000009754809

### 1. CHECK POWER DOOR LOCK SYSTEM (DOOR LOCK FUNCTION)

Lock/unlock door with door lock and unlock switch.

Refer to [DLK-184, "System Description"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check power door lock system (door lock function). Refer to [DLK-230, "ALL DOOR : Diagnosis Procedure"](#).

### 2. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-46, "Intermittent Incident"](#).

NO >> GO TO 1.

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SEC

# VEHICLE SECURITY ALARM DOES NOT ACTIVATE

< SYMPTOM DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## VEHICLE SECURITY ALARM DOES NOT ACTIVATE

### Description

INFOID:000000009754810

Alarm does not operate when alarm operating condition is satisfied.

**NOTE:**

Check that vehicle is under the condition shown in "CONDITIONS OF VEHICLE (OPERATING CONDITIONS)" before starting diagnosis, and check each symptom.

#### CONDITION OF VEHICLE (OPERATING CONDITIONS)

"SECURITY ALARM SET": ON

Check the setting of "SECURITY ALARM SET" in "Work Support" mode of "THEFT ALM" of "BCM" using CONSULT.

### Diagnosis Procedure

INFOID:000000009754811

#### 1.CHECK DOOR SWITCH

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Check door switch.

Refer to [DLK-220, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the malfunctioning door switch

#### 2.CHECK HEADLAMP FUNCTION

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Check headlamp function.

Refer to [SEC-189, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts.

#### 3.CHECK HORN FUNCTION

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Check horn function.

Refer to [SEC-190, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunctioning parts.

#### 4.CONFIRM THE OPERATION

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Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-46, "Intermittent Incident"](#).

NO >> GO TO 1.

# NATS ANTENNA AMP.

< REMOVAL AND INSTALLATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

## REMOVAL AND INSTALLATION

### NATS ANTENNA AMP.

#### Removal and Installation

INFOID:000000009754812

#### REMOVAL

1. Remove the steering column cover.  
Refer to [JP-13. "Removal and Installation"](#).
2. Remove the NATS antenna amp. mounting screw, and then remove NATS antenna amp. from steering lock assembly.

#### INSTALLATION

Install in the reverse order of removal.

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SEC