# SECURITY CONTROL SYSTEM

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## < PRECAUTION >

# PRECAUTION PRECAUTIONS

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

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

#### WARNING:

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.

# < SYSTEM DESCRIPTION >

# SYSTEM DESCRIPTION COMPONENT PARTS

**Component Parts Location** 

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A View with cluster lid A

# **COMPONENT PARTS**

#### < SYSTEM DESCRIPTION >

No.	Component	Function			
1	Rear door switch RH	Door switch detects door open/close condition and then transmits ON/OFF signal to BCM.			
2	Inside key antenna (console)	Inside key antenna (console) detects whether Intelligent Key is inside the vehicle, and transmethe signal to BCM. Refer to <u>DLK-9</u> , " <u>DOOR LOCK SYSTEM</u> : <u>Component Parts Location</u> " for detailed installat location.			
3	One touch unlock sensor as- sembly (passenger side)	One touch unlock sensor detects user hold outside handle operation and transmits one touch unlock sensor signal to BCM. Refer to <u>DLK-9, "DOOR LOCK SYSTEM : Component Parts Location"</u> for detailed installation location.			
4	Front door switch (passenger side)	Door switch detects door open/close condition and then transmits ON/OFF signal to BCM.			
5	Remote keyless entry receiv- er	Remote keyless entry receiver receives each button operation signal and electronic key ID signal from Intelligent Key, and then transmits the signal to BCM. Refer to <u>DLK-9, "DOOR LOCK SYSTEM : Component Parts Location"</u> for detailed installation location.			
6	ECM	ECM controls the engine. When ignition switch 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. Refer to <u>EC-16, "ENGINE CONTROL SYSTEM : Component Parts Location"</u> for detailed installation location.			
7	IPDM E/R	Starter control relay and starter relay are integrated in IPDM E/R, and used for the engine start- ing function. Starter relay is controlled by BCM, and starter control relay is controlled by IPDM E/R while communicating with BCM. IPDM E/R sends the starter control relay and starter relay status signal to BCM. Refer to <u>PCS-4, "Component Parts Location"</u> for detailed installation location.			
8	BCM	BCM controls INTELLIGENT KEY SYSTEM (ENGINE START FUNCTION), INFINITI VEHICLE IMMOBILIZER SYSTEM (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, ignition switch operation is available. Then, when the ignition switch is turned ON, BCM performs ID verification between BCM and ECM. If the ID verification result is OK, ECM can start engine. Refer to <u>BCS-4, "BODY CONTROL SYSTEM : Component Parts Location"</u> for detailed instal- lation location.			
9	Vehicle security horn	Vehicle security horn and horn (high) operate for warning vehicle surroundings when VEHICLE			
10	Horn (high)	SECURITY SYSTEM operates.			
1	Inside key antenna (instru- ment lower)	Inside key antenna (instrument lower) detects whether Intelligent Key is inside the vehicle, and transmits the signal to BCM. Refer to <u>DLK-9, "DOOR LOCK SYSTEM : Component Parts Location"</u> for detailed installation location.			
(12)	Horn (low)	Horn (low) operate for warning vehicle surroundings when VEHICLE SECURITY SYSTEM operates.			
(13)	Hood switch	Refer to <u>SEC-8, "Hood Switch"</u> .			

# **COMPONENT PARTS**

# < SYSTEM DESCRIPTION >

No.	Component	Function
(14)	A/T assembly (TCM)	<ul> <li>TCM detects the selector lever position, and then transmits the P/N position signal to BCM and IPDM E/R.</li> <li>BCM confirms the A/T shift selector position with the following 4 signals.</li> <li>P position signal from A/T shift selector (detention switch)</li> <li>P/N position signal from TCM</li> <li>Interlock/PNP switch signal from IPDM E/R (CAN)</li> <li>P/N position signal from TCM (CAN)</li> <li>IPDM E/R confirms the A/T shift selector position with the following 3 signals.</li> </ul>
		<ul> <li>P position signal from A/T shift selector (detention switch)</li> <li>P/N position signal from TCM</li> <li>P/N position signal from BCM (CAN)</li> <li>Refer to <u>TM-12. "A/T CONTROL SYSTEM : Component Parts Location"</u> for detailed installation location.</li> </ul>
(15)	Stop lamp switch	Stop lamp switch detects that brake pedal is depressed, and then transmits ON/OFF signal to BCM. Refer to <u>BRC-9. "Component Parts Location"</u> for detailed installation location.
16	ABS actuator and electric unit (control unit)	ABS actuator and electric unit (control unit) transmits the vehicle speed signal to BCM via CAN communication. BCM also receives the vehicle speed signal from combination meter via CAN communication. BCM compares both signals to detect the vehicle speed. Refer to <u>BRC-9, "Component Parts Location"</u> for detailed installation location.
17	A/T shift selector (detention switch)	Detention switch is integrated into A/T shift sector, and detects that selector lever is locked in the P position, then transmits ON/OFF signal to BCM and IPDM E/R.
(18)	Combination meter	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. Security indicator lamp is located on combination meter. Security indicator lamp blinks when ignition switch is in any position other than ON to warn that INFINITI VEHICLE IMMOBILIZER SYSTEM (NATS) is on board.
(19)	Power window main switch (door lock and unlock switch)	Door lock and unlock switch transmits door lock/unlock signal operation to BCM.
20	Front door switch (driver side)	Door switch detects door open/close condition and then transmits ON/OFF signal to BCM.
21	One touch unlock sensor as- sembly (driver side)	One touch unlock sensor detects user hold outside handle operation and transmits one touch unlock sensor signal to BCM. Refer to <u>DLK-9, "DOOR LOCK SYSTEM : Component Parts Location"</u> for detailed installation location.
22	Rear door switch LH	Door switch detects door open/close condition and then transmits ON/OFF signal to BCM.
23	Outside key antenna (rear bumper)	Outside key antenna detects whether Intelligent Key is within the detection area or not, and then transmits signal to BCM. Refer to <u>DLK-9, "DOOR LOCK SYSTEM : Component Parts Location"</u> for detailed installation location.
24	Trunk lid lock assembly (trunk room lamp switch)	Trunk room lamp switch is integrated into trunk lid lock assembly. Trunk room lamp switch detects trunk lid open/close condition and then transmits ON/OFF sig- nal to BCM.
25	Trunk lid opener request switch	Trunk lid opener request switch detects open operation of trunk lid and transmits trunk lid opener request signal to BCM.
26	Inside key antenna (trunk room)	Inside key antenna (trunk room) detects whether Intelligent Key is inside the vehicle, and trans- mits the signal to BCM. Refer to <u>DLK-9, "DOOR LOCK SYSTEM : Component Parts Location"</u> for detailed installation location.
Ø	Push-button ignition switch	Push-button ignition switch has push switch inside which detects that push-button ignition switch is pressed, and then transmits ON/OFF signal to BCM. BCM change the ignition switch position with the operation of push-button ignition switch. BCM maintains the ignition switch position status while push-button ignition switch is not operated.
28	NATS antenna amp.	Refer to SEC-8, "NATS Antenna Amp.".

### < SYSTEM DESCRIPTION >

# NATS Antenna Amp.

The ID verification is performed between BCM and transponder integrated into 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 ignition switch is available.



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Hood Switch

Hood switch (1) detects that hood is open, and then transmits ON/ OFF signal to IPDM E/R. IPDM E/R transmits hood switch signal to BCM via CAN communication. Hood switch is integrated into hood lock assembly LH.





# SYSTEM INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION : System Description

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# SYSTEM DIAGRAM

< SYSTEM DESCRIPTION >



# BCM INPUT/OUTPUT SIGNAL CHART

Input Signal Item

Transmit unit	Signal name	
ECM	CAN communication	<ul><li>ID verification signal</li><li>Engine status signal</li></ul>
IPDM E/R		<ul> <li>Push-button ignition switch status signal</li> <li>Starter relay status signal</li> <li>Starter control relay signal</li> <li>Detention switch signal</li> <li>Interlock/PNP switch signal</li> </ul>
Combination meter		Vehicle speed signal
ABS actuator and electric unit (control unit)		Vehicle speed signal
Remote keyless entry receiver	Key ID signal	

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### < SYSTEM DESCRIPTION >

Transmit unit	Signal name
Push-button ignition switch	Push switch signal
Each door switch	Door switch signal
Stop lamp switch	Stop lamp switch signal
A/T shift selector (detention switch)	P position signal
ТСМ	P/N position signal

#### **Output Signal Item**

Reception unit	Signal name	
Combination meter	- CAN communication	Key warning lamp signal
ECM		ID verification signal
Inside key antenna	Inside key antenna signal	

#### 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 NATS ID). It can perform the door lock/unlock operation and the push-button ignition switch operation when the registered Intelligent Key is carried.
 NOTE:

Refer to <u>DLK-19</u>, "INTELLIGENT KEY SYSTEM : System Description" for any functions other than engine start function of Intelligent Key system.

- If the ID is successfully verified, when push-button ignition switch is pressed, the engine can be started.
- Up to 4 Intelligent Keys can be registered (Including the standard Intelligent Key) upon request from the customer.
- For registration of Intelligent Keys, perform procedure according to the instructions displayed on the CON-SULT monitor.

#### PRECAUTIONS FOR INTELLIGENT KEY SYSTEM

The transponder (the chip for 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, NATS ID verification can be performed when Intelligent Key backside is contacted to push-button ignition switch while brake pedal is depressed. If verification result is OK, engine can be started.

#### OPERATION WHEN INTELLIGENT KEY IS CARRIED

- 1. When the push-button ignition switch is pressed, the BCM activates the inside key antenna and transmits the request signal to the Intelligent Key.
- 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 and starts the ignition power supply.
- 6. IPDM E/R turns the starter control relay ON for engine starting in advance.
- 7. BCM detects the selector lever position and brake pedal operation condition.
- 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 supply is supplied through the starter relay and the starter control relay to operate the starter motor. CAUTION:

If a malfunction is detected in the Intelligent Key system, the "Intelligent Key system malfunction display" display on information display in combination meter. At that time, the engine cannot be started.

# SEC-10

#### < SYSTEM DESCRIPTION >

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 А unsuccessful, cranking stops automatically within 5 seconds.) CAUTION: When the Intelligent Key is carried outside of the vehicle (inside key antenna detection area) while В 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 "IGNITION SWITCH POSITION CHANGE TABLE BY PUSH-BUT-TON IGNITION SWITCH OPERATION". OPERATION RANGE Engine can be started when Intelligent Key is inside the vehicle. However, sometimes engine may not start D when Intelligent Key is on instrument panel or in glove box. ENGINE START OPERATION WHEN INTELLIGENT KEY IS CONTACTED TO PUSH-BUTTON IG-NITION SWITCH Ε When Intelligent Key battery is discharged, NATS ID verification between transponder in Intelligent Key and BCM is performed when Intelligent Key backside is contacted to push-button ignition switch while brake pedal is depressed. If the verification result is OK, engine can be started. F IGNITION SWITCH POSITION CHANGE TABLE BY PUSH-BUTTON IGNITION SWITCH OPERA-TION The ignition switch position can be changed by the following operations. NOTE: When an Intelligent Key is within the detection area of inside key antenna or when Intelligent Key backside is contacted to push-button ignition switch, it is equivalent to the operations below. Н When starting the engine, the BCM monitors under the engine start conditions, Brake pedal operation condition Selector lever position - Vehicle speed Vehicle speed: less than 4 km/h (2.5 MPH) Condition

Power supply position	Condition		Push-button ignition switch opera-	0	
	Selector lever	Brake pedal operation con- dition	tion frequency		
$OFF \to ACC$	—	Not depressed	1	SE	
$OFF \to ACC \to ON$	—	Not depressed	2		
$OFF \to ACC \to ON \to OFF$	—	Not depressed	3	L	
$\begin{array}{l} OFF \rightarrow START \\ ACC \rightarrow START \\ ON \rightarrow START \end{array}$	P or N position	Depressed	1	N/	
Engine is running $\rightarrow$ OFF	—	—	1	IV	

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

	Condition		Puch button ignition switch opera
Power supply position	Selector lever	Brake pedal operation con- dition	tion frequency
Engine is running $\rightarrow ACC$	—	_	Emergency stop operation
Engine stall return operation while driving	N position	Not depressed	1

Emergency stop operation

Emergency engine stop is activated when any of the following operation is performed.

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

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

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# < SYSTEM DESCRIPTION >

# INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION : Circuit Diagram



# < SYSTEM DESCRIPTION >



INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS

# < SYSTEM DESCRIPTION >

# INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS : System Description

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#### SYSTEM DIAGRAM



# BCM INPUT/OUTPUT SIGNAL CHART

#### Input Signal Item

Transmit unit	Signal name		
ECM		<ul><li>ID verification signal</li><li>Engine status signal</li></ul>	
IPDM E/R	CAN communication	<ul> <li>Push-button ignition switch status signal</li> <li>Starter relay status signal</li> <li>Starter control relay signal</li> <li>Detention switch signal</li> <li>Interlock/PNP switch signal</li> </ul>	
Combination meter		Vehicle speed signal	
ABS actuator and electric unit (control unit)		Vehicle speed signal	
NATS antenna amp.	Key ID signal		
Push-button ignition switch	Push switch signal		
Each door switch	Door switch signal		
Stop lamp switch	Stop lamp switch signal		

#### < SYSTEM DESCRIPTION >

Transmit unit	Signal name	٨
A/T shift selector (detention switch)	P position signal	A
TCM	P/N position signal	

**Output Signal Item** 

Reception unit		Signal name	
ECM	CAN communication	ID verification signal	C
Combination meter (security indicator lamp)	Security indicator lamp sig	nal	
Inside key antenna	Inside key antenna signal		

#### SYSTEM DESCRIPTION

- INFINITI VEHICLE IMMOBILIZER SYSTEM (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 NATS ID verification is performed between the transponder integrated with Intelligent Key and BCM via NATS antenna amp. when the Intelligent Key backside is contacted to push-button ignition switch while brake pedal is depressed. If the verification result is OK, the engine start operation can be performed by the push-button ignition switch operation.
- Security indicator lamp is located on combination meter and blinks when the ignition switch is in any position except ON to warn that the vehicle is equipped with INFINITI VEHICLE IMMOBILIZER SYSTEM (NATS).
- Up to 4 Intelligent Keys can be registered (including the standard ignition key) upon request from the owner.
- When replacing ECM, BCM or Intelligent Key, the specified procedure (Initialization of BCM and registration of Intelligent Keys) using CONSULT is required.
- Possible symptom of NATS malfunction is "Engine can not start". This symptom also occurs because of other than NATS malfunction, so start the trouble diagnosis according to <u>SEC-54, "Work Flow"</u>.
- If ECM other than genuine part is installed, the engine cannot be started.

#### PRECAUTIONS FOR KEY REGISTRATION

- The ID registration is a procedure that erases the current 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 IDs (NATS ID and Intelligent Key ID).
- For registration of Intelligent Keys, perform procedure according to the instructions displayed on the CON-SULT monitor.

#### SECURITY INDICATOR LAMP

- Security indicator lamp warns that the vehicle is equipped with INFINITI VEHICLE IMMOBILIZER SYSTEM (NATS).
- Security indicator lamp always blinks when the ignition switch is in 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 IG-NITION SWITCH

- 1. When brake pedal is depressed while selector lever is in the P position, BCM activates NATS antenna amp. that is located behind push-button ignition switch.
- When Intelligent Key (transponder built-in) backside is contacted to push-button ignition switch, BCM starts NATS ID verification between BCM and Intelligent Key (built-in transponder) via NATS antenna amp.
- 3. When NATS ID verification result is OK, buzzer in combination meter sounds and BCM transmits the P 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 ignition relay ON and starts 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 operation condition.

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#### < SYSTEM DESCRIPTION >

- 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 through the starter relay and the starter control relay to operate the starter motor.
- 10. When BCM receives feedback signal from ECM indicating that the engine is started, 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.)

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

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

The ignition switch position can be changed by the following operations.

#### NOTĚ:

- When an Intelligent Key is within the detection area of inside key antenna or when Intelligent Key backside is contacted to push-button ignition switch, it is equivalent to the operations below.
- When starting the engine, the BCM monitors under the engine start conditions,
- Brake pedal operation condition
- Selector lever position
- Vehicle speed

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

	Con	Condition		
Power supply position	Selector lever	Brake pedal operation con- dition	tion frequency	
$OFF \to ACC$	—	Not depressed	1	
$OFF \to ACC \to ON$	—	Not depressed	2	
$OFF \to ACC \to ON \to OFF$	—	Not depressed	3	
$OFF \rightarrow START$ ACC $\rightarrow START$ ON $\rightarrow START$	P or N position	Depressed	1	
Engine is running $\rightarrow$ OFF	_	—	1	

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

	Con	Push-button ignition switch opera-	
Power supply position	Selector lever	Brake pedal operation con- dition	tion frequency
Engine is running $\rightarrow ACC$	_	—	Emergency stop operation
Engine stall return operation while driving	N position	Not depressed	1

Emergency stop operation

Emergency engine stop is activated when any of the following operation is performed.

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

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

# < SYSTEM DESCRIPTION >

# INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS : Circuit Diagram



# < SYSTEM DESCRIPTION >



# VEHICLE SECURITY SYSTEM

# < SYSTEM DESCRIPTION >

# **VEHICLE SECURITY SYSTEM : System Description**

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## SYSTEM DIAGRAM



# BCM INPUT/OUTPUT SIGNAL CHART

#### Input Signal Item

Transmit unit		Signal name	
IPDM E/R	CAN communication	Hood switch signal	
Remote keyless entry receiver	<ul><li> Key ID signal</li><li> Each button operation</li></ul>	signal	ľ
Push-button ignition switch	Push switch signal		C
Each door switch	Door switch signal		
Each door request switch	Door request switch sign	al	
Trunk room lamp switch	Trunk room lamp switch	signal	F
Trunk lid opener request switch	Trunk opener request sw	ritch signal	
Door key cylinder switch	Door key cylinder switch	signal	
One touch unlock sensor	One touch unlock sensor	r signal	

**Output Signal Item** 

# < SYSTEM DESCRIPTION >

Reception unit		Signal name
IPDM E/R	CAN communication	<ul><li>Theft warning horn request signal</li><li>High beam request signal</li></ul>
Combination meter (security indicator lamp)	Security indicator lamp s	ignal
Outside key antenna	Outside key antenna sigi	nal

#### SYSTEM DESCRIPTION

- 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, hood or trunk lid 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 any position other than ON. Security indicator lamp blinking warns that the vehicle is equipped with a vehicle security system.

Operation Flow



No.	System state	Switching condition		
1	DISARMED to PRE-ARMED	When all conditions of A and one condition of B is satis- fied.	A • Ignition switch: OFF • All doors: Closed • Hood: Closed • Trunk lid: Closed	B All doors are locked by: • Door key cylinder LOCK switch • LOCK button of Intelligent Key • Door request switch
2	PRE-ARMED to ARMED	When none of the following conditions are satisfied for 30 seconds.	<ul> <li>Ignition switch: ACC/ON</li> <li>Door key cylinder UNLOCK switch:</li> <li>UNLOCK button of Intelligent Key:</li> <li>Door request switch: ON</li> <li>UNLOCK switch of door lock and un</li> <li>Any door: Open</li> <li>Hood: Open</li> <li>Trunk lid: Open</li> </ul>	ON ON nlock switch: ON
3	ARMED to ALARM	When one condition of A and one condition of B are satis- fied.	<ul><li>Any door: Open</li><li>Hood: Open</li><li>Trunk lid: Open</li></ul>	

# < SYSTEM DESCRIPTION >

No.	System state	Switching condition		
		When all conditions of A and	A	B All doors are locked by:
4	PRE-RESET	one condition of B is satis- fied.	<ul> <li>Ignition switch: OFF</li> <li>All doors: Closed</li> <li>Hood and/or Trunk lid: Open</li> </ul>	<ul> <li>Door key cylinder LOCK switch</li> <li>LOCK button of Intelligent Key</li> <li>Door request switch</li> </ul>
5	PRE-ARMED to PRE-RESET	When one of the following conditions is satisfied.	<ul><li>Hood: Open</li><li>Trunk lid: Open</li></ul>	
6	ARMED to PRE-RESET	When one of the following	Trunk lid opener request switch: Ol	N
7	ALARM to PRE-RESET	conditions is satisfied.	<ul> <li>TRUNK OPEN button of Intelligent</li> </ul>	Key: ON
8	PRE-RESET to DISARMED	When one of the following conditions is satisfied.	<ul> <li>Ignition switch: ACC/ON</li> <li>Door key cylinder UNLOCK switch:</li> <li>UNLOCK button of Intelligent Key:</li> <li>Door request switch: ON</li> <li>UNLOCK switch of door lock and u</li> <li>Hold the outside handle grip (one to Any door: Open</li> </ul>	: ON ON Inlock switch: ON ouch unlock sensor: ON)
9	PRE-RESET to PRE-ARMED	When all conditions of A are satisfied, and all conditions of B are satisfied.	A  Ignition switch: OFF All doors: Closed	B • Hood: Closed • Trunk lid: Closed
10	PRE-ARMED to DISARMED	When one of the following condition is satisfied.	<ul> <li>Ignition switch: ACC/ON</li> <li>Door key cylinder UNLOCK switch:</li> <li>UNLOCK button of Intelligent Key:</li> <li>Door request switch: ON</li> <li>UNLOCK switch of door lock and u</li> <li>Hold the outside handle grip (one t</li> <li>Any door: Open</li> </ul>	: ON ON Inlock switch: ON ouch unlock sensor: ON)
(1)	ARMED to DISARMED	When one of the following	<ul><li>Ignition switch: ACC/ON</li><li>Door key cylinder UNLOCK switch:</li></ul>	ON
(12)	ALARM to DISARMED	condition is satisfied.	<ul> <li>UNLOCK button of Intelligent Key:</li> <li>Hold the outside handle grip (one t</li> <li>Door request switch: ON</li> </ul>	ON ouch unlock sensor: ON)
13	RE-ALARM	When one of the following condition is satisfied after the ALARM operation is finished.	<ul> <li>Any door: Open</li> <li>Hood: Open</li> <li>Trunk lid: 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 or trunk lid by operating remote controller button of Intelligent Key or door/trunk lid opener request switch, Intelligent Key must be within the detection area of outside key antenna. For details, refer to <u>DLK-19. "INTELLIGENT KEY SYSTEM :</u> <u>M</u> <u>System Description"</u>.

#### **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, hood, or trunk lid is opened without using Intelligent Key or mechanical key, vehicle security system switches to the ALARM phase. Security indicator lamp blinks every 2.4 seconds.

# SEC-21

#### < SYSTEM DESCRIPTION >

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 timings 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/ARMED 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. If only the condition of hood or trunk lid is not satisfied, the system switches to the PRE-RESET phase. Then, when any condition is changed, the system switches to the DISARMED phase or PRE-ARMED phase.

#### 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 ignition switch 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
- TRUNK OPEN button of Intelligent Key: ON
- PANIC ALARM button of Intelligent Key: Long pressed
- Any door request switch: ON
- Hold the outside handle grip (one touch unlock sensor: ON)

#### < SYSTEM DESCRIPTION >

# **VEHICLE SECURITY SYSTEM : Circuit Diagram**



# < SYSTEM DESCRIPTION >



# WARNING/INDICATOR/CHIME LIST

# < SYSTEM DESCRIPTION >

# WARNING/INDICATOR/CHIME LIST : Warning Lamp/Indicator Lamp

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Item	Design	Reference
		For layout, refer to MWI-8, "METER SYSTEM : Design".
Security indicator lamp		For function, refer to <u>MWI-41</u> , "WARNING LAMPS/INDICATOR LAMPS : Security In- dicator Lamp (Turn ON)" or <u>MWI-42</u> , "WARNING LAMPS/INDICATOR LAMPS : Secu-
		rity Indicator Lamp (Blinks)".

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# < SYSTEM DESCRIPTION > DIAGNOSIS SYSTEM (BCM)

# COMMON ITEM

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

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# 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><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 CONDITONER*		×	×
<ul><li>Intelligent Key system</li><li>Engine start system</li></ul>	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
IVIS - NATS	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Trunk lid open	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	AIR PRESSURE MONITOR			×

\*: This item 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.

#### < SYSTEM DESCRIPTION >

CONSULT screen item	Indication/Unit	Description A		
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected		
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected		_
	SLEEP>LOCK		While turning BCM status from low power consumption mode to normal mode (Power supply position is "LOCK"*)	В
	SLEEP>OFF	-	While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".)	С
	LOCK>ACC		While turning power supply position from "LOCK" *to "ACC"	
	ACC>ON		While turning power supply position from "ACC" to "IGN"	D
	RUN>ACC		While turning power supply position from "RUN" to "ACC" (Vehicle is stopping and selector lever is except P position.)	D
	CRANK>RUN	Power position status of the moment a particular DTC is detected*	While turning power supply position from "CRANKING" to "RUN" (From cranking up the engine to run it)	E
	RUN>URGENT		While turning power supply position from "RUN" to "ACC" (Emer- gency stop operation)	_
	ACC>OFF		While turning power supply position from "ACC" to "OFF"	F
	OFF>LOCK		While turning power supply position from "OFF" to "LOCK"*	
Vehicle Condition	OFF>ACC		While turning power supply position from "OFF" to "ACC"	G
	ON>CRANK		While turning power supply position from "IGN" to "CRANKING"	
	OFF>SLEEP		While turning BCM status from normal mode (Power supply position is "OFF".) to low power consumption mode	Н
	LOCK>SLEEP		While turning BCM status from normal mode (Power supply position is "LOCK"*.) to low power consumption mode	
	LOCK		Power supply position is "LOCK" (Ignition switch OFF)*	
	OFF		Power supply position is "OFF" (Ignition switch OFF)	
	ACC		Power supply position is "ACC" (Ignition switch ACC)	J
	ON		Power supply position is "IGN" (Ignition switch ON with engine stopped)	
	ENGINE RUN		Power supply position is "RUN" (Ignition switch ON with engine running)	SE
	CRANKING		Power supply position is "CRANKING" (At engine cranking)	
IGN Counter	0 - 39	<ul> <li>The number of times that</li> <li>The number is 0 when</li> <li>The number increases whenever ignition switter</li> <li>The number is fixed to the numb</li></ul>	t ignition switch is turned ON after DTC is detected a malfunction is detected now. If like $1 \rightarrow 2 \rightarrow 338 \rightarrow 39$ after returning to the normal condition inch OFF $\rightarrow$ ON.	L

#### NOTE:

\*: Power supply position shifts to "LOCK" from "OFF", when ignition switch is in the OFF position, selector lever is in the P position, 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 supply 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)

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#### WORK SUPPORT

# **SEC-27**

## < SYSTEM DESCRIPTION >

Monitor item	Description
INSIDE ANT DIAGNOSIS	This function allows inside key antenna self-diagnosis
LOCK/UNLOCK BY I-KEY	<ul><li>Door lock function (door request switch) mode can be changed to operation in this mode</li><li>On: Operate</li><li>Off: Non-operation</li></ul>
ENGINE START BY I-KEY	<ul><li>Engine start function mode can be changed to operation with this mode</li><li>On: Operate</li><li>Off: Non-operation</li></ul>
TRUNK/GLASS HATCH OPEN	Reminder function (trunk lid opener request switch) mode can be changed to operation with this mode • On: Operate • Off: Non-operation
AUTO LOCK SET	Auto door lock operation time can be changed in this mode MODE 1: OFF MODE 2: 30 sec. MODE 3: 1 minute MODE 4: 2 minutes MODE 5: 3 minutes MODE 6: 4 minutes MODE 6: 5: 5 minutes
SHORT CRANKING OUTPUT	Starter motor can operate during the times below • 70 msec • 100 msec • 200 msec
CONFIRM KEY FOB ID	It can be checked whether Intelligent Key ID code is registered or not in this mode
RETRACTABLE MIRROR SET	NOTE: This item is displayed, but cannot be used
TOUCH SENSOR UNLOCK FUNCTION SETTING	One touch unlock function can be changed to operation with this mode <ul> <li>On: Operate</li> <li>Off: Non-operation</li> </ul>
IGN/ACC BATTERY SAVER	Ignition battery saver system mode can be changed to operation with this mode <ul> <li>On: Operate</li> <li>Off: Non-operation</li> </ul>
REMOTE ENGINE STARTE	NOTE: This item is displayed, but cannot be used
INTELLIGENT KEY LINK SET	NOTE: This item is displayed, but cannot be used
ANSWER BACK	<ul> <li>Reminder function (door request switch and Intelligent Key) mode can be selected from the following with this mode</li> <li>On: S mode (buzzer or horn reminder non-operation)</li> <li>Off: C mode (buzzer or horn operate)</li> </ul>
ANSWER BACK I-KEY LOCK UN- LOCK	<ul> <li>Reminder function (door request switch) mode can be selected from the following with this mode</li> <li>BUZZER: Sound Intelligent Key warning buzzer</li> <li>HORN: Sound horn</li> <li>Off: Only hazard warning lamp operate</li> <li>INVALID: This item is displayed, but cannot be used</li> </ul>
ANSWERBACK KEYLESS LOCK UNLOCK	<ul><li>Reminder function (Intelligent Key) mode can be selected from the following with this mode</li><li>On: Horn and hazard warning lamp operate</li><li>Off: Only hazard warning lamp operate</li></ul>
WELCOME LIGHT OP SET	<b>NOTE:</b> This item is displayed, but cannot be used

SELF-DIAG RESULT Refer to <u>BCS-62, "DTC Index"</u>.

DATA MONITOR NOTE:

#### < SYSTEM DESCRIPTION >

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 front door request switch (driver side)
REQ SW -AS	Indicates [On/Off] condition of front door request switch (passenger side)
REQ SW -BD/TR	Indicates [On/Off] condition of trunk lid opener request switch
PUSH SW	Indicates [On/Off] condition of push-button ignition switch
SHFTLCK SLNID PWR SPLY	Indicates [On/Off] condition of the power supply from BCM to shift lock solenoid
CLUCH SW	NOTE: This item is displayed, but cannot be monitored
BRAKE SW 1	Indicates [On/Off]* 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
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 door status
DOOR STAT-AS	Indicates [LOCK/READY/UNLK] condition of passenger door status
DOOR STAT-RR	Indicates [LOCK/READY/UNLK] condition of rear door RH status
DOOR STAT-RL	Indicates [LOCK/READY/UNLK] condition of rear door LH status
BK DOOR STATE	NOTE: This item is displayed, but cannot be monitored
ID OK FLAG	Indicates [Set/Reset] condition of Intelligent Key ID
PRMT ENG STRT	Indicates [Set/Reset] condition of engine start possibility
PRMT RKE STRT	NOTE: This item is displayed, but cannot be monitored
I-KEY OK FLAG	Indicates [KEY On/NOT On] condition of Intelligent Key ID and Intelligent Key is detected in- side vehicle
PRBT ENG STRT	Indicates whether or not the engine is in start prohibited status
ID AUTHENT CANCEL TIMER	Indicates whether or not it is in engine start possible status when Intelligent Key verification is unnecessary
ACC BATTERY SAVER	Indicates [On/Off] whether or not ignition battery saver is in operation
CRNK PRBT TMR	Indicates [On/Off] whether or not in cranking prohibited status due to starter motor protection function operation
AUT CRANK TMR	Indicates [On/Off] whether or not in AUTO CRANKING MODE status
CRNK PRBT TME	Indicates the time for changing from cranking prohibited status to cranking possible status
AUT CRANK TMR	Indicates the time that AUTO CRANKING MODE operates
CRANKING TME	Indicates the cranking operation time

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## < SYSTEM DESCRIPTION >

Monitor Item	Condition
SHORT CRANK	NOTE: This item is displayed, but not used
DETE SW PWR	Indicates [On/Off] condition of the power supply from BCM to the A/T shift selector (detention switch)
IGN RLY3-REQ	Indicates [On/Off] condition of blower relay control signal
ACC RLY-REQ	Indicates [On/Off] condition of accessory relay control signal
RKE OPE COUN1	When remote keyless entry receiver receives the signal transmitted while operating on Intel- ligent Key, the numerical value start changing
RKE OPE COUN2	NOTE: This item is displayed, but cannot be monitored
TRNK/HAT MNTR	Indicates [On/Off] condition of trunk room lamp switch
RKE-LOCK	Indicates [On/Off] condition of LOCK signal from Intelligent Key
RKE-UNLOCK	Indicates [On/Off] condition of UNLOCK signal from Intelligent Key
RKE-TR/BD	Indicates [On/Off] condition of trunk open signal from Intelligent Key
RKE-PANIC	Indicates [On/Off] condition of panic alarm signal from Intelligent Key
RKE-MODE CHG	NOTE: This item is displayed, but cannot be monitored
RKE PBD	NOTE: This item is displayed, but cannot be monitored

\*: 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 <ul> <li>On: Operates</li> <li>Off: Non-operation</li> </ul>
INSIDE BUZZER	<ul> <li>This test is able to check warning chime in combination meter operation</li> <li>Take Out: Take away warning chime sounds when CONSULT screen is touched</li> <li>Key: Key warning chime sounds when CONSULT screen is touched</li> <li>Knob: OFF position warning chime sounds when CONSULT screen is touched</li> <li>Off: Non-operation</li> </ul>
INDICATOR	<ul> <li>This test is able to check information display (combination meter) operation</li> <li>KEY ON: [Intelligent Key system malfunction] displays when CONSULT screen is touched</li> <li>KEY IND: [Steering lock unit ID registration complete] displays when CONSULT screen is touched</li> <li>Off: Non-operation</li> </ul>
INT LAMP	This test is able to check interior room lamp operation <ul> <li>On: Operates</li> <li>Off: Non-operation</li> </ul>
FLASHER	This test is able to check hazard warning lamp operation The hazard warning lamps are activated after "LH/RH/Off" on CONSULT screen is touched
HORN	This test is able to check horn operation <ul> <li>On: Operates</li> </ul>
IGN CONT2	<ul> <li>This test is able to operate the blower relay in fuse block (J/B)</li> <li>On: Operates</li> <li>Off: Non-operation</li> </ul>
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 push-ignition switch indicator operation when "On" on CONSULT screen is touched
ACC CONT	<ul> <li>This test is able to operate the accessory relay in fuse block (J/B)</li> <li>On: Operates</li> <li>Off: Non-operation</li> </ul>

#### < SYSTEM DESCRIPTION >

Test item	Description	
IGN CONT1	This test is able to operate the ignition relay in IPDM E/R On: Operates Off: Non-operation	
IGNITION RELAY	<ul><li>This test is able to operate the ignition relay in fuse block (J/B)</li><li>On: Operates</li><li>Off: Non-operation</li></ul>	
ST CONT LOW	This test is able to operate the starter relay in IPDM E/R On: Non-operation Off: Operates	
BATTERY SAVER	<ul> <li>This test is able to check interior room lamp battery saver operation</li> <li>On: Outputs interior room lamp power supply to turn interior room lamps ON.</li> <li>Off: Cuts interior room lamp power supply to turn interior room lamps OFF.</li> </ul>	
TRUNK/BACK DOOR	This test is able to check trunk lid open operation. This actuator opens when "Open" on CONSULT screen is touched.	
RETRACTABLE MIRROR	NOTE: This item is displayed, but cannot be used	
INTELLIGENT KEY LINK(CAN)	NOTE: This item is displayed, but cannot be used	
REVERSE LAMP TEST	NOTE: This item is displayed, but cannot be used	
DOOR HANDLE LAMP TEST	This test is able to check outside handle lamp operation <ul> <li>On: Operates</li> <li>Off: Non-operation</li> </ul>	
DR SEAT LAMP TEST	NOTE: This item is displayed, but cannot be used	
AS SEAT LAMP TEST	NOTE: This item is displayed, but cannot be used	
SHIFT SPOT LAMP TEST	NOTE: This item is displayed, but cannot be used	
TRUNK/LUGGAGE LAMP TEST	This test is able to check trunk room lamp operation <ul> <li>On: Operates</li> <li>Off: Non-operation</li> </ul>	9
KEYFOB P/W TEST	<ul> <li>This test is able to check keyless power window up/down operation</li> <li>Up: Non-operation</li> <li>Down<sup>*</sup>: Power window and sunroof open</li> <li>Off: Non-operation</li> </ul>	
SHIFTLOCK SORENOID TEST	NOTE: This item is displayed, but cannot be used	

 $\sp{*:}$  When ignition switch is OFF, driver door opened, power window and sunroof is closed. THEFT ALM

# THEFT ALM : CONSULT Function (BCM - THEFT)

# 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.

		P
Monitored Item	Description	
REQ SW -DR	Indicates [On/Off] condition of door request switch (driver side).	
REQ SW -AS	Indicates [On/Off] condition of door request switch (passenger side).	
REQ SW -RR	NOTE: This item is indicated, but not monitored.	

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#### < SYSTEM DESCRIPTION >

Monitored Item	Description
REQ SW -RL	NOTE: This item is indicated, but not monitored.
REQ SW -BD/TR	Indicates [On/Off] condition of trunk lid opener request switch.
PUSH SW	Indicates [On/Off] condition of push-button ignition switch
UNLK SEN -DR	Indicates [On/Off] condition of driver door UNLOCK status.
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	NOTE: This item is indicated, but not monitored.
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 switch.
KEY CYL UN-SW	Indicates [On/Off] condition of unlock signal from door key cylinder switch.
KEY CYL SW-TR	NOTE: This item is indicated, but not monitored.
TR/BD OPEN SW	Indicates [On/Off] condition of trunk lid opener switch.
TRNK/HAT MNTR	Indicates [On/Off] condition of trunk room lamp switch.
SEN CANCEL SW	NOTE: This item is indicated, but not 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	Indicates [On/Off] condition of TRUNK OPEN signal from Intelligent Key.

#### WORK SUPPORT

Service Item	Description
SECURITY ALARM SET	This mode is able to confirm and change security alarm "On" - "Off" setting.

#### ACTIVE TEST

Test Item	Description
FLASHER	This test is able to check turn signal lamp operation. Turn signal lamp is activated after "LH" or "RH" on CONSULT screen is touched.
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 horn operation. Horn is activated for 0.5 seconds after "On" on CONSULT screen is touched.
HEADLAMP(HI)	This test is able to check headlamps operation. Headlamps are turned on when "On" on CONSULT screen is touched.

# IMMU

# IMMU : CONSULT Function (BCM - IMMU)

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# 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.

#### < SYSTEM DESCRIPTION >

Monitor item	Content	
CONFRM ID ALL		
CONFIRM ID4	Indicates [Yet] at all time.	
CONFIRM ID3	Switches to [Done] when a registered Intelligent Key backside is contacted to push-button igni-	
CONFIRM ID2	tion switch.	
CONFIRM ID1		
NOT REGISTERED	Indicates [ID OK] when key ID that is registered is received or is not yet received. Indicates [ID NG] when key ID that is not registered is received.	
TP 4		
TP 3	Indicates the number of IDs that are registered	
TP 2		
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 touched.	0

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# DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

# DIAGNOSIS SYSTEM (IPDM E/R)

CONSULT Function (IPDM E/R)

INFOID:000000009653698

# 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-22, "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 com- munication.
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 stop position 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 shift position 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 >

Monitor Item [Unit]	MAIN SIGNALS	Description	
ST/INHI RLY [Off/ ST ON/INHI ON/UNK- WN]		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 A/T shift selector (detention switch) judged by IPDM E/R.	
S/L RLY -REQ [Off/On]		NOTE: The item is indicated, but not monitored.	
S/L STATE [LOCK/UNLK/UNKWN]		NOTE: The 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.	
OIL P SW [Open/Close]		Displays the status of the oil pressure switch judged by IPDM E/R.	
HOOD SW [Off/On]		Displays the status of the hood switch judged by IPDM E/R.	
HL WASHER REQ [Off/On]		NOTE: The 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 signal received from BCM via CAN commu- nication.	
HOOD SW 2 [Off/On]		NOTE: The item is indicated, but not monitored.	

# ACTIVE TEST

Test item	Operation	Description	
HORN	On	Operates horn relay for 20 ms.	J
	Off	OFF	
FRONT WIPER	Lo	Operates the front wiper relay.	SE
	Hi	Operates the front wiper relay and front wiper HI/LO relay.	
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	2		L
MOTOR FAIN	3	Operates the cooling fan relay (MID operation).	
	4	Operates the cooling fan relay (HI operation).	в./
HEAD LAMP WASHER	On	NOTE: The item is indicated, but cannot be tested.	
	Off	OFF	N
	TAIL	Operates the tail lamp relay.	IN
EXTERNAL LAMPS	Lo	Operates the headlamp low relay.	
	Hi	Operates the headlamp low relay and ON/OFF the headlamp high relay at 1 second intervals.	0
	Fog	Operates the front fog lamp relay.	

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# < ECU DIAGNOSIS INFORMATION >

# ECU DIAGNOSIS INFORMATION ECM, IPDM E/R, BCM

# List of ECU Reference

INFOID:000000009345879

ECU		Reference
ECM	Reference Value	EC-86, "Reference Value"
	Fail-safe	EC-103. "Fail safe"
	DTC Inspection Priority Chart	EC-105, "DTC Inspection Priority Chart"
	DTC Index	EC-106, "DTC Index"
BCM	Reference Value	BCS-35, "Reference Value"
	Fail-safe	BCS-60. "Fail-safe"
	DTC Inspection Priority Chart	BCS-61, "DTC Inspection Priority Chart"
	DTC Index	BCS-62, "DTC Index"
IPDM E/R	Reference Value	PCS-15, "Reference Value"
	Fail-safe	PCS-21, "Fail-safe"
	DTC Index	PCS-22, "DTC Index"


#### < WIRING DIAGRAM >

### SECURITY CONTROL SYSTEM



### SECURITY CONTROL SYSTEM

< WIRING DIAGRAM >



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Connector No. F12 Connector Name WIR	H.S.	Traminal         Color         Traminal
Connector No.         E126           Post 6 nome transmer         Post 6 nome transmer nome nome transmer           Connector Name         Row 6 nome transmer nome nome transmer           Connector Name         Row 6 nome transmer nome nome transmer nome nome transmer           Connector Type         TH16FV-NH	H.S.	Terminal No.     Color Of No.     Signal Name (Specification)       80     PR     -       90     PR     -       90     PR     -       91     -     -       92     PR     -       93     PR     -       7     Connector Num     AT ASSIMBLY       Connector Num     AT ASSIMBLY       Connector Num     AT ASSIMBLY       0     PR       1     Connector Num       1     Connector Num       1     Connector Num       2     P       2     P       3     L       0     CMH       3     Contest Supply       1     Contest Supply       2     P       2     CAN-H       3     L       0     CAN-H       3     CON-H       3     CAN-H       9     CAN-H       9     CAN-H       0     CAN-H
Corrrector No. E121 Ourrector Name paus a initiation rower contention works for the pause of initiation of the pause of th	113 113 113 113 113 113 113 113 113 113	Terminal Nu.     Color Ori Nu.     Signal Name [Specification]       10     0     0     Signal Name [Specification]       12     16     -     -       13     1     0     -     -       13     1     1     -     -       13     1     1     -     -       14     1     1     -     -       15     1     1     -     -       16     1     1     -     -       17     1     1     -     -       18     1     1     -     -       19     1     1     -     -       10     1     1     -     -       10     1     1     -     -       10     1     1     -     -       11     1     1     -     -       11     1     1     -     -       11     1     1     -     -       11     1     1     -     -       12     1     1     -     -       13     1     1     -     -       14     1     1     1     -       15
SECURITY CONTROL SYSTEM Corrector Na. E119 Corrector Name Royal & Instrument Promet do regulation Corrector Name Royal MOHTW-LC	St St	Terminal No.         Color Operation of the connector Name         Signal Name [Specification]           Connector Name         Operation Connector Name         Signal Name [Specification]           Connector Name         EFD Connector Name         Connector Name           Connector Name         NS12FW-CS           Connector Name         NS12FW-CS           Terminal 7         Connector Name           10         V           12         V           13         Y           14         Signal Name [Specification]           13         Y           14         Signal Name [Specification]

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# SECURITY CONTROL SYSTEM



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	108 Y SENSOR GROUND (ASCD/ICC STEERING SWITCH)	109 BR TRANSMISSION RANGE SWITCH	110 V ENGINE SPEED SIGNAL OUTPUT	112 V GNDA PDPRES/FTPRES	113 P CAN COMMUNICATION LINE	114 L CAN COMMUNICATION LINE	117 V DATA LINK CONNECTOR	121 LG EVAP CANISTER VENT CONTROL VALVE	122 SB STOP LAMP SWITCH	123 B ECM GROUND	124 B ECM GROUND	195 P POWER SLIPPLY FOR FCM			12/ B ECM GROUND	128 B ECM GROUND		Connector No. M38		Connector Name PUSH-BUTTON IGNITION SWITCH			-		K		4 3		8 / 0 C			Terminal Color Of Signal Name [Specification]	No. Wire	3 W -	4 8	, u		-	7 Y =	8 BR -																
SECURITY CONTROL SYSTEM	26 BR – [With DRPO]	27 R –	28 SB -	29 BG – [Without DRPO]	29 W/B – [With DRPO]	30 L -	49 P -	52 V –	55 B –	56 SB –	57 G -	۲ 1 2		12 EG	- × 09	63 B –	64 R	65 RR -					/1 SB	- M Z/			Connector No. M37		Connector Name ECM	C III O DZO DZO D III Z	Connector Type KH24FGY-K26-K-LH-Z			128 124 113108104100	H.S.	48 CM //III C71 //II	126 122 114 110 106 102 98	125 121 117 113 109 105 101 87			Terminal Color Of	No. Wire Signal Name Specification	97 V ACCELERATOR DEDAL POSITION SENSOR 1	08 RD ACCELERATOR DENAL DOSITION SENSOR 2	DO IN MODELEVATOR FLOAL FOOTING STREAM OF A			101 SB ASCU STEERING SWITCH	101 SB ICC STEERING SWITCH	102 LG EVAP CONTROL SYSTEM PRESSURE SENSOR	103 L SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 2)	104 R SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 2)	105 L REFRIGERANT PRESSURE SENSOR	106 P FUEL TANK TEMPERATURE SENSOR	107 GR REAL AND A	

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# SECURITY CONTROL SYSTEM



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< BASIC INSPECTION >

# BASIC INSPECTION DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

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**OVERALL SEQUENCE** 



DETAILED FLOW

#### < BASIC INSPECTION >

1.GET INFORMATION FOR SYMPTOM	Λ
1. Get detailed information from the customer about the symptom (the condition and the environment when	Λ
<ol> <li>the incident/malfunction occurs).</li> <li>Check operation condition of the function that is malfunctioning.</li> </ol>	
	В
>> GO TO 2.	
	С
<ol> <li>Check DTC.</li> <li>Perform the following procedure if DTC is detected.</li> </ol>	
- Record DTC and freeze frame data (Print them out using CONSULT.)	D
<ul> <li>Erase DTC.</li> <li>Study the relationship between the cause detected by DTC and the symptom described by the customer.</li> </ul>	
3. Check related service bulletins for information.	Е
Are any symptoms described and any DTC detected?	
Symptom is described, DTC is detected>>GO TO 3.	_
Symptom is not described, DTC is detected>>GO TO 5.	F
<b>3.</b> CONFIRM THE SYMPTOM	
Try to confirm the symptom described by the customer.	G
Also study the normal operation and fail-safe related to the symptom.	
verify relation between the symptom and the contaiton when the symptom is detected.	Н
>> 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.	I
>> GO TO 6.	J
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 <u>BCS-61</u> , " <u>DTC Inspection Priority Chart</u> " and determine trouble diagnosis order.	SE L
NOTE: • Franze frame data is useful if the DTC is not detected	
<ul> <li>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</li> </ul>	M
tnis cneck. If the result of Component Function Check is NG, it is the same as the detection of DTC by DTC CONFIR- MATION PROCEDURE.	Ν
Is DTC detected?	
YES >> GO TO 7.	$\sim$
NU >> Check according to <u>GI-43, "Intermittent Incident"</u> .	U
U.DETECT MALFUNCTIONING STSTEM BY STMPTOM DIAGNOSIS	
4, and determine the trouble diagnosis order based on possible causes and symptom.	Ρ
Is the symptom described?	
YES >> GO TO 7. NO >> Monitor input data from related sensors or check voltage of related module terminals using CON- SULT.	

**1.**DETECT MALFUNCTIONING PART BY DIAGNOSIS PROCEDURE

# DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

Inspect according to Diagnosis Procedure of the system.

Is malfunctioning part detected?

YES >> GO TO 8.

NO >> Check according to <u>GI-43, "Intermittent Incident"</u>.

8. REPAIR OR REPLACE THE MALFUNCTIONING PART

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

< BASIC INSPECTION > ADDITIONAL SERVICE WHEN REPLACING ECM А Description INFOID:00000009345882 Performing the following procedure can automatically activate recommunication of ECM, but only when the В ECM is replaced with a new one\*. \*: New one means a virgin ECM that has never been energized on-board. (In this step, initialization procedure using CONSULT is not necessary) NOTE: When the replaced ECM is not a brand new, the specified procedure using CONSULT is necessary. If multiple keys are attached to the key holder, separate them before beginning work. Distinguish keys with unregistered key IDs from those with registered IDs. D Work Procedure INFOID:000000009345883 1.PERFORM ECM RECOMMUNICATING FUNCTION Ε 1. Install ECM. 2. Contact backside of the registered Intelligent Key\* to push-button ignition switch while brake pedal is F depressed, then turn ignition switch ON. \*: To perform this step, use the key that is used before performing ECM replacement. 3. Maintain ignition switch in the ON position for at least 5 seconds. Turn ignition switch OFF. 4. 5. Check that the engine starts. >> GO TO 2. Н 2. PERFORM ADDITIONAL SERVICE WHEN REPLACING ECM Refer to EC-152, "Description" >> END

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# DTC/CIRCUIT DIAGNOSIS P1610 LOCK MODE

### DTC Description

INFOID:000000009345887

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 DETECTION LOGIC

#### NOTE:

If DTC P1610 is displayed with other DTC (for BCM or ENGINE), first perform the trouble diagnosis for other DTC.

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
P1610	LOCK MODE (Lock mode)	When ECM detects a communication malfunction between ECM and BCM 5 times or more.

#### POSSIBLE CAUSE

Engine start operation is performed five times or more under the following conditions,

- Infiniti Vehicle Immobilizer System malfunction
- Operation by unregistered key

#### FAIL-SAFE

Inhibit engine cranking

#### DTC CONFIRMATION PROCEDURE

#### **1.**CHECK DTC PRIORITY

If DTC P1610 is displayed with other DTC (for BCM or ENGINE), first perform the trouble diagnosis for other DTC.

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. BCM: Refer to <u>BCS-62, "DTC Index"</u>. ECM: Refer to <u>EC-106,</u> <u>"DTC Index"</u>.
- NO >> GO TO 2.

2. 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-58, "Diagnosis Procedure".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:000000009345888

#### **1.**CHECK DTC PRIORITY

If DTC P1610 is displayed with other DTC (for BCM or ENGINE), first perform the trouble diagnosis for other DTC.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. BCM: Refer to <u>BCS-62. "DTC Index"</u>. ECM: Refer to <u>EC-106.</u> <u>"DTC Index"</u>.

NO >> GO TO 2.

- 2. 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.

### **SEC-58**

# P1610 LOCK MODE

#### < DTC/CIRCUIT DIAGNOSIS >

3.	Depress brake pedal and contact the registered Intelligent Key backside to push-button ignition switch, then wait 5 seconds.	А
4. 5. 6. 7.	Turn ignition switch ON. Turn ignition switch OFF and wait 5 seconds. Repeat steps 3 and 5 twice (a total of 3 times). Check that engine can start.	В
	>> INSPECTION END	С
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#### P1611 ID DISCORD, IMMU-ECM

#### < DTC/CIRCUIT DIAGNOSIS >

# P1611 ID DISCORD, IMMU-ECM

### **DTC** Description

INFOID:000000009345889

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
P1611	ID DISCORD, IMMU-ECM (Identification discord immobilizer unit - engine control module)	The ID verification results between BCM and ECM are NG.

#### POSSIBLE CAUSE

BCM

• ECM

FAIL-SAFE

Inhibit engine cranking

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 <u>SEC-60, "Diagnosis Procedure"</u>.
- NO-1 >> To check malfunction symptom before repair: Refer to <u>GI-43, "Intermittent Incident"</u>.
- NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

**1.** INTELLIGENT KEY REGISTRATION

Using CONSULT, register all Intelligent Keys again.

Can engine be started with the 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-60, "DTC Description".

Is DTC detected?

YES >> GO TO 3.

NO >> INSPECTION END

## **3.**REPLACE BCM

1. Replace BCM. Refer to BCS-98. "Removal and Installation".

Perform DTC CONFIRMATION PROCEDURE for DTC P1611. Refer to <u>SEC-60, "DTC Description"</u>.

Is DTC detected?

YES >> GO TO 4.

NO >> INSPECTION END

**4.**REPLACE ECM

Replace ECM. Refer to EC-578, "Removal and Installation".

>> INSPECTION END

INFOID:000000009345890

### P1612 CHAIN OF ECM-IMMU

### < DTC/CIRCUIT DIAGNOSIS >

# P1612 CHAIN OF ECM-IMMU

# **DTC** Description

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INFOID:000000009345891

# DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
P1612	CHAIN OF ECM-IMMU (Chain of engine control module - immobilizer unit)	Inactive communication between ECM and BCM
POSSIBLE	CAUSE	
<ul> <li>Harness o (The CAN</li> <li>BCM</li> <li>ECM</li> </ul>	r connectors communication line is open or shorted.)	
FAIL-SAFE Inhibit engin	e cranking	
DTC CONF	IRMATION PROCEDURE	
<b>1.</b> CHECK [	DTC PRIORITY	
If DTC P161 for DTC U10 Is applicable	2 is displayed with DTC U1000 (for BCM) or 000 (for BCM) or U1010(for BCM). a DTC detected?	r U1010 (for BCM), first perform the trouble diagnosis
YES >> NO >>	Perform diagnosis of applicable. U1000 (fo BCM): Refer to <u>BCS-62, "DTC Index"</u> . GO TO 2.	or BCM): Refer to <u>EC-106, "DTC Index"</u> . U1010 (for
2.PERFOR	M DTC CONFIRMATION PROCEDURE	
1. Turn ign 2. Check E	ition switch ON. DTC in "Self Diagnostic Result" mode of "EN	GINE" using CONSULT.
VES	<u>Cted?</u> Refer to SEC-61. "Diagnosis Procedure"	
NO-1 >> NO-2 >>	To check malfunction symptom before repair Confirmation after repair: INSPECTION END	r: Refer to <u>GI-43. "Intermittent Incident"</u> . D
Diagnosis	Procedure	INFOID:00000009345892
1.снески	DTC PRIORITY	
If DTC P161 for DTC U10	2 is displayed with DTC U1000 (for BCM) or 000 (for BCM) or U1010(for BCM).	r U1010 (for BCM), first perform the trouble diagnosis
YES >>	Perform diagnosis of applicable. U1000 (fo BCM): Refer to <u>BCS-62, "DTC_Index"</u> .	or BCM): Refer to <u>EC-106, "DTC Index"</u> . U1010 (for
	GO TO 2. E ROM	
Replace BC	L DOW M. Refer to BCS-08. "Removal and Installati	00"
Does the en	gine start?	<u>on</u> .
YES >>	INSPECTION END	
NU >>	GO TO 3. E ECM	
Replace FC	<ul> <li>– – – – – – – – – – – – – – – – – – –</li></ul>	
		<u>vii</u> .

>> INSPECTION END

#### < DTC/CIRCUIT DIAGNOSIS >

# B2192 ID DISCORD, IMMU-ECM

### **DTC** Description

INFOID:000000009345893

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B2192	ID DISCORD BCM-ECM (Identification discord body control module - engine control module)	The ID verification results between BCM and ECM are NG.

#### POSSIBLE CAUSE

BCM

• ECM

FAIL-SAFE

Inhibit engine cranking

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 <u>SEC-62, "Diagnosis Procedure"</u>.
- NO-1 >> To check malfunction symptom before repair: Refer to <u>GI-43, "Intermittent Incident"</u>.
- NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

**1.** INTELLIGENT KEY REGISTRATION

Using CONSULT, register all Intelligent Keys again.

Can engine be started with the registered Intelligent Key?

YES >> INSPECTION END

NO >> GO TO 2.

**2.**CHECK SELF-DIAGNOSIS RESULT

1. Select "Self Diagnostic Result" mode of "BCM" using CONSULT.

2. Erase DTC.

Perform DTC CONFIRMATION PROCEDURE for DTC B2192. Refer to <u>SEC-62, "DTC Description"</u>.

Is DTC detected?

YES >> GO TO 3.

NO >> INSPECTION END

## **3.**REPLACE BCM

1. Replace BCM. Refer to BCS-98, "Removal and Installation".

Perform DTC CONFIRMATION PROCEDURE for DTC B2192. Refer to <u>SEC-62, "DTC Description"</u>.

Is DTC detected?

YES >> GO TO 4.

NO >> INSPECTION END

**4.**REPLACE ECM

Replace ECM. Refer to EC-578, "Removal and Installation".

>> INSPECTION END

INFOID:000000009345894

### **B2193 CHAIN OF ECM-IMMU**

#### < DTC/CIRCUIT DIAGNOSIS >

# B2193 CHAIN OF ECM-IMMU

# **DTC Description**

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INFOID:000000009345895

DTC DETEC	CTION LOGIC				
DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition			
B2193	CHAIN OF BCM-ECM (Chain of body control module - engine control module) Inactive communication between BCM and ECM				
POSSIBLE	CAUSE				
<ul> <li>Harness or (The CAN of ECM</li> <li>BCM</li> </ul>	connectors communication line is open or shorted.)				
FAIL-SAFE	ecranking				
DTC CONFI	RMATION PROCEDURE				
1.CHECK D	TC PRIORITY				
If DTC B2193 U1010.	3 is displayed with DTC U1000 or U1010, first pe	rform the trouble diagnosis for DTC U1000 or			
Is applicable	DTC detected?				
YES >> F NO >> C	Perform diagnosis of applicable. U1000: Refer to <u>BCS-86, "DTC Description"</u> . GO TO 2.	BCS-85, "DTC Description". U1010: Refer to			
Z.PERFORM	M DTC CONFIRMATION PROCEDURE				
<ol> <li>Turn igni</li> <li>Check D</li> </ol>	tion switch ON. TC in "Self Diagnostic Result" mode of "BCM" usin tod?	g CONSULT.			
YES >> F NO-1 >> T NO-2 >> 0	Refer to <u>SEC-63, "Diagnosis Procedure"</u> . To check malfunction symptom before repair: Refer Confirmation after repair: INSPECTION END	to GI-43. "Intermittent Incident".			
Diagnosis	Procedure	INF0/D:00000009345896			
1.снеск р	TC PRIORITY				
If DTC B2193 U1010.	3 is displayed with DTC U1000 or U1010, first pe	rform the trouble diagnosis for DTC U1000 or			
Is applicable	DTC detected?				
YES >> F	Perform diagnosis of applicable. U1000: Refer to <u>BCS-86, "DTC Description"</u> .	BCS-85, "DTC Description". U1010: Refer to			
NO >> (	GO TO 2.				
Z.REPLACE	BCM				
Replace BCN	A. Refer to <u>BCS-98, "Removal and Installation"</u> .				
<u>Does the eng</u>					
NO >> N	GO TO 3.				
3.REPLACE	ECM				

Replace ECM. Refer to EC-578, "Removal and Installation".

>> INSPECTION END

#### < DTC/CIRCUIT DIAGNOSIS >

# **B2195 ANTI-SCANNING**

### **DTC** Description

INFOID:000000009345897

#### DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B2195	ANTI-SCANNING (Anti-scanning)	ID verification between BCM and ECM that is out of the specified specification is detected.

#### POSSIBLE CAUSE

ID verification request out of the specified specification

#### FAIL-SAFE

Inhibits engine cranking

#### 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 <u>SEC-64, "Diagnosis Procedure"</u>.

- NO-1 >> To check malfunction symptom before repair: Refer to <u>GI-43, "Intermittent Incident"</u>.
- NO-2 >> Confirmation after repair: INSPECTION END

### Diagnosis Procedure

INFOID:000000009345898

### **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-64. "DTC Description".
- 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" mode of "BCM" using CONSULT.
- 3. Erase DTC.
- 4. Perform DTC CONFIRMATION PROCEDURE for DTC B2195. Refer to SEC-64, "DTC Description".
- Is DTC detected?
- YES >> GO TO 4.
- NO >> INSPECTION END
- **4.**REPLACE BCM

Replace BCM. Refer to BCS-98, "Removal and Installation".

>> INSPECTION END

# **B2196 DONGLE UNIT**

< DTC/CIRCU	IT DIAGNOSIS >		
B2196 DO	NGLE UNIT		Δ
DTC Descri	ption	INFOID:00000009346013	A
BCM performs When verificati	ID verification between BC on result is OK, BCM perm	M and dongle unit. its cranking.	В
DTC DETECT	FION LOGIC		
	1		С
DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition	
B2196	DONGLE NG (Dongle unit not good)	The ID verification results between BCM and dongle unit is NG.	D
POSSIBLE C. • Harness or c	AUSE onnectors		Е
<ul><li>(Dongle unit</li><li>Dongle unit</li></ul>	circuit is open or shorted.)		
FAIL-SAFE			F
DTC CONFIR	MATION PROCEDURE		G
<b>1.</b> CHECK DT	C PRIORITY		
If DTC B2196 U1010.	is displayed with DTC U10	000 or U1010, first perform the trouble diagnosis for DTC U1000 or	Н
Is applicable D	TC detected?		
YES >> Pe <u>BC</u> NO >> GC	rform diagnosis of applica <u>CS-86, "DTC Description"</u> . D TO 2.	ble. U1000: Refer to <u>BCS-85, "DTC Description"</u> . U1010: Refer to	I
2.PERFORM	DTC CONFIRMATION PR	OCEDURE	
1. Turn ignitic	on switch ON.		J
<ol> <li>Turn ignitic</li> <li>Turn ignitic</li> <li>Check "Se</li> </ol>	on switch ON. If-diagnosis result" using C	ONSULT.	SE
Is the DTC det	ected?		
YES >> Re NO-1 >> To	efer to <u>SEC-65, "Diagnosis</u> check malfunction sympto	Procedure". m before repair: Refer to <u>GI-43, "Intermittent Incident"</u> .	L
Diagnosis F	Procedure		ъл
1.CHECK DT	C PRIORITY		IVI
If DTC B2196 U1010.	is displayed with DTC U10	000 or U1010, first perform the trouble diagnosis for DTC U1000 or	Ν
Is applicable D	TC detected?		
YES >> Pe	erform diagnosis of applica <u>CS-86, "DTC Description"</u> .	ble. U1000: Refer to <u>BCS-85, "DTC Description"</u> . U1010: Refer to	0
2.PERFORM	INITIALIZATION		Ρ
1. Perform in 2 Start the e	itialization of BCM and rere	gistration of all Intelligent Keys using CONSULT.	
Does the engin	ne start?		
YES >> IN	SPECTION END		

NO >> GO TO 3.

# **B2196 DONGLE UNIT**

#### < DTC/CIRCUIT DIAGNOSIS >

# 3. 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.

B	СМ	Dong	Continuity		
Connector	Terminal	Connector	Terminal	Continuity	
M14	52	M32	1	Existed	

4. Check continuity between BCM harness connector and ground.

В	CM		Continuity
Connector	Terminal	Ground	Continuity
M14	52		Not existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

### 4. CHECK DONGLE UNIT GROUND CIRCUIT

Check continuity between dongle unit harness connector and ground.

Dong	le unit		Continuity
Connector	Terminal	Ground	Continuity
M32	4		Existed

Is the inspection result normal?

YES >> Replace dongle unit.

NO >> Repair or replace harness.

#### B2198 NATS ANTENNA AMP.

#### < DTC/CIRCUIT DIAGNOSIS >

## B2198 NATS ANTENNA AMP.

### **DTC** Description

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INFOID:000000009345900

INFOID:000000009345899

## DTC DETECTION LOGIC

OTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B2198	NATS ANTENNA AMP (Nissan Anti-Theft System antenna amplifier)	Inactive communication between NATS antenna amp. and BCM is detected when BCM enters in the low power consumption mode (BCM sleep condition)

- Harness or connectors
- (NATS antenna amp. circuit is open or shorted.)
- NATS antenna amp.
- BCM

#### FAIL-SAFE

Inhibit engine cranking

#### 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 <u>BCS-13, "POWER CONSUMPTION CONTROL SYSTEM : System Description"</u>.

# Turn ignition switch ON. Check DTC in "Solf Diac

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

#### Is DTC detected?

- YES >> Refer to <u>SEC-67, "Diagnosis Procedure"</u>.
- NO-1 >> To check malfunction symptom before repair: Refer to <u>GI-43, "Intermittent Incident"</u>.
- NO-2 >> Confirmation after repair: INSPECTION END

#### **Diagnosis** Procedure

### 1. CHECK NATS ANTENNA COMMUNICATION SIGNAL

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

(·	+)					L
NATS antenna amp.		(—)	Condition		Voltage	
Connector	Terminal					М
M51	1	Ground	Intelligent Key: Intelligent	Brake pedal: De-	(V) 30 20 10 0 0 10 0 0 10 0 10 0 10 0 10 0	N
	3		Key battery is removed	pressed	(V) 15 10 5 0 ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	Ρ

Is the inspection result normal?

### B2198 NATS ANTENNA AMP.

< DTC/CIRCUIT DIAGNOSIS >

YES >> Replace NATS antenna amp. Refer to <u>SEC-128</u>, "Removal and Installation".

NO >> GO TO 2.

2. CHECK NATS ANTENNA AMP. OUTPUT SIGNAL CIRCUIT

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

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

NATS antenna amp.		BCM		Continuity	
Connector	Terminal	Connector Termin		Continuity	
M51	1	M16	127	Existed	
IVID I	3	IVITO	126	Existed	

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

NATS ant	enna amp.		Continuity	
Connector	Terminal	Ground	Continuity	
M51	1	Ground	Not ovisted	
	3	-	NOT EXISTED	

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-98, "Removal and Installation"</u>.

NO >> Repair or replace harness.

### **B2555 STOP LAMP**

### < DTC/CIRCUIT DIAGNOSIS >

# **B2555 STOP LAMP**

### **DTC** Description

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INFOID:000000009345905

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`	(Trouble diagnosis content)		DTC detecting condition		
B2555 (	STOP LAMP (Stop lamp)	BCM makes a compa switch. It judges from	irison between the upper voltage and lower voltage of stop lamp their values to detect the malfunctioning circuit.		
<ul> <li>POSSIBLE C</li> <li>Harness or c</li> <li>(Stop lamp s</li> <li>Stop lamp ss</li> <li>Fuse</li> <li>BCM</li> </ul>	CAUSE connectors switch circuit is open or witch	shorted.)			
FAIL-SAFE					
DTC CONFIF	RMATION PROCEDU	JRE N PROCEDURE			
1. Depress b 2. Check DT Is DTC detecte	prake pedal and wait 1 °C in "Self Diagnostic R ed?	second or more. tesult" mode of "Bo	CM" using CONSULT.		
YES >> Re NO-1 >> To NO-2 >> Co	efer to <u>SEC-69, "Diagn</u> o check malfunction syn onfirmation after repair	osis Procedure". mptom before repa : INSPECTION EN	air: Refer to <u>GI-43, "Intermittent Incident"</u> . ND		
Diagnosis F	Procedure		INFOID:0000000093		
<b>1.</b> CHECK FU	JSE				
Check that the	e following fuse in the f	use block (J/B) is r	not blown.		
	Signal name		Fuse No.		

3. Check voltage between BCM harness connector and ground.

(	+)			С
B	CM	(-)	Voltage	
Connector	Terminal			
M13	25	Ground	9 – 16 V	_ r

Is the inspection normal?

YES >> GO TO 3.

NO >> Check harness for open or short between BCM and fuse.

# **3.**CHECK STOP LAMP SWITCH POWER SUPPLY CIRCUIT

Disconnect stop lamp switch connector. 1.

# **B2555 STOP LAMP**

#### < DTC/CIRCUIT DIAGNOSIS >

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

(+)			
Stop lamp switch		(-)	Voltage
Connector	Terminal		
E57	3	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4.

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

#### **4.**CHECK STOP LAMP SWITCH 1 SIGNAL

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

(+) BCM		()	Condition		Voltage
Connector	Terminal	-			
M12	27	Ground	Proko podol	Depressed	9 – 16 V
IVI I S	21	27 Ground	Blake pedal	Not depressed	0 V

#### Is the inspecting result normal?

YES >> Replace BCM. Refer to <u>BCS-98, "Removal and Installation"</u>.

NO >> GO TO 5.

### 5.CHECK STOP LAMP SWITCH 1 SIGNAL 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	Continuity
E57	4	M13	27	Existed

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

Stop lamp sv	vitch		Continuity
Connector	Terminal	Ground	Continuity
E57	4		Not existed

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

**Ó.**CHECK STOP LAMP SWITCH

Refer to SEC-70, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 7.

NO >> Replace stop lamp switch. Refer to <u>BR-21, "Removal and Installation"</u>.

7.CHECK INTERMITTENT INCIDENT

Refer to GI-43, "Intermittent Incident".

#### >> INSPECTION END

**Component Inspection** 

**1.**CHECK STOP LAMP SWITCH

INFOID:000000009345907

# **B2555 STOP LAMP**

#### < DTC/CIRCUIT DIAGNOSIS >

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

Stop lamp switch Terminal		Condition		Continuity	
2	4	Proko podol	Not depressed	Not existed	-
3	4	brake pedal	Depressed	Existed	(

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace stop lamp switch. Refer to <u>BR-21, "Removal and Installation"</u>.

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### **B2556 PUSH-BUTTON IGNITION SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

# B2556 PUSH-BUTTON IGNITION SWITCH

### **DTC** Description

INFOID:000000009345908

#### DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B2556	PUSH-BTN IGN SW (Push-button ignition switch)	BCM detects the push-button ignition switch stuck at ON for 100 seconds or more.

#### POSSIBLE CAUSE

· Harness or connectors

- (Push-button ignition switch circuit is shorted.)
- Push-button ignition switch
- BCM

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FAIL-SAFE
```

### DTC CONFIRMATION PROCEDURE

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

- 1. Press push-button ignition switch under the following condition.
- Brake 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 >> Refer to <u>SEC-72, "Diagnosis Procedure"</u>.
- NO-1 >> To check malfunction symptom before repair: Refer to <u>GI-43, "Intermittent Incident"</u>.
- NO-2 >> Confirmation after repair: INSPECTION END

### **Diagnosis Procedure**

INFOID:000000009345909

# **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.

(+)			
Push-button ignition switch		()	Voltage
Connector	Terminal		
M38	8	Ground	9 – 16 V

#### 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	Push-button ignition switch		BCM		
Connector	Terminal	Connector	Terminal	Continuity	
M38	8	M13	1	Existed	

3. Check continuity between push-button ignition switch harness connector and ground.
# **B2556 PUSH-BUTTON IGNITION SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

Push-	button ignition swi	tcn		Operationsity
Connector		Terminal	Ground	Continuity
M38		8		Not existed
s the inspection result YES >> GO TO 3. NO >> Repair or i B-REPLACE BCM	<u>normal?</u> eplace harnes	s.		
Replace BCM Refer to	BCS-98 "Rer	moval and Installation	מע"	
>> INSPECTI 4.CHECK PUSH-BUT Check continuity betwe	ON END TON IGNITIOI een push-butto	N SWITCH GROUN	D CIRCUIT	und.
Push-	button ignition swi	tch		Continuity
Connector		Terminal	Ground	Continuity
M38		4		Existed
YES >> GO TO 5.				
YES >> GO TO 5. NO >> Repair or r D.CHECK PUSH-BUT Refer to <u>SEC-73, "Con</u> <u>s the inspection result</u> YES >> GO TO 6. NO >> Replace p D.CHECK INTERMIT Refer to <u>GI-43, "Interm</u> >> INSPECTI	replace harnes TON IGNITIO ponent Inspect normal? ush-button igni TENT INCIDEN ittent Incident" ON END ction	s. N SWITCH <u>ction"</u> . tion switch. Refer to \T	9 <u>PCS-88, "Removal and</u>	Installation".
YES >> GO TO 5. NO >> Repair or r 5.CHECK PUSH-BUT Refer to <u>SEC-73, "Con</u> <u>s the inspection result</u> YES >> GO TO 6. NO >> Replace p 5.CHECK INTERMIT Refer to <u>GI-43, "Interm</u> >> INSPECTI Component Inspe 1.CHECK PUSH-BUT	replace harnes TON IGNITIO ponent Inspect normal? ush-button igni TENT INCIDEN ittent Incident" ON END ction	s. N SWITCH <u>ttion"</u> . tion switch. Refer to NT	9 <u>PCS-88, "Removal and</u>	Installation".
YES >> GO TO 5. NO >> Repair or r D.CHECK PUSH-BUT Refer to <u>SEC-73, "Con</u> <u>s the inspection result</u> YES >> GO TO 6. NO >> Replace p D.CHECK INTERMIT Refer to <u>GI-43, "Interm</u> >> INSPECTI Component Inspe 1.CHECK PUSH-BUT I. Turn ignition switcl 2. Disconnect push-b 3. Check continuity b	replace harnes TON IGNITIO ponent Inspect normal? ush-button igni TENT INCIDEN ittent Incident" ON END ction TON IGNITIO n OFF. putton ignition s etween push-b	s. N SWITCH <u>ction"</u> . tion switch. Refer to NT N SWITCH switch connector. putton ignition switch	PCS-88, "Removal and	Installation".
YES >> GO TO 5. NO >> Repair or r D.CHECK PUSH-BUT Refer to <u>SEC-73, "Con</u> <u>s the inspection result</u> YES >> GO TO 6. NO >> Replace p D.CHECK INTERMIT Refer to <u>GI-43, "Interm</u> >> INSPECTI Component Inspe I.CHECK PUSH-BUT . Turn ignition switcl Disconnect push-to . Check continuity b Push-button ig	replace harnes TON IGNITIO ponent Inspect normal? ush-button igni TENT INCIDEN ittent Incident" ON END ction TON IGNITIO n OFF. putton ignition s etween push-b	s. N SWITCH <u>ction"</u> . tion switch. Refer to NT N SWITCH switch connector.	PCS-88, "Removal and	Installation".
YES >> GO TO 5. NO >> Repair or r D.CHECK PUSH-BUT Refer to <u>SEC-73, "Con</u> <u>s the inspection result</u> YES >> GO TO 6. NO >> Replace p D.CHECK INTERMIT Refer to <u>GI-43, "Interm</u> >> INSPECTI Component Inspe 1.CHECK PUSH-BUT I. Turn ignition switcl 2. Disconnect push-b 3. Check continuity b Push-button ig Term	replace harnes TON IGNITIO ponent Inspect normal? ush-button igni TENT INCIDEN ittent Incident" ON END Ction TON IGNITIO n OFF. putton ignition s etween push-b nition switch inal	s. N SWITCH tion switch. Refer to NT N SWITCH switch connector. button ignition switch	PCS-88, "Removal and n terminals. Condition	Installation".
YES $>>$ GO TO 5. NO $>>$ Repair or r 5.CHECK PUSH-BUT Refer to <u>SEC-73, "Con</u> is the inspection result YES $>>$ GO TO 6. NO $>>$ Replace p 5.CHECK INTERMIT Refer to <u>GI-43, "Interm</u> >> INSPECTI Component Inspe 1.CHECK PUSH-BUT 1. Turn ignition switcl 2. Disconnect push-b 3. Check continuity b Push-button ig Term 4	replace harnes TON IGNITIO ponent Inspec- normal? ush-button igni TENT INCIDEN ittent Incident" ON END ction TON IGNITIO n OFF. putton ignition s etween push-b nition switch inal	s. N SWITCH ction". tion switch. Refer to NT N SWITCH switch connector. button ignition switch Push-button ignitio	n terminals.	Installation".

# B2557 VEHICLE SPEED

#### **DTC** Description

INFOID:000000009345911

#### DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B2557	VEHICLE SPEED (Vehicle speed)	<ul> <li>BCM detects one of the following conditions for 10 seconds continuously.</li> <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 less</li> </ul>

#### POSSIBLE CAUSE

- Harness or connectors
- (The CAN communication line is open or shorted.)
- Combination meter
- ABS actuator and electric unit (control unit)

#### FAIL-SAFE

#### DTC CONFIRMATION PROCEDURE

#### **1.**CHECK DTC PRIORITY

If DTC B2557 is displayed with DTC U1000 or U1010, first perform the trouble diagnosis for DTC U1000 or U1010.

#### Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000: Refer to <u>BCS-85, "DTC Description"</u>. U1010: Refer to <u>BCS-86, "DTC Description"</u>.

#### NO >> GO TO 2.

#### 2. 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 >> Refer to <u>SEC-74, "Diagnosis Procedure"</u>.
- NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

#### **Diagnosis** Procedure

INFOID:000000009345912

#### **1.**CHECK DTC PRIORITY

If DTC B2557 is displayed with DTC U1000 or U1010, first perform the trouble diagnosis for DTC U1000 or U1010.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000: Refer to <u>BCS-85, "DTC Description"</u>. U1010: Refer to <u>BCS-86, "DTC Description"</u>.

NO >> GO TO 2.

# **2.**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 <u>BRC-57, "DTC Index"</u>. NO >> GO TO 3.

#### SEC-74

# **B2557 VEHICLE SPEED**

3.сн	ECK DTC OF "COMBINATION METER"	^
Check	DTC in "Self Diagnostic Result" mode of "METER/M&A" using CONSULT.	^
<u>Is DTC</u>	C detected?	
YES NO	>> Perform the trouble diagnosis related to the detected DTC. Refer to <u>MWI-80, "DTC Index"</u> . >> GO TO 4.	В
4.сн	ECK INTERMITTENT INCIDENT	
Refer	to <u>GI-43, "Intermittent Incident"</u> .	C
	>> INSPECTION END	D

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< DTC/CIRCUIT DIAGNOSIS >

# B2601 SHIFT POSITION

#### **DTC** Description

INFOID:000000009345913

#### DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B2601	SHIFT POSITION (Shift position)	When there is a difference between P position signal from A/T shift selector (detention switch) and P position signal from IPDM E/R (CAN).

#### POSSIBLE CAUSE

- · Harness or connectors
- (CAN communication line is open or shorted.)
- Harness or connectors
- [A/T shift selector (detention switch) circuit is open or shorted.]
- BCM
- IPDM E/R
- A/T shift selector (detention switch)

#### FAIL-SAFE

#### DTC CONFIRMATION PROCEDURE

#### **1.**CHECK DTC PRIORITY

If DTC B2601 is displayed with DTC U1000 or U1010, first perform the trouble diagnosis for DTC U1000 or U1010.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000: Refer to <u>BCS-85, "DTC Description"</u>. U1010: Refer to <u>BCS-86, "DTC Description"</u>.

NO >> GO TO 2.

## 2. 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 >> Refer to SEC-76, "Diagnosis Procedure".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

#### Diagnosis Procedure

INFOID:000000009345914

#### **1.**CHECK DTC PRIORITY

If DTC B2601 is displayed with DTC U1000 or U1010, first perform the trouble diagnosis for DTC U1000 or U1010.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000: Refer to <u>BCS-85, "DTC Description"</u>. U1010: Refer to <u>BCS-86, "DTC Description"</u>.

NO >> GO TO 2.

- 2.CHECK A/T SHIFT SELECTOR CIRCUIT (BCM)
- 1. Turn ignition switch OFF.
- 2. Disconnect A/T shift selector (detention switch) connector, BCM connector, and IPDM E/R connector.
- Check continuity between A/T shift selector (detention switch) harness connector and BCM harness connector.

#### SEC-76

#### < DTC/CIRCUIT DIAGNOSIS >

Art shift selector (detention switch)       BCM         Connector       Terminal       Connector       Terminal         M7       11       M13       20         4.       Check continuity between A/T shift selector (detention switch) harness connector       Art shift selector (detention switch)       art shift selector (detention switch)         Art shift selector (detention switch)       Ground       Ground       art shift selector (detention switch)         Art shift selector result normal?       YES       >> GO TO 3.       Ground       art shift selector (detention switch)         YES       >> GO TO 3.       NO       >> Repair or replace harness.       3.         CHECK A/T SHIFT SELECTOR CIRCUIT (IPDM E/R)       Check continuity between A/T shift selector (detention switch) harness connector ar nector.         Art shift selector (detention switch)       IPDM E/R         Connector       Terminal       Connector         M7       11       E121       31         Is the inspection result normal?       YES       >> GO TO 4.         NO       >> Repair or replace harness.       4.         REPLACE BCM       1.       Replace BCM. Refer to BCS-98. "Removal and Installation".         1.       Replace BCM. Refer to BCS-98. "Removal and Installation".       2.         2.       Perform								
Connector       Terminal       Connector       Terminal         M7       11       M13       20         4.       Check continuity between A/T shift selector (detention switch) harness connector       A/T shift selector (detention switch)         Connector       Terminal       Ground         M7       11       Ground         Sthe inspection result normal?       YES       >> GO TO 3.         YES       >> GO TO 3.       Scheck CA/T SHIFT SELECTOR CIRCUIT (IPDM E/R)         Check continuity between A/T shift selector (detention switch) harness connector are       Connector         Check continuity between A/T shift selector (detention switch) harness connector are       IPDM E/R         Connector       Terminal       Connector         A/T shift selector (detention switch)       IPDM E/R         Connector       Terminal       Connector         M7       11       E121       31         s the inspection result normal?       YES       >> GO TO 4.       NO         NO       >> Repair or replace harness.       A.REPLACE BCM       I.         I.       Replace BCM. Refer to <u>BCS-98. "Removal and Installation".       2.       Perform DTC CONFIRMATION PROCEDURE for DTC B2601. Refer to <u>SEC-76</u>         s DTC B2601 detected again?       YES       &gt;&gt; Replace IPDM E/R.</u>	A/T s	T shift selector (detention switch) BCM		O + i - · · ·				
M7       11       M13       20         4.       Check continuity between A/T shift selector (detention switch) harness connector         AT shift selector (detention switch)       Ground         M7       11       Ground         Is the inspection result normal?       YES         YES       >> GO TO 3.         NO       >> Repair or replace harness.         3.CHECK A/T SHIFT SELECTOR CIRCUIT (IPDM E/R)         Check continuity between A/T shift selector (detention switch) harness connector ar nector.         A/T shift selector (detention switch)       IPDM E/R         Connector       Terminal         M7       11         E121       31         Is the inspection result normal?         YES       >> GO TO 4.         NO       >> Repair or replace harness.         4.REPLACE BCM         1. Replace BCM. Refer to BCS-98, "Removal and Installation".         2. Perform DTC CONFIRMATION PROCEDURE for DTC B2601. Refer to SEC-76         Is DTC B2601 detected again?         YES       >> Replace IPDM E/R. Refer to PCS-37. "Removal and Ins	Conne	ector	Terminal	Conr	nector	Te	minal	Continuit
4.       Check continuity between A/T shift selector (detention switch) harness connection         A/T shift selector (detention switch)       Ground         M7       11         Is the inspection result normal?         YES       >> GO TO 3.         NO       >> Repair or replace harness.         3.CHECK A/T SHIFT SELECTOR CIRCUIT (IPDM E/R)         Check continuity between A/T shift selector (detention switch) harness connector ar nector.         A/T shift selector (detention switch)       IPDM E/R         Connector       Terminal         Connector       Terminal         M7       11         Elsthe inspection result normal?         YES       >> GO TO 3.         M7       11         Elsthe inspection result normal?         YES       >> GO TO 4.         NO       >> Repair or replace harness.         4.REPLACE BCM         1.       Replace BCM. Refer to BCS-98. "Removal and Installation".         2.       Perform DTC CONFIRMATION PROCEDURE for DTC B2601. Refer to SEC-76         Is DTC B2601 detected again?         YES       >> Replace IPDM E/R. Refer to PCS-37. "Removal and Installation".         NO       >> INSPECTION END	M	7	11	М	13		20	Existed
AT shift selector (detention switch)       Ground         Connector       Terminal       Ground         M7       11       It         s the inspection result normal?       YES       >> GO TO 3.         NO       >> Repair or replace harness.       S.CHECK A/T SHIFT SELECTOR CIRCUIT (IPDM E/R)         Check continuity between A/T shift selector (detention switch) harness connector ar actor.       IPDM E/R         A/T shift selector (detention switch)       IPDM E/R         Connector       Terminal       Connector         M7       11       E121       31         s the inspection result normal?       YES       >> GO TO 4.       NO         NO       >> Repair or replace harness.       A.REPLACE BCM       .         .       Replace BCM. Refer to BCS-98. "Removal and Installation".       .         .       Perform DTC CONFIRMATION PROCEDURE for DTC B2601. Refer to SEC-76         s DTC B2601 detected again?       YES       >> Replace IPDM E/R. Refer to PCS-37. "Removal and Installation".         NO       >> INSPECTION END       .       .	. Check co	ntinuity betwe	en A/T shift seleo	ctor (deten	tion switch)	harness	connecto	r and ground.
Connector       Terminal       Ground         M7       11         s the inspection result normal?         YES       >> GO TO 3.         NO       >> Repair or replace harness.         CHECK A/T SHIFT SELECTOR CIRCUIT (IPDM E/R)         Check continuity between A/T shift selector (detention switch) harness connector arector.         A/T shift selector (detention switch)       IPDM E/R         Connector       Terminal         Connector       Terminal         M7       11         E121       31         s the inspection result normal?         YES       >> GO TO 4.         NO       >> Repair or replace harness.        REPLACE BCM        Replace BCM. Refer to BCS-98. "Removal and Installation".        Perform DTC CONFIRMATION PROCEDURE for DTC B2601. Refer to SEC-76         SDTC B2601 detected again?         YES       >> Replace IPDM E/R. Refer to PCS-37. "Removal and Installation".         NO       >> INSPECTION END		A/T shift selecto	r (detention switch)					
M7       11         s the inspection result normal?         YES       >> GO TO 3.         NO       >> Repair or replace harness.         J.CHECK A/T SHIFT SELECTOR CIRCUIT (IPDM E/R)         Check continuity between A/T shift selector (detention switch) harness connector an ector.         A/T shift selector (detention switch)         IPDM E/R         Connector         Terminal         M7       11         E121       31         s the inspection result normal?         YES       >> GO TO 4.         NO       >> Repair or replace harness.         4.REPLACE BCM         .       Replace BCM. Refer to BCS-98, "Removal and Installation".         2.       Perform DTC CONFIRMATION PROCEDURE for DTC B2601. Refer to SEC-76         s DTC B2601 detected again?       YES         YES       >> Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".         NO       >> INSPECTION END	Co	nnector	Termin	al	(	Ground		Continuity
s the inspection result normal?         YES       >> GO TO 3.         NO       >> Repair or replace harness.         3.CHECK A/T SHIFT SELECTOR CIRCUIT (IPDM E/R)         Check continuity between A/T shift selector (detention switch) harness connector ar nector.         A/T shift selector (detention switch)       IPDM E/R         Connector       Terminal         M7       11       E121       31         s the inspection result normal?       YES       >> GO TO 4.       NO       >> Repair or replace harness.         4.REPLACE BCM       I. Replace BCM. Refer to BCS-98. "Removal and Installation".       2.       Perform DTC CONFIRMATION PROCEDURE for DTC B2601. Refer to SEC-76 s DTC B2601 detected again?         YES       >> Replace IPDM E/R. Refer to PCS-37. "Removal and Installation".       NO       >> INSPECTION END		M7	11		1			Not existed
A/T shift selector (detention switch)       IPDM E/R         Connector       Terminal       Connector       Terminal         M7       11       E121       31         sthe inspection result normal?         YES       >> GO TO 4.         NO       >> Repair or replace harness.         .REPLACE BCM         . Replace BCM. Refer to BCS-98. "Removal and Installation".         . Perform DTC CONFIRMATION PROCEDURE for DTC B2601. Refer to SEC-76         SDTC B2601 detected again?         YES       >> Replace IPDM E/R. Refer to PCS-37. "Removal and Installation".         NO       >> INSPECTION END	YES >> G NO >> R CHECK A/	O TO 3. epair or replac T SHIFT SELI uity between A	≥e harness. ECTOR CIRCUI /T shift selector (	Γ (IPDM E/ (detention s	R) switch) har	ness con	nector and	I IPDM E/R har
Connector       Terminal       Connector       Terminal         M7       11       E121       31         s the inspection result normal?       YES       >> GO TO 4.         NO       >> Repair or replace harness. <b>1</b> . REPLACE BCM         I. Replace BCM. Refer to BCS-98. "Removal and Installation".         2. Perform DTC CONFIRMATION PROCEDURE for DTC B2601. Refer to SEC-76         s DTC B2601 detected again?         YES       >> Replace IPDM E/R. Refer to PCS-37. "Removal and Installation".         NO       >> INSPECTION END		hift selector (dete	ntion switch)		IPDM	1 F/R		
M7     11     E121     31       s the inspection result normal?     YES     >> GO TO 4.       NO     >> Repair or replace harness. <b>1</b> . Replace BCM. Refer to BCS-98. "Removal and Installation".       2. Perform DTC CONFIRMATION PROCEDURE for DTC B2601. Refer to SEC-76       s DTC B2601 detected again?       YES     >> Replace IPDM E/R. Refer to PCS-37. "Removal and Installation".       NO     >> INSPECTION END	Conne	ector	Terminal	Conr	nector	Tei	minal	- Continuit
s the inspection result normal?         YES       >> GO TO 4.         NO       >> Repair or replace harness.         4.REPLACE BCM         1. Replace BCM. Refer to BCS-98. "Removal and Installation".         2. Perform DTC CONFIRMATION PROCEDURE for DTC B2601. Refer to SEC-76         s DTC B2601 detected again?         YES       >> Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".         NO       >> INSPECTION END	M	7	11	F1	21		31	Existed
NO >> INSPECTION END	NO >> R → REPLACE → Replace E → Perform E → DTC B2601 YES >> R	epair or replace BCM 3CM. Refer to DTC CONFIRM detected aga eplace IPDM	e harness. <u>BCS-98, "Remo</u> MATION PROCE <u>in?</u> E/R. Refer to <u>PC</u>	val and Ins DURE for S-37, "Rer	<u>itallation"</u> . DTC B260 <sup>7</sup> noval and I	1. Refer to	o <u>SEC-76,</u> n <u>"</u> .	"DTC Descript

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# B2602 SHIFT POSITION

## **DTC** Description

INFOID:000000009345915

#### DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B2602	SHIFT POSITION (Shift position)	<ul> <li>BCM detects the following status for 10 seconds.</li> <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>

#### POSSIBLE CAUSE

- Harness or connectors
  - (The CAN communication line is open or shorted.)
- Harness or connectors
- [A/T shift selector (detention switch) circuit is open or shorted.]
- BCM
- A/T shift selector (detention switch)
- ABS actuator and electric unit (control unit)
- Combination meter

FAIL-SAFE

#### DTC CONFIRMATION PROCEDURE

#### **1.**CHECK DTC PRIORITY

If DTC B2602 is displayed with DTC U1000 or U1010, first perform the trouble diagnosis for DTC U1000 or U1010.

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. U1000: Refer to <u>BCS-85, "DTC Description"</u>. U1010: Refer to <u>BCS-86, "DTC Description"</u>.
- NO >> GO TO 2.

## 2. 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 >> Refer to <u>SEC-78, "Diagnosis Procedure"</u>.
- NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

#### **Diagnosis** Procedure

INFOID:000000009345916

#### **1.**CHECK DTC PRIORITY

If DTC B2602 is displayed with DTC U1000 or U1010, first perform the trouble diagnosis for DTC U1000 or U1010.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000: Refer to <u>BCS-85, "DTC Description"</u>. U1010: Refer to <u>BCS-86, "DTC Description"</u>.

NO >> GO TO 2.

2. 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 <u>BRC-57, "DTC Index"</u>.

#### **SEC-78**

< DTC/CIRCUIT DIAG	NOSIS >				
NO >> GO TO 3.					
3. CHECK DTC OF CC	MBINATION METER	र			
Check DTC in "Self Dia	gnostic Result" mode	of "METE	R/M&A" us	ing CONSULT.	
Is DTC detected?					
YES >> Perform the NO >> GO TO 4.	e trouble diagnosis re	elated to the	e detected	DTC. Refer to M	WI-80, "DTC Index".
4.CHECK A/T SHIFT	SELECTOR POWER	SUPPLY			
<ol> <li>Turn ignition switch</li> <li>Disconnect A/T shi</li> <li>Check voltage betw</li> </ol>	OFF. It selector (detention veen A/T shift selecto	switch) co or (detentio	nnector. n switch) h	arness connecto	r and ground.
	(+)				
A/T shift se	elector (detention switch)			(-)	Voltage
Connector	Termin	al			
M7	10		(	Ground	9 – 16 V
Is the inspection result	normal?				
YES >> GO TO 7. NO >> GO TO 5.					
5. CHECK A/T SHIFT	SELECTOR POWER	SUPPLY (	CIRCUIT		
<ol> <li>Disconnect BCIN of 2. Check continuity be nector.</li> <li>A/T shift selector</li> </ol>	(detention switch)	ctor (deten	tion switch	) harness conne	ctor and BCM harness con-
Connector	Terminal	Conr	nector	Terminal	Continuity
M7	10	М	14	69	Existed
3. Check continuity be	etween A/T shift selec	ctor (deten	tion switch)	) harness connec	ctor and ground.
A/T shift se	elector (detention switch)				
Connector	Termin	al	(	Ground	Continuity
M7	10		_		Not existed
Is the inspection result	normal?				
YES >> GO TO 6.					
NO >> Repair or re	eplace harness.				
<b>6.</b> REPLACE BCM					
Replace BCM. Refer to	BCS-98, "Removal a	and Installa	ation".		
>> INSPECTION	ON END				
7.CHECK A/T SHIFT	SELECTOR CIRCUIT	Г			
<ol> <li>Disconnect BCM ca</li> <li>Check continuity be nector.</li> </ol>	onnector and IPDM E etween A/T shift sele	/R connec ctor (deten	tor. ition switch	) harness conne	ctor and BCM harness con-
A/T shift selector	(detention switch)		BC	CM	
Connector	Terminal	Conr	nector	Terminal	Continuity
M7	11	М	13	20	Existed
3 Check continuity by	atwoon Δ/T shift solo	ctor (deten	tion switch	harness conner	stor and ground

#### < DTC/CIRCUIT DIAGNOSIS >

Connector Terminal Ground		Continuity		A/T shift selector (detention switch)		
	Continuity		Ground	Terminal	Connector	
M7 11 Not existence	ł	Not existed	-	11	M7	

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness.

**8.**CHECK A/T SHIFT SELECTOR (DETENTION SWITCH)

Refer to SEC-80. "Component Inspection".

Is the inspection result normal?

YES >> GO TO 9.

NO >> Replace A/T shift selector. Refer to <u>TM-210, "Removal and Installation"</u>.

9. CHECK INTERMITTENT INCIDENT

Refer to GI-43, "Intermittent Incident".

>> INSPECTION END

#### Component Inspection

1.CHECK A/T SHIFT SELECTOR (DETENTION SWITCH)

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

-	A/T shift selector (detention switch) Terminal		Con	Continuity	
			Condition		Continuity
		0 11	Selector lovery Diposition	Selector button: Released	Not existed
	10		Selector level. P position	Selector button: Pressed	Existed
			Selector lever: Other than P position		LAISIEU

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace A/T shift selector. Refer to <u>TM-210, "Removal and Installation"</u>.

INFOID:000000009345917

# < DTC/CIRCUIT DIAGNOSIS >

# B2603 SHIFT POSITION

# **DTC** Description

А

В

INFOID:000000009345918

# DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition	
B2603	SHIFT POSI STATUS (Shift position status)	<ul> <li>BCM detects the following status when ignition switch is in the ON position.</li> <li>P/N position signal: approx. 0 V (Other than P/N position)</li> <li>A/T shift selector (detention switch) signal: approx. 0 V (P position)</li> </ul>	
POSSIBLE	CAUSE		
<ul> <li>Harness o (The CAN</li> <li>Harness o</li> </ul>	r connectors communication line is open r connectors	or shorted.)	ł
<ul> <li>P/N positi</li> <li>A/T shift so</li> <li>BCM</li> <li>TCM</li> </ul>	on signal circuit is open or si elector (detention switch)	norted.)	I
FAIL-SAFE —			(
DTC CONF	IRMATION PROCEDURE		
1.снески	DTC PRIORITY		ŀ
If DTC B260	3 is displayed with DTC B26	01, first perform the trouble diagnosis for DTC B2601.	
Is applicable YES >> NO >>	DTC detected? Perform diagnosis of applica GO TO 2.	ble. Refer to SEC-76, "DTC Description".	
2.PERFOR	M DTC CONFIRMATION PF	ROCEDURE 1	
1.Shift the2.Turn ign3.Check IIs DTC deteYES>>	e selector lever to the P posit hition switch ON and wait 1 so DTC in "Self Diagnostic Resu cted? Refer to <u>SEC-81, "Diagnosis</u>	on. econd or more. It" mode of "BCM" using CONSULT. <u>Procedure"</u> .	SI
NO >>	GO TO 3.		l
<b>J.</b> PERFOR	M DTC CONFIRMATION PF	ROCEDURE 2	
<ol> <li>Shift the</li> <li>Check I</li> <li>Is DTC dete</li> </ol>	selector lever to the position DTC in "Self Diagnostic Resu cted?	n other than P and N, and wait 1 second or more. It" mode of "BCM" using CONSULT.	Ν
YES >> NO-1 >> NO-2 >>	Refer to <u>SEC-81, "Diagnosis</u> To check malfunction sympto Confirmation after repair: INS	<u>Procedure"</u> . om before repair: Refer to <u>GI-43, "Intermittent Incident"</u> . SPECTION END	١
Diagnosis	Procedure	INF01D:00000000	9345919
1.снески	OTC PRIORITY		
If DTC B260 Is applicable YES >> NO >> 2 INSPECT	03 is displayed with DTC B26 <u>&gt; DTC detected?</u> Perform diagnosis of applica GO TO 2. FION START	01, first perform the trouble diagnosis for DTC B2601. ble. Refer to <u>SEC-76, "DTC Description"</u> .	

Perform inspection in accordance with procedure that confirms DTC.

#### < DTC/CIRCUIT DIAGNOSIS >

#### Which procedure confirms DTC?

DTC confirmation procedure 1>>GO TO 3. DTC confirmation procedure 2>>GO TO 7.

**3.**CHECK P/N POSITION SIGNAL

#### 1. Turn ignition switch ON.

2. Check voltage between BCM harness connector and ground.

(+) BCM		()	С	ondition	Voltage
Connector	Terminal				
M13	39	Ground	Selector lever	P or N position	(V) 15 10 5 0 10 10 10 10 10 10 10 10 10
				Other than above	0 V

Is the inspection result normal?

YES >> GO TO 12.

NO >> GO TO 4.

**4.**CHECK P/N POSITION SIGNAL CIRCUIT 1

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

IPDI	M E/R	B	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
E121	37	M13	39	Existed

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

5. CHECK P/N POSITION SIGNAL CIRCUIT 2

#### 1. Disconnect A/T assembly connector.

2. Check continuity between A/T assembly harness connector and IPDM E/R harness connector.

A/T assembly		BCM		Continuity
Connector	Terminal	Connector	Terminal	Continuity
F2	9	M13	39	Existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

6. CHECK JOINT CONNECTOR

1. Remove joint connector.

2. Check continuity between joint connector terminals.

A/T assembly harness connector side	TCM harness connector side	Continuity
Terminal	Terminal	Continuity
9	9	Existed

Is the inspection result normal?

YES >> Replace TCM. Refer to <u>TM-219</u> , "Removal and Installation" NO >> Replace joint connector. Refer to <u>TM-219</u> , "Removal and In <b>7</b> CHECK A/T SHIFT SELECTOR DOWER SUPPLY		
	ostaliation	
I CHECK A/I SHIFT SELECTOR POWER SUPPLY	<u>lotaliation</u> .	
<ol> <li>Turn ignition switch OFF.</li> <li>Disconnect A/T shift selector (detention switch) connector.</li> <li>Turn ignition switch ON.</li> <li>Check voltage between A/T shift selector (detention switch) harnese</li> </ol>	ss connecto	or and ground.
(+)		
A/T shift selector (detention switch) (-)		Voltage
Connector Terminal		
M7 10 Ground	d	9 – 16 V
YES >> GO TO 9. NO >> GO TO 8. 8.CHECK A/T SHIFT SELECTOR POWER SUPPLY CIRCUIT		
<ol> <li>Turn ignition switch OFF.</li> <li>Disconnect BCM connector.</li> <li>Check continuity between A/T shift selector (detention switch) harn nector.</li> </ol>	ness conne	ctor and BCM harness con
A/T shift selector (detention switch) BCM		Continuity
A/T shift selector (detention switch)     BCM       Connector     Terminal     Connector	Terminal	Continuity
A/T shift selector (detention switch)BCMConnectorTerminalConnectorM710M14	Terminal 69	Continuity Existed
A/T shift selector (detention switch)BCMConnectorTerminalConnectorM710M144. Check continuity between A/T shift selector (detention switch) harned	Terminal 69 1ess connec	Continuity Existed ctor and ground.
A/T shift selector (detention switch)       BCM         Connector       Terminal       Connector         M7       10       M14         4.       Check continuity between A/T shift selector (detention switch) harned         A/T shift selector (detention switch)	Terminal 69 1ess connec	Continuity Existed ctor and ground.
A/T shift selector (detention switch)       BCM         Connector       Terminal       Connector         M7       10       M14         4.       Check continuity between A/T shift selector (detention switch) harned         A/T shift selector (detention switch)       Ground	Terminal 69 1ess connec	Continuity Existed Ctor and ground. Continuity
A/T shift selector (detention switch)     BCM       Connector     Terminal     Connector       M7     10     M14       4.     Check continuity between A/T shift selector (detention switch) harned       A/T shift selector (detention switch)     Ground       M7     10     M14	Terminal 69 Ness connec	Continuity Existed Ctor and ground. Continuity Not existed
A/T shift selector (detention switch)       BCM         Connector       Terminal       Connector         M7       10       M14         4.       Check continuity between A/T shift selector (detention switch) harned         A/T shift selector (detention switch)       Ground         A/T shift selector (detention switch)       Ground         M7       10         Sthe inspection result normal?       YES         YES       >> GO TO 11.         NO       >> Repair or replace harness.         9.CHECK A/T SHIFT SELECTOR CIRCUIT         1.       Turn ignition switch OFF         2.       Disconnect BCM connector.	Terminal 69 ness connec d	Continuity Existed ctor and ground. Continuity Not existed
A/T shift selector (detention switch)       BCM         Connector       Terminal       Connector         M7       10       M14         4.       Check continuity between A/T shift selector (detention switch) harned $A/T$ shift selector (detention switch)       Ground $A/T$ shift selector (detention switch)       Ground $M7$ 10       Ground $M7$ 10       Ground         Sthe inspection result normal?       YES       >> GO TO 11.         NO       >> Repair or replace harness.       Scheck A/T SHIFT SELECTOR CIRCUIT         1.       Turn ignition switch OFF       Disconnect BCM connector.         3.       Check continuity between A/T shift selector (detention switch) harr nector	Terminal 69 ness connec d	Continuity Existed ctor and ground. Continuity Not existed
A/T shift selector (detention switch)       BCM         Connector       Terminal       Connector         M7       10       M14         4. Check continuity between A/T shift selector (detention switch) harned         A/T shift selector (detention switch)         Connector       Terminal         A/T shift selector (detention switch)         Connector       Terminal         Ground         M7       10         Sthe inspection result normal?         YES       >> GO TO 11.         NO       >> Repair or replace harness.         P.CHECK A/T SHIFT SELECTOR CIRCUIT         1. Turn ignition switch OFF         2. Disconnect BCM connector.         3. Check continuity between A/T shift selector (detention switch) harr nector         A/T shift selector (detention switch)       BCM         A/T shift selector (detention switch)       BCM	Terminal 69 Ness connec d rness count	Continuity Existed Ctor and ground. Continuity Not existed Cermand BCM harness con- Continuity Continuity
A/T shift selector (detention switch)       BCM         Connector       Terminal       Connector         M7       10       M14         I.       Check continuity between A/T shift selector (detention switch) harned         A/T shift selector (detention switch)         Connector       Terminal         A/T shift selector (detention switch)         Connector       Terminal         Ground       M7         M7       10         Sthe inspection result normal?         YES       >> GO TO 11.         NO       >> Repair or replace harness.         J.CHECK A/T SHIFT SELECTOR CIRCUIT         Turn ignition switch OFF         Disconnect BCM connector.         Check continuity between A/T shift selector (detention switch) harr nector         A/T shift selector (detention switch)       BCM         A/T shift selector (detention switch)       BCM	Terminal 69 ness connec d rness count Terminal 20	Continuity Existed Ctor and ground. Continuity Not existed termand BCM harness con- Continuity Existed
A/T shift selector (detention switch)       BCM         Connector       Terminal       Connector         M7       10       M14         A/T shift selector (detention switch) between A/T shift selector (detention switch) harned       A/T shift selector (detention switch)         A/T shift selector (detention switch)       Ground         M7       10         M7       10         M7       10         A/T shift selector (detention switch)       Ground         M7       10         Sthe inspection result normal?       YES         YES       >> GO TO 11.         NO       >> Repair or replace harness.         CHECK A/T SHIFT SELECTOR CIRCUIT         . Turn ignition switch OFF         Disconnect BCM connector.         Check continuity between A/T shift selector (detention switch) harr         nector         A/T shift selector (detention switch)       BCM         Connector       Terminal         M7       11         M13       M13	Terminal 69 1ess connec d rness count Terminal 20 1ess connec	Continuity Existed Ctor and ground. Continuity Not existed termand BCM harness con- Continuity Existed Ctor and ground.
A/T shift selector (detention switch)       BCM         Connector       Terminal       Connector         M7       10       M14         Check continuity between A/T shift selector (detention switch) harned         A/T shift selector (detention switch)         Connector       Terminal         A/T shift selector (detention switch)         Connector       Terminal         Ground       M7         M7       10         Sthe inspection result normal?         YES       >> GO TO 11.         NO       >> Repair or replace harness.         CHECK A/T SHIFT SELECTOR CIRCUIT         . Turn ignition switch OFF         Disconnect BCM connector.         B. Check continuity between A/T shift selector (detention switch) harr         A/T shift selector (detention switch)       BCM         A/T shift selector (detention switch)       BCM         A/T shift selector (detention switch)       BCM         Connector       Terminal       Connector         M7       11       M13         M7       11       M13         M7       11       M13	Terminal 69 Ness connect d rness count Terminal 20 Ness connect	Continuity Existed Ctor and ground. Continuity Not existed termand BCM harness con- Continuity Existed Ctor and ground.
A/T shift selector (detention switch)       BCM         Connector       Terminal       Connector         M7       10       M14         4.       Check continuity between A/T shift selector (detention switch) harned         A/T shift selector (detention switch)       Ground         M7       10         Sthe inspection result normal?         YES       >> GO TO 11.         NO       >> Repair or replace harness.         J.CHECK A/T SHIFT SELECTOR CIRCUIT         I.       Turn ignition switch OFF         2.       Disconnect BCM connector.         3.       Check continuity between A/T shift selector (detention switch) harr         mector       Terminal         A/T shift selector (detention switch)       BCM         Connector       Terminal         Connector       Terminal         A/T shift selector (detention switch)       BCM         Connector       Terminal         A/T shift selector (detention switch)       BCM         Connector       Terminal       Connector         M7       11       M13         I.       Check continuity between A/T shift selector (detention switch)       Ground	Terminal 69 ness connec d rness count Terminal 20 ness connec	Continuity Existed Ctor and ground. Continuity Not existed Cermand BCM harness contemport Continuity Existed Continuity Continuity Continuity Continuity Continuity Continuity

YES >> GO TO 10. NO >> Repair or replace harness. NO

 $10. {\sf check a/t shift selector (detention switch)}$ 

< DTC/CIRCUIT DIAGNOSIS >

Refer to SEC-84, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 12.

NO >> Replace A/T shift selector. Refer to <u>TM-210, "Removal and Installation"</u>.

11.CHECK INTERMITTENT INCIDENT

Refer to GI-43, "Intermittent Incident".

#### >> INSPECTION END

12.REPLACE BCM

Replace BCM. Refer to <u>BCS-98, "Removal and Installation"</u>.

#### >> INSPECTION END

#### Component Inspection

INFOID:000000009345921

# 1.CHECK A/T SHIFT SELECTOR (DETENTION SWITCH)

1. Turn ignition switch OFF.

2. Disconnect A/T shift selector connector.

3. Check continuity between A/T shift selector (detention switch) terminals.

A/T shift selector	(detention switch)	Condition		Continuity
Terminal		Condition		Continuity
		Selector lever: P position	Selector button: Released	Not existed
10	10 11	Selector level. P position	Selector button: Pressed	Evisted
		Selector lever: Other than P position		LAISted

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace A/T shift selector. Refer to <u>TM-210, "Removal and Installation"</u>.

# **B2604 SHIFT POSITION**

# **DTC** Description

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INFOID:000000009345922

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DIC DEIE	CTION LOGIC		
DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition	
B2604	PNP/CLUTCH SW (Park neutral position/ clutch switch)	<ul> <li>The following states are detected for 5 seconds while ignition switch is ON.</li> <li>P/N position signal is sent from TCM but shift position signal input (CAN) from TCM is other than P and N</li> <li>P/N position signal is not sent from TCM but shift position signal input (CAN) from TCM is P or N</li> </ul>	
POSSIBLE • Harness or (The CAN	CAUSE connectors communication line is op	en or shorted.)	
<ul> <li>Harness or (P/N position</li> <li>BCM</li> <li>TCM</li> </ul>	connectors on signal circuit is open o	r shorted.)	
• IPDM E/R			
HAIL-SAFE			
		RE	
		11000 or 11010, first perform the trouble diagnosis for DTC 11000 or	
U1010.	4 is displayed with DTC	o rous of o rous, first perform the trouble diagnosis for DTC o rous of	
Is applicable YES >> I	DTC detected? Perform diagnosis of app 3CS-86. "DTC Descriptio	blicable. U1000: Refer to <u>BCS-85, "DTC Description"</u> . U1010: Refer to <u>n"</u> .	
2.PERFOR	GO TO 2. M DTC CONFIRMATION	PROCEDURE	S
<ol> <li>Shift the</li> <li>Turn ign</li> <li>Shift the</li> <li>Shift the</li> </ol>	selector lever to the P po ition switch ON and wait selector lever to the N po selector lever to any pos	osition. 5 seconds or more. osition and wait 5 seconds or more. ition other than P and N, and wait 5 seconds or more.	
5. Check D Is DTC detect	TC in "Self Diagnostic Re <u>cted?</u> Refer to SEC-85, "Diagno	esult" mode of "BCM" using CONSULT.	
NO-1 >> NO-2 >> (	To check malfunction sym Confirmation after repair:	nptom before repair: Refer to <u>GI-43, "Intermittent Incident"</u> . INSPECTION END	
Diagnosis	Procedure	INFOID:00000009345923	
1. СНЕСК С	DTC PRIORITY		
If DTC B260 U1010.	4 is displayed with DTC	U1000 or U1010, first perform the trouble diagnosis for DTC U1000 or	
Is applicable	DTC detected?		
YES >> I <u>I</u> NO >> 0	Perform diagnosis of app <u>BCS-86, "DTC Descriptio</u> GO TO 2.	blicable. U1000: Refer to <u>BCS-85, "DTC Description"</u> . U1010: Refer to <u>n"</u> .	

2.CHECK DTC OF TCM

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

< DTC/CIRCUIT DIAGNOSIS >

#### Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to TM-85, "DTC Index".

NO >> GO TO 3.

**3.**CHECK P/N POSITION SIGNAL

#### 1. Turn ignition switch ON.

2. Check voltage between BCM harness connector and ground.

(· B( Connector	+) CM Terminal	()	Condition Voltage		Voltage
M13	39	Ground	Selector lever	P or N position	(V) 15 10 5 0 • • • • 10 ms JSMIA1472GB
				Other than above	0 V

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-98</u>, "Removal and Installation".

NO >> GO TO 4.

**4.**CHECK P/N POSITION SIGNAL CIRCUIT 1

1. Turn ignition switch OFF.

2. Disconnect IPDM E/R connector, BCM connector and A/T assembly connector.

3. Check continuity between A/T assembly harness connector and BCM harness connector.

A/T assembly		BCM		Continuity
Connector	Terminal	Connector	Terminal	Continuity
F2	9	M13	39	Existed

4. Check continuity between A/T assembly harness connector and ground.

A/T assembly			Continuity
Connector	Terminal	Ground	Continuity
F2	9		Not existed

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

**5.**CHECK P/N POSITION SIGNAL CIRCUIT 2

1. Check continuity between A/T assembly harness connector and IPDM E/R harness connector.

A/T ass	A/T assembly		IPDM E/R	
Connector	Terminal	Connector	Terminal	Continuity
F2	9	E121	37	Existed

2. Check continuity between A/T assembly harness connector and ground.

A/T assembly			Continuity
Connector	Terminal	Ground	Continuity
F2	9		Not existed

Is the inspection result normal?

< DTC/CIRCUIT DIAGNOSIS >

YES >> GO TO 6.

NO >> Repair or replace harness.

6.CHECK JOINT CONNECTOR

#### 1. Remove joint connector.

2. Check continuity between joint connector terminals.

A/T assembly harness connector side	TCM harness connector side	Continuity
Terminal	Terminal	Continuity
9	9	Existed

Is the inspection result normal?

- YES
- >> Replace TCM. Refer to <u>TM-219</u>, "Removal and Installation".
  >> Replace joint connector. Refer to <u>TM-219</u>, "Removal and Installation". NO

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# B2605 SHIFT POSITION

## **DTC** Description

INFOID:000000009345925

#### DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B2605	PNP/CLUTCH SW (Park neutral position/clutch switch)	When ignition switch is ON, P/N position signal input from TCM and P/N position signal (CAN) input from IPDM E/R do not match.

#### POSSIBLE CAUSE

- Harness or connectors
- (The CAN communication line is open or shorted.)
- Harness or connectors
  - (P/N position signal circuit is open or shorted.)
- BCM
- IPDM E/R
- TCM

FAIL-SAFE

#### DTC CONFIRMATION PROCEDURE

#### **1.**CHECK DTC PRIORITY

If DTC B2605 is displayed with DTC U1000 or U1010, first perform the trouble diagnosis for DTC U1000 or U1010.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000: Refer to <u>BCS-85, "DTC Description"</u>. U1010: Refer to <u>BCS-86, "DTC Description"</u>.

NO >> GO TO 2.

## 2. 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 >> Refer to <u>SEC-88</u>, "Diagnosis Procedure".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

#### **Diagnosis Procedure**

INFOID:000000009345926

#### **1.**CHECK DTC PRIORITY

If DTC B2605 is displayed with DTC U1000 or U1010, first perform the trouble diagnosis for DTC U1000 or U1010.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000: Refer to <u>BCS-85, "DTC Description"</u>. U1010: Refer to <u>BCS-86, "DTC Description"</u>.

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-85, "DTC Index".

< DTC/CIRCUIT DIAGNOSIS >

)       >> G CHECK P/I	N POSITION S	IGNAL				
Turn igniti Check vol	on switch ON. tage between I	BCM harness	connector and	l ground.		
	(+)					
	BCM	(-)	С	ondition		Voltage
Connector	Terminal	-				
M13	39	Ground	Selector lever	P or N position	(V) 15 10 5 0	D ms JSMIA1472GB
				Other than above		0 V
	on switch OFF					
Turn igniti Disconne Check co	t IPDM E/R continuity betwee	nnector and I n IPDM E/R h	BCM connector	r. ctor and BCM har	ness connec	ctor.
Turn igniti Disconne Check col	IPDM E/R co	n IPDM E/R h	BCM connector	r. ctor and BCM har BCM		ctor. Continuity
Turn igniti Disconner Check con Conner	IPDM E/R continuity betwee	nnector and E n IPDM E/R h Terminal	BCM connector	r. ctor and BCM har BCM ctor Te		Ctor. Continuity
Turn igniti Disconne Check con Conne E12	IPDM E/R continuity betwee	n IPDM E/R h	Connector Connector Connector M13	r. ctor and BCM har BCM ctor Te	ness connec erminal 39	Ctor. Continuity Existed
Turn igniti Disconner Check con Conner E12 Check con	IPDM E/R continuity betwee	n IPDM E/R h Terminal 37 n IPDM E/R h	BCM connector harness connector Connector M13 harness connector	r. ctor and BCM har BCM ctor Te ctor and ground.	ness connec erminal 39	Ctor. Continuity Existed
Turn igniti Disconner Check con Conne E12 Check con	IPDM E/R continuity betwee	n IPDM E/R h Terminal 37 n IPDM E/R h	Connector Connector Connector M13 marness connector	r. ctor and BCM har BCM ctor Te ctor and ground.	ness connec erminal 39	Ctor. Continuity Existed
Turn igniti Disconne Check con E12 Check con Conre	IPDM E/R continuity betwee	n IPDM E/R h Terminal 37 n IPDM E/R h R Terminal	ACM connector	r. ctor and BCM har BCM ctor Te ctor and ground. Ground	ness connec	Ctor. Continuity Existed Continuity
Turn igniti Disconner Check con E12 Check con Conr E1 he inspecti	IPDM E/R continuity betwee IPDM E/R IPDM E/R IPDM E/R IPDM E/R IPDM E/R IPDM E/R IPDM E/R IPDM E/R	n IPDM E/R h Terminal 37 n IPDM E/R h R Terminal 37 al?	BCM connector	r. ctor and BCM har BCM ctor Te ctor and ground. Ground	erminal	Ctor. Continuity Existed Continuity Not existed
Turn igniti Disconne Check col E12 Check col Conr E1 Check col ES >> G D >> R CHECK P/I Disconne Check col	IPDM E/R continuity betwee IPDM E/R ctor 1 Intinuity betwee IPDM E/R ector 21 Dn result normation O TO 5. epair or replace N POSITION S ct A/T assembly intinuity betwee	n IPDM E/R h Terminal 37 n IPDM E/R h R Terminal 37 al? e harness. IGNAL CIRCI y connector. n A/T assemb	Connector Connector M13 narness connector UIT 2 Dly harness cor	r. ctor and BCM har BCM ctor Te ctor and ground. Ground Ground	ness connec erminal 39	Continuity Existed Continuity Not existed
Turn igniti Disconne Check con E12 Check con Conr E1 Check con E1 he inspecti ES >> G D >> R CHECK P/I Disconne Check con	IPDM E/R continuity betwee IPDM E/R ctor 1 Intinuity betwee IPDM E/R ctor 1 Intinuity betwee IPDM E/R ector 21 IPDM E/R ector 21 IPDM E/R ector 21 IPDM E/R ector 21 IPDM E/R ector 21 IPDM E/R ector 21 IPDM E/R ector A/T assembly	n IPDM E/R h Terminal 37 n IPDM E/R h R Terminal 37 al? e harness. IGNAL CIRCI y connector. n A/T assemb	BCM connector	r. ctor and BCM har BCM ctor Te ctor and ground. Ground nnector and IPDM IPDM E/R	ness connec	Continuity Existed Continuity Not existed
Turn igniti Disconner Check con E12 Check con Conr E1 Check con ES >> G D >> R CHECK P/I Disconner Check con	IPDM E/R continuity betwee IPDM E/R ctor 1 Intinuity betwee IPDM E/R ctor 1 IPDM E/R IPDM E/R IP	nnector and B n IPDM E/R h Terminal 37 n IPDM E/R h R Terminal 37 al? e harness. IGNAL CIRCI y connector. n A/T assemb Terminal	BCM connector arness connector Connector M13 narness connector UIT 2 Dly harness cor	r. ctor and BCM har BCM ctor Te ctor and ground. Ground Ground IPDM E/R tor Te	ness connec erminal 39 I E/R harnes	ctor. Continuity Existed Continuity Not existed ss connector.
Turn igniti Disconner Check con E12 Check con Conr E1 he inspecti ES >> G D >> R CHECK P/I Disconner Check con Check con E12 the inspection ES = 20 CHECK P/I Disconner Check con	IPDM E/R continuity betwee IPDM E/R ctor 1 Intinuity betwee IPDM E/R ctor 1 Intinuity betwee IPDM E/R ector 21 IPDM E/R ector 21 IPDM E/R ector 21 IPDM E/R ector 21 IPDM E/R ector 21 IPDM E/R ector IPDM E/R IPDM E/R ector IPDM E/R IPDM	n IPDM E/R h Terminal 37 n IPDM E/R h R Terminal 37 al? e harness. IGNAL CIRCI y connector. n A/T assemb Terminal 9	BCM connector arness connector Connector M13 arness connector UIT 2 Dly harness cor Connector E121	r. ctor and BCM har BCM ctor Te ctor and ground. Ground Ground IPDM E/R tor Te	ness connec erminal 39 I E/R harnes erminal 37	Ctor. Continuity Existed Continuity Not existed Continuity Seconnector.
Turn igniti Disconner Check con E12 Check con Conr E1 Check con ES >> G O >> R CHECK P/I Disconner Check con ES Check con Check con	IPDM E/R continuity betwee IPDM E/R ctor 1 Intinuity betwee IPDM E/R ctor 1 IPDM E/R ctor 21 IPDM E/R ctor A/T assembly tor tor IPDM E/R ctor A/T assembly tor IPDM E/R ctor A/T assembly tor IPDM E/R ctor A/T assembly tor IPDM E/R ctor IPDM E/R Ctor	n IPDM E/R h Terminal 37 n IPDM E/R h R Terminal 37 al? e harness. IGNAL CIRCI y connector. n A/T assemb Terminal 9 n A/T assemb	BCM connector harness connector Connector M13 harness connector UIT 2 Oly harness cornector E121 Dly harness cornector E121	r. ctor and BCM har BCM ctor Te ctor and ground. Ground IPDM E/R tor Te innector and IPDM	ness connector erminal 39 I E/R harnes erminal 37 nd.	ctor. Continuity Existed Continuity Not existed S connector. Continuity Existed
Turn igniti Disconner Check con E12 Check con Conr E1 Check con ES >> G D >> R CHECK P/I Disconner Check con ES Check con F2 Check con	IPDM E/R continuity betwee IPDM E/R ctor 1 Intinuity betwee IPDM E/R ctor 1 IPDM E/R IPDM E/R IP	n IPDM E/R h Terminal 37 n IPDM E/R h R Terminal 37 al? e harness. IGNAL CIRCI y connector. n A/T assemb Terminal 9 n A/T assemb	BCM connector arness connector M13 harness connector UIT 2 Dly harness cor E121 Dly harness cor	r. ctor and BCM har BCM ctor Te ctor and ground. Ground Ground IPDM E/R tor Te innector and IPDM IPDM E/R	ness connec erminal 39 I E/R harnes erminal 37 nd.	ctor. Continuity Continuity Not existed Continuity Not existed
Turn igniti Disconner Check con E12 Check con Conr E1 Check con Conr E1 he inspecti ES >> G D >> R CHECK P/I Disconner Check con E2 Check con F2 Check con	IPDM E/R continuity betwee IPDM E/R ctor 1 Intinuity betwee IPDM E/R ctor 1 IPDM E/R ctor 1 IPDM E/R ector 21 IPDM E/R ector IPDM E/R ector IPDM E/R ector IPDM E/R ector IPDM E/R ector IPDM E/R ector IPDM E/R ector IPDM E/R ector IPDM E/R ector IPDM E/R ector A/T assembly tor A/T assembly A/T assembly A/T assembly A/T assembly A/T assembly A/T assembly IPDM E/R ector A/T assembly IPDM E/R ECTOR A/T assembly IPDM E/R ECTOR A/T assembly IPDM E/R ECTOR A/T assembly IPDM E/R IPDM I	n IPDM E/R h Terminal 37 n IPDM E/R h R Terminal 37 al? e harness. IGNAL CIRCI y connector. n A/T assemb Terminal 9 n A/T assemb	BCM connector arness connector Connector M13 arness connector UIT 2 Dly harness cor E121 Dly harness cor	r. ctor and BCM har BCM ctor Te ctor and ground. Ground IPDM E/R tor Te IPDM E/R tor Te IPDM E/R	I E/R harnes	ctor. Continuity Existed Continuity Not existed Continuity S connector. Continuity Existed

NO >> Repair or replace harness.

# **SEC-89**

# **B2608 STARTER RELAY**

#### **DTC** Description

INFOID:000000009345927

#### DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B2608	STARTER RELAY (Starter relay)	BCM outputs starter relay OFF signal but BCM receives starter relay ON signal from IPDM E/R (CAN).

#### POSSIBLE CAUSE

· Harness or connectors

- (The CAN communication line is open or shorted.)
- Harness or connectors (Starter motor relay circuit is open or shorted.)
- IPDM E/R

#### FAIL-SAFE

Inhibit engine cranking

#### DTC CONFIRMATION PROCEDURE

#### **1.**CHECK DTC PRIORITY

If DTC B2608 is displayed with DTC U1000, U1010, or B210D first perform the trouble diagnosis for DTC U1000 or U1010.

#### Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. U1000: Refer to <u>BCS-85, "DTC Description"</u>. U1010: Refer to <u>BCS-86, "DTC Description"</u>. B210D: Refer to <u>BCS-86, "DTC Description"</u>
- NO >> GO TO 2.

# 2. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press push-button ignition switch under the following conditions to start engine, and wait 1 second or more.
- Selector lever: In the P position
- Brake pedal: Depressed
- 2. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Refer to <u>SEC-90, "Diagnosis Procedure"</u>.
- NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

#### **Diagnosis** Procedure

INFOID:000000009345928

#### **1.**CHECK DTC PRIORITY

If DTC B2608 is displayed with DTC U1000, U1010, or B210D first perform the trouble diagnosis for DTC U1000 or U1010.

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. U1000: Refer to <u>BCS-85, "DTC Description"</u>. U1010: Refer to <u>BCS-86, "DTC Description"</u>. B210D: Refer to <u>BCS-86, "DTC Description"</u>
- NO >> GO TO 2.

2.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 <u>PCS-22, "DTC Index"</u>.

NO >> GO TO 3.

**3.**CHECK P/N POSITION SIGNAL 1

# **B2608 STARTER RELAY**

#### < DTC/CIRCUIT DIAGNOSIS >

#### 1. Turn ignition switch ON.

2. Check voltage between BCM harness connector and ground.

(+)						
BC	CM	(—)	C	ondition	Voltage	
Connector	Terminal					
M13	39	Ground	Selector lever	P or N position	(V) 15 10 5 0 10 ms JSMIA1472GB	
				Other than above	0 V	

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

#### **4.**CHECK P/N POSITION SIGNAL 2

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

(+)						
 IPDM E/R		()	C	Condition	Voltage	H
 Connector	Terminal	-				
E121	37	Ground	Soloctor lovor	P or N position	9 – 16 V	1
 EIZI	57	Ground	Selector level	Other than above	0 – 1.5 V	

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

# **5.**REPLACE IPDM E/R

- 1. Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".
- 2. Perform DTC CONFIRMATION PROCEDURE for B2608. Refer to SEC-90, "DTC Description".

#### Is DTC B2608 detected again?

- YES >> Replace BCM. Refer to <u>BCS-98. "Removal and Installation"</u>.
- NO >> INSPECTION END

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# **B260F ENGINE STATUS**

## Description

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

#### **DTC** Description

INFOID:000000009345938

INFOID:000000009345937

# DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B260F	ENG STATE SIG LOST (Engine state signal lost)	BCM has not yet received the engine status signal from ECM when ignition switch is in the ON position.

#### POSSIBLE CAUSE

- Harness or connectors
- (The CAN communication line is open or shorted.)
- ECM

#### FAIL-SAFE

Inhibit engine cranking

#### DTC CONFIRMATION PROCEDURE

#### **1.**CHECK DTC PRIORITY

If DTC B260F is displayed with DTC U1000 or U1010, first perform the trouble diagnosis for DTC U1000 or U1010.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000: Refer to <u>BCS-85, "DTC Description"</u>. U1010: Refer to <u>BCS-86, "DTC Description"</u>.

NO >> GO TO 2.

#### 2. 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 >> Refer to <u>SEC-92, "Diagnosis Procedure"</u>.
- NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

#### **Diagnosis Procedure**

INFOID:000000009345939

#### **1.**CHECK DTC PRIORITY

If DTC B260F is displayed with DTC U1000 or U1010, first perform the trouble diagnosis for DTC U1000 or U1010.

#### Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000: Refer to <u>BCS-85, "DTC Description"</u>. U1010: Refer to <u>BCS-86, "DTC Description"</u>.

NO >> GO TO 2.

# 2.INSPECTION START

- 1. Turn ignition switch ON.
- 2. Select "Self Diagnostic Result" mode of "BCM" using CONSULT.
- Touch "ERASE".
- Perform DTC CONFIRMATION PROCEDURE for DTC B260F. Refer to <u>SEC-92, "DTC Description"</u>.

#### Is DTC detected?

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

B260F ENGINE STATUS	
< DTC/CIRCUIT DIAGNOSIS >	
<b>3.</b> REPLACE ECM	A
Replace ECM. Refer EC-578. "Removal and Installation".	
>> INSPECTION END	В
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#### **B26F3 STARTER CONTROL RELAY**

#### < DTC/CIRCUIT DIAGNOSIS >

# B26F3 STARTER CONTROL RELAY

#### **DTC** Description

INFOID:000000009345952

#### DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B26F3	START CONT RLY ON (Starter control relay 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).

#### POSSIBLE CAUSE

• Harness or connectors

(The CAN communication line is open or shorted.)

- IPDM E/R
- BCM

FAIL-SAFE

Inhibit engine cranking

#### DTC CONFIRMATION PROCEDURE

#### **1.**CHECK DTC PRIORITY

If DTC B26F3 is displayed with DTC U1000 or U1010, first perform the trouble diagnosis for DTC U1000 or U1010.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000: Refer to <u>BCS-85, "DTC Description"</u>. U1010: Refer to <u>BCS-86, "DTC Description"</u>.

NO >> GO TO 2.

#### 2. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press push-button ignition switch under the following conditions to start engine.
- Selector lever: In the P position
- Brake pedal: Not depressed
- 2. Wait 2 seconds after engine started.
- 3. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Refer to <u>SEC-94, "Diagnosis Procedure"</u>.
- NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

#### Diagnosis Procedure

INFOID:000000009345953

#### **1.**CHECK DTC PRIORITY

If DTC B26F3 is displayed with DTC U1000 or U1010, first perform the trouble diagnosis for DTC U1000 or U1010.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000: Refer to <u>BCS-85, "DTC Description"</u>. U1010: Refer to <u>BCS-86, "DTC Description"</u>.

NO >> GO TO 2.

2. 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 <u>PCS-22, "DTC Index"</u>.

NO >> GO TO 3.

**3.**REPLACE BCM

# **B26F3 STARTER CONTROL RELAY**

< DTC/CIRCUIT DIAGNOSIS >	
Replace BCM. Refer to BCS-98, "Removal and Installation".	^
>> INSPECTION END	~
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#### **B26F4 STARTER CONTROL RELAY**

#### < DTC/CIRCUIT DIAGNOSIS >

# B26F4 STARTER CONTROL RELAY

#### **DTC** Description

INFOID:000000009345954

#### DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B26F4	START CONT RLY OFF (Starter control 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 (CAN).

#### POSSIBLE CAUSE

Harness or connectors

(The CAN communication line is open or shorted.)

- BCM
- IPDM E/R

FAIL-SAFE

Inhibit engine cranking

#### DTC CONFIRMATION PROCEDURE

#### **1.**CHECK DTC PRIORITY

If DTC B26F4 is displayed with DTC U1000, or U1010 first perform the trouble diagnosis for DTC U1000, or U1010.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000: Refer to <u>BCS-85, "DTC Description"</u>. U1010: Refer to <u>BCS-86, "DTC Description"</u>.

NO >> GO TO 2.

#### 2. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press push-button ignition switch under the following conditions to start engine, and wait 1 second or more.
- Selector lever: In the P position
- Brake pedal: Not depressed
- 2. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

#### Is DTC detected?

- YES >> Refer to <u>SEC-96. "Diagnosis Procedure"</u>.
- NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

#### Diagnosis Procedure

INFOID:000000009345955

#### **1.**CHECK DTC PRIORITY

If DTC B26F4 is displayed with DTC U1000, or U1010 first perform the trouble diagnosis for DTC U1000, or U1010.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000: Refer to <u>BCS-85, "DTC Description"</u>. U1010: Refer to <u>BCS-86, "DTC Description"</u>.

NO >> GO TO 2.

2. 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 <u>PCS-22, "DTC Index"</u>.

NO >> GO TO 3.

**3.**REPLACE BCM

# **B26F4 STARTER CONTROL RELAY**

Replace BCM. Refer to <u>BCS-98</u> , " <u>Removal and Installation</u> ". A B C D E F G H I J SEC L M	< DTC/CIRCUIT DIAGNOSIS >	
>> INSPECTION END	Replace BCM. Refer to BCS-98, "Removal and Installation".	^
B C D F G H 1 J 2 C C L M	>> INSPECTION END	A
C D F G H 1 J D 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1		В
C D E F G H I J SEC L M		
р с с л л л л л л л л л л л л л л л л л		С
E F G H I J SEC L M		D
E F G H J J SEC L M		D
F G H J SEC L M		E
F G H J SEC L M		
G H J SEC L M		F
H J SEC L M		G
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# B26F7 BCM

#### DTC Description

INFOID:000000009345958

#### DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B26F7	BCM (Body control module)	Inside key antenna output circuit in BCM is malfunctioning.

# POSSIBLE CAUSE

BCM

#### FAIL-SAFE

Inhibit engine cranking by Intelligent Key system

#### 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 >> Refer to <u>SEC-98</u>, "Diagnosis Procedure".
- NO-1 >> To check malfunction symptom before repair: Refer to <u>GI-43, "Intermittent Incident"</u>.
- NO-2 >> Confirmation after repair: INSPECTION END

#### Diagnosis Procedure

INFOID:000000009345959

### **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-98, "DTC Description".

#### Is DTC B26F7 detected again?

YES >> GO TO 2.

NO >> INSPECTION END

#### 2.REPLACE BCM

Replace BCM. Refer to <u>BCS-98, "Removal and Installation"</u>.

>> INSPECTION END

# **B26F8 BCM**

# < DTC/CIRCUIT DIAGNOSIS > B26F8 BCM

# **DTC Description**

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INFOID:000000009345960

# DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B26F8	BCM (Body control module)	Starter control relay control signal and feedback circuit signal (inside BCM) does not match.
POSSIBLE BCM	CAUSE	
FAIL-SAFE —		
DTC CONFI 1.PERFORI	IRMATION PROCEDUR	E PROCEDURE
1. Turn igni 2. Check D Is DTC detec	tion switch ON and wait 1 TC in "Self Diagnostic Res <u>sted?</u>	second. sult" mode of "BCM" using CONSULT.
NO-1 >> 1 NO-2 >> (	To check malfunction symp Confirmation after repair: If	tom before repair: Refer to <u>GI-43, "Intermittent Incident"</u> . NSPECTION END
Diagnosis	Procedure	INF0ID:00000000934596
1.INSPECT	ION START	
1. Turn igni 2. Select "S 3. Touch "E	tion switch ON. Self Diagnostic Result" mod RASE".	de of "BCM" using CONSULT.
4. Perform Refer to	DTC CONFIRMATION PR SEC-99, "DTC Description	OCEDURE for DTC B26F8.
Is DTC detec	ted?	_
YES >> (	GO TO 2. NSPECTION END	
2.REPLACE	E BCM	
Replace BCN	A. Refer to <u>BCS-98, "Remo</u>	oval and Installation".
~ 1	NSPECTION END	

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#### **B26FC KEY REGISTRATION**

#### < DTC/CIRCUIT DIAGNOSIS >

# B26FC KEY REGISTRATION

#### **DTC** Description

INFOID:000000009345962

#### DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B26FC	KEY REGISTRATION (Key registration)	Intelligent Key that does not match the vehicle is registered.

#### POSSIBLE CAUSE

Improper registration operation

- Intelligent Key
- BCM

FAIL-SAFE

#### 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 >> Refer to <u>SEC-100, "Diagnosis Procedure"</u>
- NO-1 >> To check malfunction symptom before repair: Refer to <u>GI-43, "Intermittent Incident"</u>.
- NO-2 >> Confirmation after repair: INSPECTION END

#### Diagnosis Procedure

INFOID:000000009345963

# **1.**REPLACE INTELLIGENT KEY

- 1. Prepare Intelligent Key that matches the vehicle.
- 2. Registration of all Intelligent Keys 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

Replace BCM. Refer to <u>BCS-98, "Removal and Installation"</u>.

>> INSPECTION END

# **B210B STARTER CONTROL RELAY**

#### < DTC/CIRCUIT DIAGNOSIS >

# B210B STARTER CONTROL RELAY

# **DTC** Description

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INFOID:000000009345973

#### DTC DETECTION LOGIC

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DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B210B	STR CONT RLY ON CIRC (Starter control relay on circuit)	<ul> <li>When comparing the following items, IPDM E/R detects that starter control relay is stuck in the ON position for 1 second or more.</li> <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> </ul>
POSSIBLE IPDM E/R	CAUSE	
FAIL-SAFE —		
DTC CONF	IRMATION PROCEDURE	
<b>1.</b> CHECK C	DTC PRIORITY	
If DTC B210 U1010.	B is displayed with DTC U1	000 or U1010, first perform the trouble diagnosis for DTC U1000 or
YES $>>1$ NO $>>0$ 2.PERFORM	Perform diagnosis of applica <u>PCS-31, "DTC Description"</u> . GO TO 2. M DTC CONFIRMATION PR	able. U1000: Refer to <u>PCS-29. "DTC Description"</u> . U1010: Refer to
1. Turn ign 2. Turn ign 3. Check D	ition switch ON. ition switch OFF and wait for TC in "Self Diagnostic Resu	1 second or more. It" mode of "IPDM E/R" using CONSULT.
YES >> I NO-1 >> NO-2 >> 0	<u>cted?</u> Refer to <u>SEC-101, "Diagnosi</u> To check malfunction sympto Confirmation after repair: INS	<u>s Procedure"</u> . om before repair: Refer to <u>GI-43, "Intermittent Incident"</u> . SPECTION END
Diagnosis	Procedure	INFOID:00000009345974
1.CHECK S	ELF DIAGNOSTIC RESULT	
Check DTC i What is the c "CRNT">> I	n "Self Diagnostic Result" m display history of DTC "B210 Replace IPDM E/R. Refer to	ode of "IPDM E/R" using CONSULT. <u>B"?</u> PCS-37, "Removal and Installation".
2.CHECK II	JU 10 2. NTERMITTENT INCIDENT	
Check interm	hittent incident. Refer to GI-4	3. "Intermittent Incident".
>>	NSPECTION END	

# B210C STARTER CONTROL RELAY

## DTC Description

INFOID:000000009345975

#### DTC DETECTION LOGIC

#### NOTE:

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.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B210C	STR CONT RLY OFF CIRC (Starter control relay off circuit)	<ul> <li>When comparing the following items, IPDM E/R detects that starter control relay is stuck in the OFF position for 1 second or more.</li> <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> </ul>

#### POSSIBLE CAUSE

- IPDM E/R
- BCM
- Battery

FAIL-SAFE

Inhibit engine cranking

#### DTC CONFIRMATION PROCEDURE

#### **1.**CHECK DTC PRIORITY

If DTC B210C is displayed with DTC U1000 or U1010, first perform the trouble diagnosis for DTC U1000 or U1010.

Is applicable DTC detected?

- YES >> Perform diagnosis of applicable. U1000: Refer to <u>PCS-29, "DTC Description"</u>. U1010: Refer to <u>PCS-31, "DTC Description"</u>.
- NO >> GO TO 2.

#### 2. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Turn ignition switch OFF and wait for 1 second or more.
- 3. Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

#### Is DTC detected?

- YES >> Refer to <u>SEC-102</u>, "Diagnosis Procedure".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

#### **Diagnosis** Procedure

INFOID:000000009345976

**1.**CHECK SELF DIAGNOSTIC RESULT

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

What is the display history of DTC "B210C"?

"CRNT">> GO TO 3.

"PAST" >> GO TO 2.

2.CHECK BATTERY VOLTAGE

Measure the battery voltage.

Which is the measurement result?

More than 12.4 V>>GO TO 5

Less than 12.4 V>>Perform battery inspection. Refer to PG-98. "Work Flow".

# SEC-102

# **B210C STARTER CONTROL RELAY**

#### < DTC/CIRCUIT DIAGNOSIS >

<ol> <li>Turn ignition sw</li> <li>Selector lever is</li> <li>Measure the vol</li> </ol>	itch ON 5 in P position. Itage between IPD	M E/R harness	connector and gr	round.	
(+	+)				
IPDN	1 E/R	(-)	Co	ondition	Voltage
Connector	Terminal				0 4014
E121	37	Ground	Shift position	P or N	9 – 16 V
I. Turn ignition sw	itch OFF				
<ol> <li>Disconnect IPD</li> <li>Check continuity</li> </ol>	M E/R connector a y between IPDM E	and BCM conne /R harness con	ctor. nector and BCM	harness conne	ctor.
<ol> <li>Disconnect IPD</li> <li>Check continuity</li> </ol>	M E/R connector a y between IPDM E PDM E/R	and BCM conne /R harness con	ctor. nector and BCM BCM	harness conne	ctor.
2. Disconnect IPD 3. Check continuit	M E/R connector a y between IPDM E PDM E/R Terminal	and BCM conne /R harness con	ctor. nector and BCM BCM	harness conne	ctor. Continuity
2. Disconnect IPD 3. Check continuity 	M E/R connector a y between IPDM E PDM E/R Terminal 37	and BCM conner /R harness con Cor	Ctor. nector and BCM BCM nector M13	harness conne Terminal 39	ctor. Continuity Existed
2. Disconnect IPD 3. Check continuity Connector E121 Is the inspection res YES >> Replace NO >> Repair of 5.CHECK INTERM	M E/R connector a y between IPDM E PDM E/R Terminal 37 ult normal? e BCM. Refer to B pr replace harness ITTENT INCIDEN	and BCM conner /R harness con Cor CS-98, "Remova  T	ctor. nector and BCM BCM Inector M13 al and Installation	harness conne Terminal 39 <u>"</u> .	ctor. Continuity Existed

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# **B210D STARTER RELAY**

# **DTC** Description

INFOID:000000009345977

#### DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B210D	STARTER RLY ON CIRC (Starter relay on circuit)	<ul> <li>When comparing the following items, IPDM E/R detects that starter relay is stuck in the ON position for 5 seconds or more.</li> <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> </ul>

#### POSSIBLE CAUSE

- Harness or connectors
- (The CAN communication line is open or shorted.)
- Harness or connectors
  - (The CAN communication line is open or shorted.)
- ÎPDM E/R
- BCM

FAIL-SAFE

#### DTC CONFIRMATION PROCEDURE

#### **1.**CHECK DTC PRIORITY

If DTC B210D is displayed with DTC U1000 or U1010, first perform the trouble diagnosis for DTC U1000 or U1010.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000: Refer to <u>PCS-29, "DTC Description"</u>. U1010: Refer to <u>PCS-31, "DTC Description"</u>.

NO >> GO TO 2.

#### 2. 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 >> Refer to <u>SEC-104</u>, "Diagnosis Procedure".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

#### **Diagnosis Procedure**

INFOID:000000009345978

#### **1.**CHECK SELF DIAGNOSTIC RESULT

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

What is the display history of DTC "B210D"?

"CRNT">> GO TO 2.

"PAST" >> GO TO 4.

#### 2. CHECK STARTER RELAY CONTROL SIGNAL CIRCUIT VOLTAGE

- 1. Turn ignition switch ON
- 2. Selector lever is in P position.
- 3. Measure the voltage between IPDM E/R harness connector and ground.

# SEC-104

# **B210D STARTER RELAY**

#### < DTC/CIRCUIT DIAGNOSIS >

(+)				
IPDM E/R		(-)	Condition	Voltage
Connector	Terminal			
E121	33	Ground	Other than at engine cran	king 6 – 16 V
nich is the measuremer	nt result?			
pprox. 12 V>>Replace	IPDM E/R. I	Refer to <u>PCS-37.</u>	"Removal and Installation"	
Disconnect IPDM E/F	R connector	and BCM connec	ctor.	
Check continuity betw	veen IPDM I	E/R harness conr	nector and ground.	
	PDM F/R			
Connector		Terminal	Ground	Continuity
F121		33		Not existed
the inspection result pe	rmal2			Not oxistou
ES >> Perform the (	diagnosis pr	ocedure for DTC	B2608 of BCM Refer to	SEC-90 "Diagnosis Proc
<u>dure"</u> .	alagnosis pi			
O >> Repair or rep	lace harness	S.		
CHECK INTERMITTE	NT INCIDEN	IT		
eck intermittent incider	nt. Refer to	GI-43, "Intermitter	nt Incident".	

# B210E STARTER RELAY

#### DTC Description

INFOID:000000009345979

#### DTC DETECTION LOGIC

#### NOTE:

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.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B210E	STARTER RLY OFF CIRC (Starter relay off circuit)	<ul> <li>When comparing the following items, IPDM E/R detects that starter relay is stuck in the OFF position for 5 seconds or more.</li> <li>Starter relay control 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> </ul>

#### POSSIBLE CAUSE

· Harness or connectors

(The CAN communication line is open or shorted.)

Harness or connector

(Starter relay control signal circuit is open or shorted.)

- IPDM E/R
- BCM
- Battery

FAIL-SAFE

#### DTC CONFIRMATION PROCEDURE

#### **1.**CHECK DTC PRIORITY

If DTC B210E is displayed with DTC U1000, U1010, or B2605 first perform the trouble diagnosis for DTC U1000, U1010, or B2605.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000: Refer to <u>BCS-85, "DTC Description"</u>. U1010: Refer to <u>BCS-86, "DTC Description"</u>. B2605: Refer to <u>SEC-88, "DTC Description"</u>.

NO >> GO TO 2.

2. 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 >> Refer to SEC-106. "Diagnosis Procedure".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

#### Diagnosis Procedure

INFOID:000000009345980

#### **1.**CHECK SELF DIAGNOSTIC RESULT

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

What is the display history of DTC "B210E"?

"CRNT">> GO TO 3. "PAST" >> GO TO 2.

#### SEC-106

# **B210E STARTER RELAY**

< DTC/CIRCUIT DIAGNOSIS >

2	.CHECK	BATTERY	VOLTAGE

Measure the battery voltage.

Which is the measurement result?

More than 12.4 V>>GO TO 5

Less than 12.4 V>>Perform battery inspection. Refer to <u>PG-98, "Work Flow"</u>.

**3.**CHECK STARTER RELAY CONTROL SIGNAL

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

	(	+)				Г
	IPDM E/R		(-)	Condition	Voltage	
(	Connector	Terminal				
	E121	33	Ground	Other than at engine cranking	6 – 16 V	E

Which is the measurement result?

Approx. 12 V>>GO TO 4.

Approx. 0 V>>Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".

## 4. CHECK STARTER RELAY CONTROL SIGNAL CIRCUIT

1. Turn ignition switch OFF.

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

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

Continuity	IPDM E/R		BCM	
Continuity	Terminal	Connector	Terminal	Connector
Existed	33	E121	62	M14

#### Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-98, "Removal and Installation"</u>.

NO >> Repair or replace harness.

#### **5.**CHECK INTERMITTENT INCIDENT

Check intermittent incident. Refer to GI-43, "Intermittent Incident".

#### >> INSPECTION END

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# **B210F SHIFT POSITION/CLUTCH INTERLOCK SWITCH**

< DTC/CIRCUIT DIAGNOSIS >

# B210F SHIFT POSITION/CLUTCH INTERLOCK SWITCH

#### **DTC** Description

INFOID:000000009345981

#### DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B210F	INTRLCK/PNP SW ON (Interlock/park neutral position switch on)	<ul><li>IPDM E/R detects a difference between the following signals</li><li>P/N position signal from TCM</li><li>P/N position signal (CAN) from BCM</li></ul>

#### POSSIBLE CAUSE

- Harness or connectors
- (The CAN communication line is open or shorted.)
- Harness or connectors
  - (P/N position signal circuit is open or shorted.)
- BCM
- IPDM E/R

FAIL-SAFE

#### DTC CONFIRMATION PROCEDURE

#### **1.**CHECK DTC PRIORITY

If DTC B210F is displayed with DTC U1000 or U1010, first perform the trouble diagnosis for DTC U1000 or U1010.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000: Refer to <u>PCS-29, "DTC Description"</u>. U1010: Refer to <u>PCS-31, "DTC Description"</u>.

NO >> GO TO 2.

## 2. 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 >> Refer to <u>SEC-108</u>, "Diagnosis Procedure".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

# Diagnosis Procedure

INFOID:000000009345982

## **1.**CHECK P/N POSITION SIGNAL

1. Turn ignition switch ON.

2. Check voltage between BCM harness connector and ground.
# **B210F SHIFT POSITION/CLUTCH INTERLOCK SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

(· 	+) CM	()	C	ondition	Voltage	1
Connector	Terminal				tolago	
M13	39	Ground	Selector lever	P or N position	(V) 15 10 5 0 10 ms JSMIA1472GB	(
				Other than above	0 V	

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-98, "Removal and Installation"</u>.

NO >> GO TO 2.

# 2. CHECK P/N POSITION SIGNAL CIRCUIT

1. Turn ignition switch OFF.

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

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

IPDM E/R		B	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
E121	37	M13	39	Existed

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

IPDN	M E/R		Continuity	
Connector	Terminal	Ground	Continuity	
E121	37		Not existed	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".

NO >> Repair or replace harness.

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# **B2110 SHIFT POSITION/CLUTCH INTERLOCK SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

# B2110 SHIFT POSITION/CLUTCH INTERLOCK SWITCH

## **DTC** Description

INFOID:000000009345983

## DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B2110	INTRLCK/PNP SW OFF (Interlock/park neutral position switch off)	<ul> <li>IPDM E/R detects a difference between the following signals</li> <li>P/N position signal from TCM</li> <li>P/N position signal (CAN) from BCM</li> </ul>

#### POSSIBLE CAUSE

- Harness or connectors
- (The CAN communication line is open or shorted.)
- Harness or connectors
- (P/N position signal circuit is open or shorted.)
- TCM
- BCM
- IPDM E/R

FAIL-SAFE

#### DTC CONFIRMATION PROCEDURE

#### **1.**CHECK DTC PRIORITY

If DTC B2110 is displayed with DTC U1000 or U1010, first perform the trouble diagnosis for DTC U1000 or U1010.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000: Refer to <u>PCS-29, "DTC Description"</u>. U1010: Refer to <u>PCS-31, "DTC Description"</u>.

NO >> GO TO 2.

## 2. 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 the 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 >> Refer to <u>SEC-110, "Diagnosis Procedure"</u>.
- NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
- NO-2 >> Confirmation after repair: INSPECTION END

#### Diagnosis Procedure

INFOID:000000009345984

## **1.**CHECK P/N POSITION SIGNAL

1. Turn ignition switch ON.

2. Check voltage between BCM harness connector and ground.

# **B2110 SHIFT POSITION/CLUTCH INTERLOCK SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

(-	+)				
BC	CM	()	C	ondition	Voltage
Connector	Terminal				
M13	39	Ground	Selector lever	P or N position	(V) 15 10 5 0 10 ms JSMIA1472GB
				Other than above	0 V

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-98, "Removal and Installation"</u>.

NO >> GO TO 2.

# 2. CHECK P/N POSITION SIGNAL CIRCUIT

1. Turn ignition switch OFF.

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

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

IPDM E/R		B	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
E121	37	M13	39	Existed

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

IPDN	M E/R		Continuity	
Connector	Terminal	Ground	Continuity	
E121	37		Not existed	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".

NO >> Repair or replace harness.

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## < DTC/CIRCUIT DIAGNOSIS >

# SECURITY INDICATOR LAMP

# Component Function Check

1. CHECK FUNCTION

1. Perform "THEFT IND" in "ACTIVE TEST" mode of "IMMU" of "BCM" using CONSULT.

2. Check security indicator lamp operation.

Test	Test item		ription
	ON	Socurity indicator Jamp	Illuminates
	OFF	Security indicator lamp	Does not illuminate

Is the inspection result normal?

YES >> INSPECTION END

NO >> Refer to <u>SEC-112</u>, "Diagnosis Procedure".

#### Diagnosis Procedure

INFOID:000000009345986

INFOID:00000009345985

# **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	6 (10 A)
Ignition power supply	11 (5 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.

(+) Combination meter			Condition		Voltage
		()			
Connector	Terminal				
M58	45	Ground	Ignition switch	ON	Battery voltage
10150	46 Ground		ignition switch	OFF, ACC or ON	Dattory Voltage

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

 $\mathbf{3}.$ CHECK SECURITY INDICATOR LAMP SIGNAL

1. Connect combination meter connector.

2. Disconnect BCM connector.

3. Check voltage between BCM harness connector and ground.

(	+)		
B	CM	()	Voltage
Connector	Terminal		
M13	18	Ground	Battery voltage

Is the inspection result normal?

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

## SECURITY INDICATOR LAMP

< DTC/CIRCUIT DIAGNOSIS >

# **4.**REPLACE BCM

Replace BCM. Refer to <u>BCS-98, "Removal and Installation"</u>.

#### >> 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.

Combinat	Combination meter		BCM		
Connector	Terminal	Connector	Terminal	Continuity	D
M57	7	M13	18	Existed	-

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

Combination meter			Continuity	
Connector	Terminal	Ground	Continuity	
M57	7	-	Not existed	_

#### Is the inspection result normal?

YES >> Replace combination meter. Refer to <u>MWI-126, "Removal and Installation"</u>.

NO >> Repair or replace harness.

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# **HOOD SWITCH**

# < DTC/CIRCUIT DIAGNOSIS >

# HOOD SWITCH

## **Component Function Check**

INFOID:000000009345987

# **1.**CHECK FUNCTION

1. Select "HOOD SW" in "Data Monitor" mode of "IPDM E/R" using CONSULT.

2. Check "HOOD SW" indication under the following condition.

Monitor item	Condition		Indication
	Hood	Open	ON
	ΠΟΟΔ	Close	OFF

#### Is the indication normal?

YES >> Hood switch is OK.

NO >> Refer to SEC-114, "Diagnosis Procedure".

#### Diagnosis Procedure

INFOID:000000009345988

## **1.**CHECK HOOD SWITCH SIGNAL

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

(+)			
Hood	switch	(-)	Voltage
Connector	Terminal		
E77 2		Ground	9 – 16 V

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

## 2. CHECK HOOD SWITCH SIGNAL CIRCUIT

1. Disconnect IPDM E/R connector.

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

IPDI	IPDM E/R		Hood switch	
Connector	Terminal	Connector	Terminal	Continuity
E126	96	E77	2	Existed

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

IPDM E/R			Continuity
Connector	Terminal	Ground	Continuity
E126	96		Not existed

Is the inspection result normal?

#### YES >> Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".

NO >> Repair or replace harness.

3.CHECK HOOD SWITCH GROUND CIRCUIT

Check continuity between hood switch harness connector and ground.

Ноос	d switch		Continuity
Connector	Connector Terminal		Continuity
E77	1		Existed

# **HOOD SWITCH**

	2912 >		
s the inspection result nor	rmal?		
YES >> GO IO 4.	ace harness		
<b>1.</b> CHECK HOOD SWITC	CH		
Refer to <u>SEC-115, "Comp</u>	onent Inspection".		
s the inspection result nor	rmal?		
YES >> GO TO 5.			
NO >> Replace hood	l lock assembly. Refer	to <u>DLK-215, "HOOD LOCK : R</u>	emoval and Installation".
CHECK INTERMITTEN	NT INCIDENT		
efer to GI-43, "Intermitte	nt Incident".		
>> INSPECTION	END		
omponent Inspection	on		INFOID:00000009345989
CHECK HOOD SWITC	'n		
. Turn ignition switch O	FF.		
<ul> <li>Check continuity betw</li> </ul>	/een hood switch term	inals.	
Check continuity betw	veen hood switch term	inals.	
Check continuity betw Hood s	veen hood switch term	inals. Condition	Continuity
Check continuity betw Hood s	veen hood switch term witch inal	inals. Condition	Continuity
Check continuity betw Hood s Termi	veen hood switch term witch inal	inals. Condition Close the hood	Continuity Not existed
Check continuity betw Hood s Termi	veen hood switch term witch inal 2	Condition Close the hood Open the hood	Continuity Not existed Existed
Check continuity betw Hood s Termi 1 the inspection result nor	veen hood switch term witch inal 2 rmal?	inals. Condition Close the hood Open the hood	Continuity Not existed Existed
Check continuity betw Hood s Term 1 the inspection result noi YES >> INSPECTION	veen hood switch term witch inal 2 rmal? END	inals. Condition Close the hood Open the hood	Continuity Not existed Existed
. Check continuity betw Hood s Termi 1 <u>the inspection result non</u> YES >> INSPECTION NO >> Replace hood	veen hood switch term witch inal 2 <u>rmal?</u> END I lock assembly. Refer	inals. Condition Close the hood Open the hood	Continuity Not existed Existed Removal and Installation".
. Check continuity betw Hood s Termi 1 the inspection result nor YES >> INSPECTION NO >> Replace hood	veen hood switch term witch inal 2 rmal? END I lock assembly. Refer	Condition Close the hood Open the hood	Continuity Not existed Existed Removal and Installation".
Check continuity betw Hood s Termi 1 the inspection result nor YES >> INSPECTION NO >> Replace hood	veen hood switch term witch inal 2 rmal? I END I lock assembly. Refer	Condition Close the hood Open the hood	Continuity Not existed Existed
Check continuity betw Hood s Termi 1 the inspection result nor (ES >> INSPECTION NO >> Replace hood	veen hood switch term witch inal 2 rmal? END END I lock assembly. Refer	Condition Close the hood Open the hood	Continuity Not existed Existed
Check continuity betw Hood s Termi 1 the inspection result not (ES >> INSPECTION NO >> Replace hood	veen hood switch term witch inal 2 <u>rmal?</u> I END I lock assembly. Refer	Condition Close the hood Open the hood	Continuity Not existed Existed
Check continuity betw Hood s Termi 1 the inspection result noi (ES >> INSPECTION NO >> Replace hood	veen hood switch term witch inal 2 rmal? END END I lock assembly. Refer	Condition Close the hood Open the hood	Continuity Not existed Existed Cemoval and Installation".
Check continuity betw Hood s Termi 1 the inspection result nor (ES >> INSPECTION NO >> Replace hood	veen hood switch term witch inal 2 rmal? END END I lock assembly. Refer	Condition Close the hood Open the hood	Continuity Not existed Existed

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## < DTC/CIRCUIT DIAGNOSIS >

# HEADLAMP FUNCTION

# **Component Function Check**

INFOID:000000009346010

# 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	Hoadlamps (Hi)	Light
	OFF	rieaulaitips (rii)	Do not light

Is the inspection result normal?

YES >> INSPECTION END

NO >> Refer to <u>SEC-116</u>, "Diagnosis Procedure".

## **Diagnosis Procedure**

INFOID:000000009346011

**1.**CHECK HEADLAMP FUNCTION

Refer to EXL-130. "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-43, "Intermittent Incident".

>> INSPECTION END

< DTC/CIRCUIT	DIAGNOSIS	>					
HORN FUN	CTION						
Component	Function Ch	leck				A	
1.CHECK FUN	CTION 1					В	
<ol> <li>Disconnect vehicle security horn relay.</li> <li>Perform "VEHICLE SECURITY HORN" in "ACTIVE TEST" mode of "THEFT ALM" of "BCM" using CON- SULT.</li> <li>Check the horn operation.</li> </ol>							
	Test it	em		Des	scription	Γ	
VEHICLE SEC	URITY HORN C	N		Horn (LOW and HIGH)	Sounds (for	0.5 sec.)	
Is the operation of YES >> GO NO >> Refe 2.CHECK FUN	<u>normal?</u> TO 2. er to <u>SEC-117, "I</u> CTION 2	<u>Diagnosis Proc</u>	<u>edure"</u> .			E	
<ol> <li>Reconnect v</li> <li>Disconnect I</li> <li>Perform "VE SULT.</li> <li>Check the her</li> </ol>	ehicle security I norn relay. HICLE SECUR orn operation.	norn relay. ITY HORN" in ",	ACTIVE T	EST" mode of "THEFT	ALM" of "B	CM" using CON-	
	Test it	em		Des	scription	H	
VEHICLE SEC	URITY HORN C	N		Vehicle security horn	Sounds (for	0.5 sec.)	
YES >> INSI NO >> Refe Diagnosis Pi 1.INSPECTION	PECTION END or to <u>SEC-117, "</u> ocedure START	Diagnosis Proc	<u>edure"</u> .			INFOID:00000009345991 J	
Perform inspection	on in accordanc	e with procedur	e that cont	firms malfunction.		SE	
Which procedure Component Fun Component Fun 2.CHECK HOR	confirms malfunction Check 1> action Check 2> N FUNCTION	<u>nction?</u> >GO TO 2. >GO TO 5.				L	
Check horn func	tion using horn :	switch.				N	
Do the horn sour YES >> GO NO >> Che <b>3.</b> CHECK HOR	<u>nd?</u> TO 3. ck horn circuit. F N RELAY CON <sup>-</sup>	Refer to <u>HRN-3,</u> TROL SIGNAL	"Wiring D	iagram".		Ν	
<ol> <li>Turn ignition</li> <li>Select "VEH SULT.</li> <li>Check voltage</li> </ol>	switch ON. ICLE SECURIT ge between IPD	™ HORN" in "A M E/R harness	CTIVE TE	EST" mode of "THEFT and ground.	ALM" of "B(	CM" using CON-	
IPD Connector	(+) M E/R Terminal	()		Test item		Voltage	

Is the operation normal?

23

Ground

E121

VEHICLE SECURITY

HORN

On

Off

0 – 1 V

9 – 16 V

< DTC/CIRCUIT DIAGNOSIS >

YES >> GO TO 10.

NO >> GO TO 4.

**4.**CHECK HORN RELAY CONTROL SIGNAL CIRCUIT

1. Disconnect IPDM E/R connector and horn relay connector.

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

	IPDM E/R		Horn relay		Continuity
-	Connector	Terminal	Connector	Terminal	Continuity
-	E121	23	E102	2	Existed

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

	IPDN	/I E/R		Continuity
	Connector Terminal		Ground	Continuity
-	E121 23			Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-37. "Removal and Installation".

NO >> Repair or replace harness.

**5.**CHECK VEHICLE SECURITY HORN RELAY CONTROL SIGNAL

- 1. Turn ignition switch ON.
- Select "VEHICLE SECURITY HORN" in "ACTIVE TEST" mode of "THEFT ALM" of "BCM" using CON-SULT.
- 3. Check voltage between IPDM E/R harness connector and ground.

(+) IPDM E/R		()	Test ii	tem	Voltage	
Connector	Terminal		reschem		volage	
F121	22	Ground	VEHICLE SECURITY	On	0 – 1 V	
	22	Ground	HORN	Off	9 – 16 V	

Is the operation normal?

YES >> GO TO 10.

NO >> GO TO 6.

#### **6.**CHECK VEHICLE SECURITY HORN RELAY POWER SUPPLY

Check voltage between vehicle security horn relay harness connector and ground.

(+) Vehicle security horn relay			Voltage	
		()		
Connector	Terminal			
E101	1	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 7.

NO-1 >> Check 10 A fuse [No. 65 located in the fuse block (J/B)].

NO-2 >> Check harness for open or short between vehicle security horn relay and fuse.

# 7. CHECK VEHICLE SECURITY HORN CONTROL CIRCUIT

1. Disconnect IPDM E/R connector and vehicle security horn relay connector.

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

## < DTC/CIRCUIT DIAGNOSIS >

IPDN	M E/R	Vehicle sec	curity horn relay	
Connector	Terminal	Connector	Terminal	Continuity
E121	22	E101	2	Existed
3. Check continuity be	etween IPDM E/R harr	ness connector and	d ground.	
	IPDM E/R		Orecord	Continuity
E121	Ierminal		Ground	Not ovisted
	22 normal?			NOI EXISIEU
YES >> GO TO 8. NO >> Repair or ro 8.CHECK VEHICLE S	eplace harness. ECURITY HORN CIR	CUIT		
<ol> <li>Disconnect vehicle</li> <li>Check continuity b ness connector.</li> </ol>	security horn connect etween vehicle securi	or. ity horn relay harn	ess connector an	d vehicle security horn
Vehicle secu	rity horn relay	Vehicles	security horn	Continuity
Connector	Terminal	Connector	Terminal	
E101	3	E73	1	Existed
3. Check continuity be	etween vehicle securit	y horn relay harnes	ss connector and	ground.
Vehicl	e security horn relay		Ground	
Connector	Terminal			
E101	3			Not existed
<ol> <li>Check continuity be</li> </ol>	etween vehicle securit	y horn harness cor	nector and groun	d.
Ver	nicle security horn			Continuity
Connector	Terminal	l	Ground	Continuity
E74	2			Existed
Is the inspection result YES >> GO TO 9. NO >> Repair or re 9.CHECK VEHICLE S	<u>normal?</u> eplace harness. ECURITY HORN REL	AY		
Refer to <u>SEC-119, "Cor</u>	mponent Inspection".			
Is the inspection result	normal?			
NO >> Replace ve	whicle security horn relation	ay.		
10. CHECK INTERMI	TTENT INCIDENT	-		
Check intermittent incic	lent Refer to GI-43 "I	ntermittent Incident	r"	
			<u> </u>	
>> INSPECTIO	ON END			
		Δ٧		INF01D:0000000
		_/ \ 1		

Disconnect vehicle security horn relay.
 Check voltage between vehicle security horn relay terminal and ground under the following conditions.

# **SEC-119**

## < DTC/CIRCUIT DIAGNOSIS >

(+) Vehicle security horn relay Terminal	(–)	Condition	Voltage
3	Ground	12 V direct current supply between terminals (1) and (2)	Battery voltage
0	Cround	No current supply	0

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace vehicle security horn relay.

# ENGINE DOES NOT START WHEN INTELLIGENT KEY IS INSIDE OF VEHICLE < SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS	
	А
ENGINE DOES NOT START WHEN INTELLIGENT KEY IS INSIDE OF VE-	
HICLE	В
Description	_
Engine does not start when push-button ignition switch is pressed while carrying Intelligent Key.	С
Diagnosis Procedure	
1.PERFORM WORK SUPPORT	D
Perform "INSIDE ANT DIAGNOSIS" in "Work Support" mode of "INTELLIGENT KEY" of "BCM" using CON-	
Refer to SEC-27, "INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY)".	Е
>> GO TO 2.	F
2.PERFORM SELF-DIAGNOSIS RESULT	
Select "Self Diagnostic Result" mode of "BCM", and check whether or not DTC of inside key antenna is detected.	G
Is DTC detected?	
<ul> <li>YES &gt;&gt; Perform the trouble diagnosis for detected DTC. Refer to <u>BCS-62, "DTC Index"</u>.</li> <li>NO &gt;&gt; GO TO 3.</li> </ul>	Н
<b>3.</b> CHECK PUSH-BUTTON IGNITION SWITCH	
Check push-button ignition switch. Refer to PCS-81, "Component Function Check".	I
Is the operation normal?	
YES >> GO TO 4.	J
NO >> Repair or replace malfunctioning parts.	
4.REPLACE BCM	
Replace BCM. Refer to BCS-98, "Removal and Installation"	SEC
Is the inspection result normal?	
YES >> INSPECTION END NO >> Check intermittent incident. Refer to GI-43. "Intermittent Incident"	L
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## SECURITY INDICATOR LAMP DOES NOT TURN ON OR BLINK

#### < SYMPTOM DIAGNOSIS >

# SECURITY INDICATOR LAMP DOES NOT TURN ON OR BLINK

## Description

Security indicator lamp does not blink when ignition switch is other than ON.

## Diagnosis Procedure

INFOID:000000009763870

INFOID:000000009763869

1. CHECK SECURITY INDICATOR LAMP

Check security indicator lamp. Refer to <u>SEC-112</u>, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.REPLACE BCM

Replace BCM. Refer to BCS-98. "Removal and Installation"

Is the inspection result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u>.

VEHICLE SECURITY SYSTEM CANNOT BE SET	
VEHICLE SECURITY SYSTEM CANNOT BE SET	
INTELLIGENT KEY	A
INTELLIGENT KEY : Description	R
ARMED phase is not activated when door is locked using Intelligent Key.	D
INTELLIGENT KEY : Diagnosis Procedure	С
1. CHECK INTELLIGENT KEY SYSTEM (REMOTE KEYLESS ENTRY FUNCTION)	0
Press the LOCK button of Intelligent Key.	D
NO >> Check Intelligent Key system (remote keyless entry function). Refer to <u>DLK-146, "Diagnosis Pro-</u> <u>cedure"</u> .	E
2.CHECK HOOD SWITCH	
Check hood switch. Refer to <u>SEC-114, "Component Function Check"</u> .	F
Is the inspection result normal?	G
<ul> <li>YES &gt;&gt; GO TO 3.</li> <li>NO &gt;&gt; Repair or replace malfunctioning parts. Refer to <u>SEC-114, "Diagnosis Procedure"</u>.</li> </ul>	0
3. CHECK TRUNK ROOM LAMP SWITCH	н
Check trunk room lamp switch. Refer to DLK-133, "Component Function Check".	
Is the inspection result normal?	
<ul> <li>YES &gt;&gt; GO TO 4.</li> <li>NO &gt;&gt; Repair or replace malfunctioning parts. Refer to <u>DLK-133, "Diagnosis Procedure"</u>.</li> </ul>	
4.REPLACE BCM	J
Replace BCM. Refer to BCS-98, "Removal and Installation"	
Is the inspection result normal?	SEC
NO >> Check intermittent incident. Refer to GI-43, "Intermittent Incident".	
DOOR REQUEST SWITCH	I
DOOR REQUEST SWITCH : Description	
ARMED phase is not activated when door is locked using door request switch.	M
DOOR REQUEST SWITCH : Diagnosis Procedure	
1. CHECK INTELLIGENT KEY SYSTEM (DOOR LOCK FUNCTION)	Ν
Carry the Intelligent Key and press the door request switch.	
Are all doors LOCKED?	0
NO >> Check Intelligent Key system (door lock function). Refer to <u>DLK-143, "ALL DOOR REQUEST</u> SWITCHES : Diagnosis Procedure".	
2.CHECK HOOD SWITCH	Ρ
Check hood switch.	
Refer to <u>SEC-114, "Component Function Check"</u> .	
YES >> GO TO 3.	
NO >> Repair or replace malfunctioning parts. Refer to <u>SEC-114, "Diagnosis Procedure"</u> .	

# SEC-123

# VEHICLE SECURITY SYSTEM CANNOT BE SET

< SYMPTOM DIAGNOSIS >

**3.**CHECK TRUNK ROOM LAMP SWITCH

Check trunk room lamp switch.

Refer to DLK-133, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace malfunctioning parts. Refer to <u>DLK-133, "Diagnosis Procedure"</u>.

**4.**REPLACE BCM

Replace BCM. Refer to <u>BCS-98. "Removal and Installation"</u>

Is the inspection result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to <u>GI-43. "Intermittent Incident"</u>.

DOOR LOCK AND UNLOCK SWITCH

DOOR LOCK AND UNLOCK SWITCH : Description

Armed phase is not activated when door is locked using door lock and unlock switch.

DOOR LOCK AND UNLOCK SWITCH : Diagnosis Procedure

INFOID:000000009763862

INFOID:000000009763861

1. CHECK INTELLIGENT KEY SYSTEM (DOOR LOCK FUNCTION)

Press the LOCK button of door lock and unlock switch.

Are all doors LOCKED?

YES >> GO TO 2.

NO >> Check Intelligent Key system (door lock function). Refer to <u>DLK-139, "ALL DOOR : Diagnosis Pro-</u> cedure".

2. CHECK HOOD SWITCH

Check hood switch.

Refer to SEC-114, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts. Refer to <u>SEC-114, "Diagnosis Procedure"</u>.

**3.**CHECK TRUNK ROOM LAMP SWITCH

Check trunk room lamp switch.

Refer to DLK-133, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace malfunctioning parts. Refer to <u>DLK-133, "Diagnosis Procedure"</u>.

**4.**REPLACE BCM

Replace BCM. Refer to BCS-98, "Removal and Installation"

Is the inspection result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u>.

DOOR KEY CYLINDER

DOOR KEY CYLINDER : Description

ARMED phase is not activated when door is locked using mechanical key.

DOOR KEY CYLINDER : Diagnosis Procedure

1.CHECK POWER DOOR LOCK SYSTEM

Mechanical key inserted in the door key cylinder on driver side, turning it to LOCK position.

#### **SEC-124**

INFOID:000000009763863

INFOID:000000009763864

# VEHICLE SECURITY SYSTEM CANNOT BE SET

< SYMPTOM DIAGNOSIS >	
Are all doors LOCKED?	
<ul> <li>YES &gt;&gt; GO TO 2.</li> <li>NO &gt;&gt; Check power door lock system. Refer to <u>DLK-145, "Diagnosis Procedure"</u>.</li> </ul>	A
2.CHECK HOOD SWITCH	D
Check hood switch. Refer to <u>SEC-114, "Component Function Check"</u> .	В
Is the inspection result normal?	C
YES >> GO TO 3. NO >> Repair or replace malfunctioning parts. Refer to <u>SEC-114, "Diagnosis Procedure"</u> .	0
<b>3.</b> CHECK TRUNK ROOM LAMP SWITCH	D
Check trunk room lamp switch. Refer to DLK-133, "Component Function Check".	
<u>Is the inspection result normal?</u> YES >> GO TO 4.	E
NO >> Repair or replace malfunctioning parts. Refer to <u>DLK-133, "Diagnosis Procedure"</u> .	
4.REPLACE BCM	F
Replace BCM. Refer to BCS-98, "Removal and Installation"	
Is the inspection result normal?	G
YES >> INSPECTION END	0
NO >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u> .	
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## **VEHICLE SECURITY ALARM DOES NOT ACTIVATE**

#### < SYMPTOM DIAGNOSIS >

# VEHICLE SECURITY ALARM DOES NOT ACTIVATE

## Description

Alarm does not operate when alarm operating condition is satisfied.

## Diagnosis Procedure

INFOID:000000009763868

INFOID:000000009763867

**1.**CHECK DOOR SWITCH

Check door switch circuit. Refer to DLK-111, "Component Function Check".

Is the inspection result normal?

- YES >> GO TO 2.
- NO >> Repair or replace malfunctioning parts. Refer to <u>DLK-111, "Diagnosis Procedure"</u>.

2. CHECK HOOD SWITCH

Check hood switch circuit.

Refer to SEC-114, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace malfunctioning parts. Refer to <u>SEC-114, "Diagnosis Procedure"</u>.

3.CHECK HEADLAMP FUNCTION

Check headlamp function.

Refer to SEC-116, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace malfunctioning parts. Refer to <u>SEC-116. "Diagnosis Procedure"</u>.

**4.**CHECK HORN FUNCTION

Check horn function.

Refer to SEC-117, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace malfunctioning parts. Refer to <u>SEC-117, "Diagnosis Procedure"</u>.

**5.**REPLACE BCM

Replace BCM. Refer to BCS-98, "Removal and Installation"

Is the inspection result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-43, "Intermittent Incident".

# PANIC ALARM FUNCTION DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >
PANIC ALARM FUNCTION DOES NOT OPERATE
Description INFOID:00000000763865
Panic alarm does not operate when press the PANIC ALARM button of Intelligent Key. $_{ m B}$
Diagnosis Procedure
1.CHECK INTELLIGENT KEY SYSTEM (REMOTE KEYLESS ENTRY FUNCTION)
Press the LOCK button of Intelligent Key.
Are all doors LOCKED?
<ul> <li>YES &gt;&gt; GO TO 2.</li> <li>NO &gt;&gt; Check Intelligent Key system (remote keyless entry function). Refer to <u>DLK-146</u>, "<u>Diagnosis Pro-</u> <u>cedure</u>".</li> </ul>
2.CHECK HEADLAMP FUNCTION
Check headlamp function. Refer to <u>SEC-116, "Component Function Check"</u> .
Is the inspection result normal?
YES >> GO TO 3. NO >> Repair or replace malfunctioning parts. Refer to <u>SEC-116, "Diagnosis Procedure"</u> .
3. CHECK HORN FUNCTION
Check horn function. Refer to <u>SEC-117, "Component Function Check"</u> .
Is the inspection result normal?
YES >> GO TO 4. NO >> Repair or replace malfunctioning parts. Refer to <u>SEC-117, "Diagnosis Procedure"</u> .
4.REPLACE BCM
Replace BCM. Refer to BCS-98, "Removal and Installation"
Is the inspection result normal?
YES >> INSPECTION END NO >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u> .

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# < REMOVAL AND INSTALLATION > REMOVAL AND INSTALLATION

# NATS ANTENNA AMP.

# Removal and Installation

INFOID:000000009346005

#### REMOVAL

- 1. Disengage cluster lid A fixing pawls. Refer to IP-12, "Removal and Installation".
- 2. Disconnect push-button ignition switch connector and NATS antenna amp. connector.
- 3. Disengage NATS antenna amp. fixing pawls and then remove NATS antenna amp. ① and push-button ignition switch ② as a set from cluster lid A ③.

: Pawl



4. Disengage NATS antenna amp. fixing pawl and then remove NATS antenna amp. (2) from push-button ignition switch ①.





INSTALLATION Install in the reverse order of removal.