# SECURITY CONTROL SYSTEM

# CONTENTS

### **INTELLIGENT KEY : CONSULT Function (BCM -**WITH INTELLIGENT KEY SYSTEM INTELLIGENT KEY) .....19 PRECAUTION ......4 THEFT ALM : CONSULT Function (BCM - THEFT PRECAUTIONS ......4 Precaution for Supplemental Restraint System ALM) ......22 (SRS) "AIR BAG" and "SEAT BELT PRE-TEN-IMMU : CONSULT Function (BCM - IMMU) ......23 Precaution for Work ......4 DIAGNOSIS SYSTEM (IPDM E/R) .....25 PREPARATION .......5 CONSULT Function (IPDM E/R) .....25 PREPARATION ......5 ECU DIAGNOSIS INFORMATION ......27 Special Service Tool .....5 ECM, IPDM E/R, BCM ......27 SYSTEM DESCRIPTION ...... 6 List of ECU Reference ......27 COMPONENT PARTS ......6 Component Parts Location ......6 NATS Antenna Amp. .....7 **INTELLIGENT KEY SYSTEM/ENGINE** Wiring Diagram ......28 SYSTEM ......9 NISSAN VEHICLE IMMOBILIZER SYSTEM-**INTELLIGENT KEY SYSTEM/ENGINE START** FUNCTION ......9 INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION : System Description ......9 VEHICLE SECURITY SYSTEM ......46 Wiring Diagram ......46 NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS...11 NISSAN VEHICLE IMMOBILIZER SYSTEM-BASIC INSPECTION ......55 NATS : System Description ......12 DIAGNOSIS AND REPAIR WORK FLOW ......55 VEHICLE SECURITY SYSTEM ......14 Work Flow ......55 VEHICLE SECURITY SYSTEM : System Description ......14 ADDITIONAL SERVICE WHEN REPLACING DIAGNOSIS SYSTEM (BCM) .....18 ECM : Description ......58 COMMON ITEM : CONSULT Function (BCM -COMMON ITEM) .....18 ECM : Work Procedure ......58 INTELLIGENT KEY ......19 BCM ......58

D

Ε

F

Н

J

SEC

L

Μ

Ν

Ο

BCM : Description BCM : Work Procedure	
DTC/CIRCUIT DIAGNOSIS	60
P1610 LOCK MODE DTC Description Diagnosis Procedure	60
P1611 ID DISCORD, IMMU-ECM DTC Description Diagnosis Procedure	61
P1612 CHAIN OF ECM-IMMU DTC Description Diagnosis Procedure	63
P1614 CHAIN OF IMMU-KEY DTC Description Diagnosis Procedure	65
B210B STARTER CONTROL RELAY DTC Description Diagnosis Procedure	67
B210C STARTER CONTROL RELAY DTC Description Diagnosis Procedure	68
B210D STARTER RELAY DTC Description Diagnosis Procedure	69
B210E STARTER RELAY DTC Description Diagnosis Procedure	71
B210F TRANSMISSION RANGE SWITCH DTC Description Diagnosis Procedure	73
B2110 TRANSMISSION RANGE SWITCH DTC Description Diagnosis Procedure	76
B2192 ID DISCORD, IMMU-ECM DTC Description Diagnosis Procedure	79
B2193 CHAIN OF ECM-IMMU DTC Description Diagnosis Procedure	81
B2195 ANTI-SCANNING DTC Description Diagnosis Procedure	83
B2196 DONGLE UNIT DTC Description Diagnosis Procedure	85
B2198 NATS ANTENNA AMP DTC Description	

Diagnosis Procedure	87
B2555 STOP LAMP	89
DTC Description	
Diagnosis Procedure	
Component Inspection	
<b>B2556 PUSH-BUTTON IGNITION SWITCH</b>	92
DTC Description	92
Diagnosis Procedure	
Component Inspection	
B2557 VEHICLE SPEED	
DTC Description	
Diagnosis Procedure	94
B2560 STARTER CONTROL RELAY	
DTC Description	
Diagnosis Procedure	96
B2601 SHIFT POSITION	97
DTC Description	
Diagnosis Procedure	
Component Inspection	
B2602 SHIFT POSITION	100
DTC Description	
Diagnosis Procedure	
Component Inspection	
B2603 SHIFT POSITION	103
DTC Description	103
Diagnosis Procedure	103
Component Inspection	106
DOCAL CLIET DOCITION	
B2604 SHIFT POSITION	
DTC Description	
Diagnosis Procedure	107
B2605 SHIFT POSITION	110
DTC Description	
Diagnosis Procedure	
	110
B2608 STARTER RELAY	113
DTC Description	
Diagnosis Procedure	
-	
B260F ENGINE STATUS	115
DTC Description	115
Diagnosis Procedure	115
B261E VEHICLE TYPE	
DTC Description	
Diagnosis Procedure	117
B26F3 STARTER CONTROL RELAY	110
DTC Description	
•	
Diagnosis Procedure	119
B26F4 STARTER CONTROL RELAY	120
DTC Description	
Diagnosis Procedure	
	120

B26F7 BCM       1         DTC Description       1         Diagnosis Procedure       1	121
B26FC KEY REGISTRATION       1         DTC Description       1         Diagnosis Procedure       1	122
HEADLAMP FUNCTION       1         Component Function Check       1         Diagnosis Procedure       1	123
HOOD SWITCH       1         Component Function Check       1         Diagnosis Procedure       1         Component Inspection       1	124 124
HORN FUNCTION       1         Component Function Check       1         Diagnosis Procedure       1         Component Inspection       1	126 126
SECURITY INDICATOR LAMP1 Component Function Check	129
SYMPTOM DIAGNOSIS1	131
INTELLIGENT KEY SYSTEM SYMPTOMS 1 Diagnosis Procedure 1	
ENGINE CAN NOT START	132

ENGINE DOES NOT START WHEN INTELLI- GENT KEY IS INSIDE OF VEHICLE	А
ENGINE DOES NOT START WHEN INTELLI- GENT KEY IS INSIDE OF VEHICLE (ONE	В
KEY)	С
DOOR DOES NOT LOCK/UNLOCK AND EN- GINE DOES NOT START (REQ SW/PUSH SW) (ONE KEY)	D
Description	E
REMOVAL AND INSTALLATION138	F
NATS ANTENNA AMP.138Exploded View138Removal and Installation138	г G
PUSH-BUTTON IGNITION SWITCH139Exploded View139Removal and Installation139	Н
IMMOBILIZER CONTROL MODULE	
REMOTE KEYLESS ENTRY RECEIVER 141 Removal and Installation	
HOOD SWITCH	J

SEC

L

M

Ν

0

# < 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. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

### WARNING:

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

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

### WARNING:

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

# Precaution for Work

INFOID:000000012875967

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

# PREPARATION

# PREPARATION

# Special Service Tool

The actual shape of the tools may differ from those illustrated here.

Tool number (TechMate No.) Tool name		Description	(
_		Removing trim components	
(J-46534) Trim Tool Set	AWJIA0483ZZ		E

J

G

Н

# SEC

L

Μ

Ν

Ο

Ρ

INFOID:000000012875968

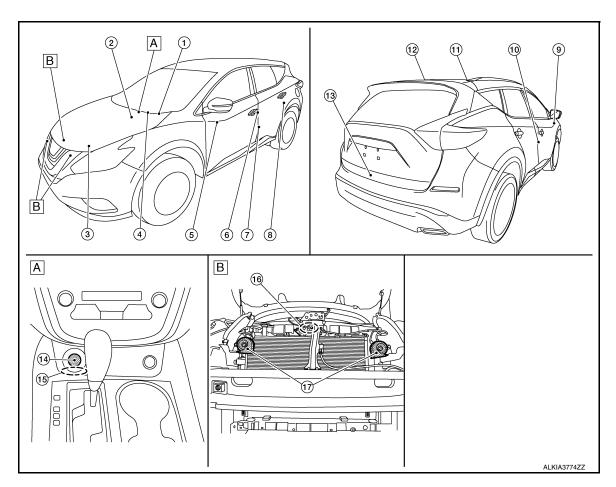
A

В

# SYSTEM DESCRIPTION COMPONENT PARTS

# **Component Parts Location**

INFOID:000000012875969



A. View of center console.

### B. View with front bumper fascia removed.

No.	Component Function		
1.	Combination meter	Combination meter transmits the vehicle speed signal to BCM via CAN commu- nication. 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 NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS [NVIS (NATS)] is on board. Refer to <u>MWI-5, "METER SYSTEM : Component Parts Location"</u> .	
2.	Inside key antenna (instrument center)	Inside key antenna (instrument center) detects whether Intelligent Key is inside the vehicle or not, and then transmits the signal to the BCM. Refer to <u>DLK-20</u> , "Inside Key Antenna (Instrument Center)".	
3.	Transmission range switch	The transmission range switch detects the selector lever position. Refer to <u>TM-13</u> , "CVT CONTROL SYSTEM : Transmission Range Switch".	

# **COMPONENT PARTS**

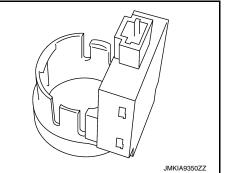
# < SYSTEM DESCRIPTION >

# [WITH INTELLIGENT KEY SYSTEM]

No.	Component	Function	
4.	ВСМ	BCM controls INTELLIGENT KEY SYSTEM (ENGINE START FUNCTION)         NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS [NVIS (NATS)] and VEH         CLE SECURITY SYSTEM.         BCM performs the ID verification between BCM and Intelligent Key when the         telligent Key is carried into the detection area of inside key antenna, and pu         button ignition switch is pressed. If the ID verification result is OK, ignition swit         operation is available.         Then, when the ignition switch is turned ON, BCM performs ID verification is tween BCM and ECM. If the ID verification result is OK, ECM can start eng         Refer to BCS-4. "BODY CONTROL SYSTEM : Component Parts Location"         detailed installation location.	
5.	Main power window and door lock/unlock switch	Door lock and unlock switch is integrated into the power window main switch. Door lock and unlock switch transmits door lock/unlock operation signal to BCM. Refer to <u>PWC-7, "Main Power Window and Door Lock/Unlock Switch"</u> .	
6.	Front door lock assembly LH	Door key cylinder switch is integrated into front door lock assembly (driver side). Door key cylinder switch detects door LOCK/UNLOCK operation using me- chanical key, and then transmits the operation signal to BCM. Refer to <u>DLK-22, "Front Door Lock Assembly (LH)"</u> .	
7.	Front door switch LH	Front door switch LH transmits door open/closed signal to the BCM.	
8.	Rear door switch LH	Rear door switch LH transmits door open/closed signal to the BCM.	
9.	Remote keyless entry receiver	Remote keyless entry receiver receives button operation signal and key ID signal of Intelligent Key and then transmits them to BCM. Refer to <u>DLK-19. "Remote Keyless Entry Receiver"</u> .	
10.	Front door switch RH	Door switch detects door open/close condition and then transmits ON/OFF signal to BCM.	
11.	Inside key antenna (console)	Inside key antenna (console) detects whether Intelligent Key is inside the vehi- cle or not, and then transmits the signal to the BCM. Refer to <u>DLK-20, "Inside Key Antenna (Console)"</u> .	
12.	Inside key antenna (luggage room)	Inside key antenna (luggage room) detects whether Intelligent Key is inside the vehicle or not, and then transmits the signal to the BCM. Refer to <u>DLK-20</u> , "Inside Key Antenna (Console)".	
13.	Back door lock assembly	Back door lock actuator locks/unlocks the back door latch assembly.	
14.	Push-button ignition switch	Push-button ignition switch has push switch inside which detects that push- ton ignition switch is pressed and then transmits ON/OFF signal to BCM. B changes the ignition switch position with the operation of push-button igniti switch. BCM maintains the ignition switch position status while push-buttor nition switch is not operated.	
15.	NATS antenna amp.	SEC-7, "NATS Antenna Amp."	
16.	Hood switch	Hood switch transmits hood open/closed signal to the IPDM E/R. Refer to <u>DLK-20, "Outside Key Antenna (Rear Bumper)"</u> .	
17.	Horns	IPDM E/R energizes the horns when the security system is activated.	

# 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 power switch, in case that Intelligent Key battery is discharged. If the ID verification result is OK, the operation of power switch is available.



0

Ρ

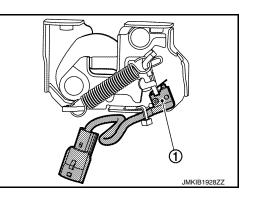
INFOID:000000012875970

Ν

INFOID:000000012875971

# 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.



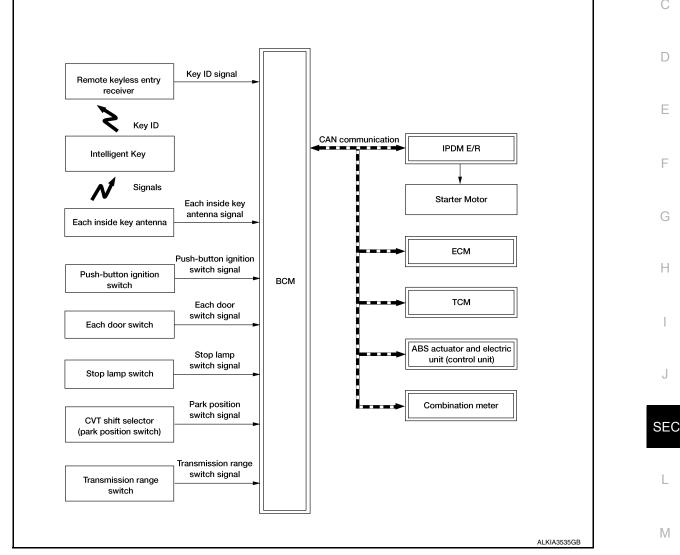
# SYSTEM DESCRIPTION > [WITH INTELLIG SYSTEM INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION INTELLIGENT KEY OVOTEM/ENGINE START FUNCTION

# INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION : System Description

INFOID:000000012875972

А

# SYSTEM DIAGRAM



# 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 IVIS (NATS) ID]. It can perform the door lock/unlock operation and the push-button ignition switch operation when the registered Intelligent Key is carried.
- When Intelligent Key battery is discharged, engine can be started by operating push-button ignition switch after contacting Intelligent Key backside to push-button ignition switch. At that time, the IVIS (NATS) ID verification is performed.
- 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 initialization and registration of Intelligent Key, refer to CONSULT Immobilizer mode and follow the onscreen instructions.

Revision: December 2015

# SEC-9

# < SYSTEM DESCRIPTION >

### NOTE:

Refer to <u>SEC-9</u>, "INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION : System Description" for any functions other than engine start function of Intelligent Key system.

# PRECAUTIONS FOR INTELLIGENT KEY SYSTEM

The transponder [the chip for IVIS (NATS) ID verification] is integrated into the Intelligent Key. In that case, the IVIS (NATS) ID verification can be performed when Intelligent Key backside is contacted to push-button ignition switch. If verification result is OK, engine can be started.

# OPERATION WHEN INTELLIGENT KEY IS CARRIED

- 1. When the push-button ignition switch is pressed, 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. BCM detects the selector lever position and brake pedal operating condition.
- 7. 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.
- 8. IPDM E/R turns the starter control relay ON when receiving the starter request signal.
- 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 "KEY" warning lamp in the combination meter illuminates. At that time, the engine cannot be started.

10. When BCM receives feedback signal from ECM indicating that the engine is started, the BCM transmits a stop signal to IPDM E/R and stops cranking by turning OFF the starter motor relay. (If engine start is unsuccessful, cranking stops automatically within 5 seconds.)

### CAUTION: When the Intelligent k

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

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

### **OPERATION RANGE**

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

### ENGINE START OPERATION WHEN INTELLIGENT KEY IS CONTACTED TO PUSH-BUTTON IG-NITION SWITCH

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

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

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

### NOTE:

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

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

# < SYSTEM DESCRIPTION >

# [WITH INTELLIGENT KEY SYSTEM]

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

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

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

Emergency stop operation

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

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

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

J

Е

F

Н

SEC

L

Μ

Ν

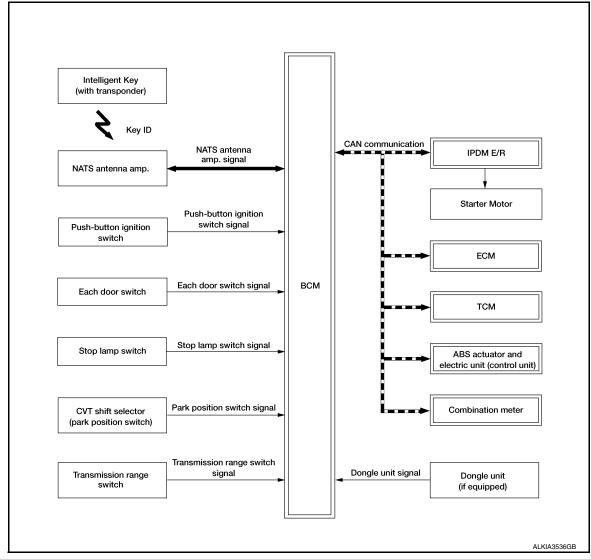
Ο

# < SYSTEM DESCRIPTION >

# [WITH INTELLIGENT KEY SYSTEM]

# NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS : System Description

### SYSTEM DIAGRAM



# SYSTEM DESCRIPTION

- The NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS [NVIS (NATS)] prevents the engine from being started by Intelligent Key whose ID is not registered to the vehicle (BCM). It has higher protection against auto theft involving the duplication of mechanical keys.
- The ignition key integrated in the Intelligent Key cannot start the engine. When the Intelligent Key battery is discharged, the NVIS (NATS) ID verification is performed between the transponder integrated with Intelligent Key and BCM via NATS antenna amp., when the Intelligent Key backside is contacted to push-button ignition switch. If the verification results are OK, the engine start operation can be performed by the push-button ignition switch operation.
- Locate the security indicator lamp and apply the anti-theft system equipment sticker that warns that the NVIS (NATS) is on-board the model.
- Security indicator lamp always blinks when the power supply position is any position other than ON.
- Up to 4 Intelligent Keys can be registered (including the standard ignition key) upon request from the owner.
- Specified registration is required when replacing ECM, BCM or Intelligent Key.
- For initialization and registration of Intelligent Key, refer to CONSULT Immobilizer mode and follow the onscreen instructions.
- Possible symptom of NVIS (NATS) malfunction is "Engine cannot start". The engine can not be started because of other than NVIS (NATS) malfunction, so start the trouble diagnosis according to <u>SEC-55</u>, "Work <u>Flow"</u>.
- If ECM other than genuine part is installed, the engine cannot be started. For ECM replacement procedure, refer to <u>EC-574, "Removal and Installation"</u>.

# < SYSTEM DESCRIPTION >

# [WITH INTELLIGENT KEY SYSTEM]

### PRECAUTIONS FOR KEY REGISTRATION

- The ID registration is a procedure that erases the current NVIS (NATS) ID once, and then reregisters a new ID. Therefore, before starting the registration operation, collect all registered Intelligent Keys from the customer.
- When registering the Intelligent Key, perform only one procedure to simultaneously register both ID [NVIS (NATS) ID and Intelligent Key ID].

### SECURITY INDICATOR LAMP

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

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

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

- 1. When brake pedal is depressed while selector lever is in the P (Park) 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 NVIS (NATS) ID verification between BCM and Intelligent Key (transponder built-in) via NATS antenna amp.
- 3. When the NVIS (NATS) ID verification result is OK, buzzer in combination meter sounds and BCM transmits the result to ECM.
- 4. 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. BCM detects that the selector lever position is P (Park) or N (Neutral).
- 7. 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.
- 8. IPDM E/R turns the starter control relay ON when receiving the starter request signal.
- 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 the table "POWER SUPPLY POSITION CHANGE TABLE BY PUSH-BUTTON IGNITION SWITCH OPERATION" below.

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

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

• When an Intelligent Key is within the detection area of inside key antenna and when Intelligent Key backside is contacted to push-button ignition switch, it is equivalent to the operations below.

• When starting the engine, the BCM monitors under the engine start conditions:

- Brake pedal operating condition

- Selector lever position

- Vehicle speed

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

	Engine start/	Push-button ignition switch		
Power supply position	Selector lever	Brake pedal operation condition	operation frequency	
$LOCK \rightarrow ACC$	—	Not depressed	1	
$LOCK \rightarrow ACC \rightarrow ON$	—	Not depressed	2	
$LOCK \to ACC \to ON \to OFF$	—	Not depressed	3	

SEC

L

Μ

Ν

Ρ

J

D

F

Н

# < SYSTEM DESCRIPTION >

	Engine start/s	stop condition	Push-button ignition switch
Power supply position	Selector lever	Brake pedal operation condition	operation frequency
$\begin{array}{l} LOCK \to START \\ ACC \to START \\ ON \to START \end{array}$	P (Park) or N (Neutral) po- sition	Depressed	1
Engine is running $\rightarrow \text{OFF}$	—	—	1

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

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

Emergency stop operation

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

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

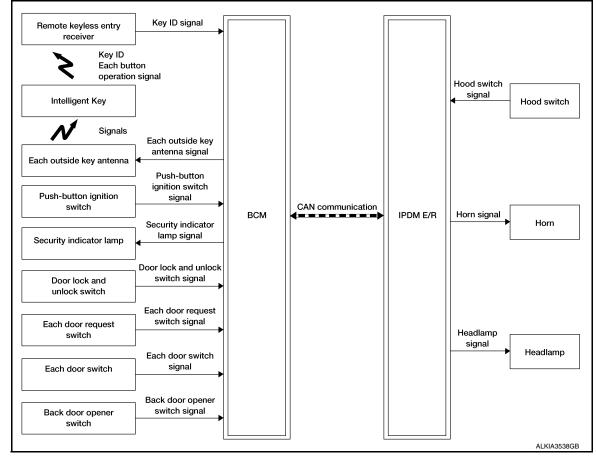
# VEHICLE SECURITY SYSTEM

# VEHICLE SECURITY SYSTEM : System Description

INFOID:000000012875974

[WITH INTELLIGENT KEY SYSTEM]

# SYSTEM DIAGRAM



# 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.

# < SYSTEM DESCRIPTION >

• 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.

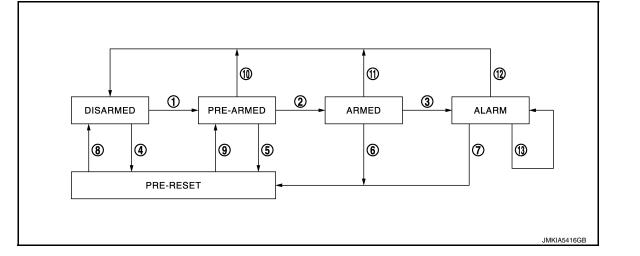
The priority of the functions are as per the following.

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 or hood is opened by unauthorized means while the system is in the ARMED state.
- Security indicator lamp on combination meter always blinks when power supply position is any position other than ON. Security indicator lamp blinking warns that the vehicle is equipped with a vehicle security system.

### **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 <ul> <li>Power supply position: OFF/LOCK</li> <li>All doors: Closed</li> <li>Hood: Closed</li> </ul>	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 all of the following conditions are satisfied for 30 seconds.	<ul><li>Power supply position: OFF/LOCK</li><li>All doors: Locked</li><li>Hood: Closed</li></ul>			
3	ARMED to ALARM	When one condition of A and one condition of B are satis- fied.	A Intelligent Key: Not used	B • Any door: Open • Hood: Open		
4	DISARMED to PRE-RESET	When all conditions of A and one condition of B is satis- fied.	A • Power supply position: OFF/LOCK • All doors: Closed • Hood: Open	B All doors are locked by: • Door key cylinder LOCK switch • LOCK button of Intelligent Key • Door request switch		
5	PRE-ARMED to PRE-RESET	When one of the following conditions is satisfied.	Hood: Open			
6	ARMED to PRE-RESET	No conditions.				
7	ALARM to PRE-RESET					

В

А

[WITH INTELLIGENT KEY SYSTEM]

С

D

Ε

F

Н

# < SYSTEM DESCRIPTION >

### [WITH INTELLIGENT KEY SYSTEM]

System state		Switching condition
PRE-RESET to DISARMED	When one of the following conditions is satisfied.	<ul> <li>Power supply position: ACC/ON/CRANKING/RUN</li> <li>Door key cylinder UNLOCK switch: ON</li> <li>UNLOCK button of Intelligent Key: ON</li> <li>Door request switch: ON</li> <li>Back door opener switch: ON</li> <li>UNLOCK switch of door lock and unlock switch: ON</li> <li>Any door: Open</li> </ul>
PRE-RESET to PRE-ARMED	When all of the following conditions are satisfied.	<ul> <li>Power supply position: OFF/LOCK</li> <li>All doors: Closed</li> <li>Hood: Closed</li> </ul>
PRE-ARMED to DISARMED	When one of the following conditions is satisfied.	<ul> <li>Power supply position: ACC/ON/CRANKING/RUN</li> <li>Door key cylinder UNLOCK switch: ON</li> <li>UNLOCK button of Intelligent Key: ON</li> <li>AUTO BACK DOOR button of Intelligent Key: ON</li> <li>Door request switch: ON</li> <li>Back door opener switch: ON</li> <li>Any door: Open</li> </ul>
ARMED to DISARMED	When one of the following conditions is satisfied.	<ul> <li>Power supply position: ACC/ON/CRANKING/RUN</li> <li>Door key cylinder UNLOCK switch: ON</li> </ul>
ALARM to DISARMED		<ul> <li>UNLOCK button of Intelligent Key: ON</li> <li>AUTO BACK DOOR button of Intelligent Key: ON</li> <li>Door request switch: ON</li> <li>Back door opener switch: ON</li> </ul>
RE-ALARM	When one of the following conditions is satisfied after the ALARM operation is fin- ished.	<ul><li>Any door: Open</li><li>Hood: Open</li></ul>
	PRE-RESET to DISARMED PRE-RESET to PRE-ARMED to DISARMED ARMED to DISARMED ALARM to DISARMED	PRE-RESET to DISARMEDWhen one of the following conditions is satisfied.PRE-RESET to PRE-ARMEDWhen all of the following conditions are satisfied.PRE-ARMED to DISARMEDWhen one of the following conditions is satisfied.ARMED to DISARMEDWhen one of the following conditions is satisfied.ARMED to DISARMEDWhen one of the following conditions is satisfied.RE-ALARM to DISARMEDWhen one of the following conditions is satisfied.RE-ALARM to ALARM to DISARMEDWhen one of the following conditions is satisfied after the ALARM operation is fin-

### NOTE:

- · BCM ignores the door key cylinder UNLOCK switch signal input for 1 second after the door key cylinder LOCK switch signal input.
- To lock/unlock all doors by operating remote control button of Intelligent Key or door request switch, Intelligent Key must be within the detection area of outside key antenna. For details, refer to <u>SEC-9. "INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION : System Description"</u>.
- To open back door by operating back door opener switch, Intelligent Key must be within the detection area of outside key antenna. For details, refer to <u>DLK-25</u>, "INTELLIGENT KEY SYSTEM : System Description".

### **DISARMED** Phase

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

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

### PRE-ARMED Phase

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

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

### ARMED Phase

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

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

### ALARM Phase

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

To cancel the ALARM operation, refer to the switching condition of No. 12 in the table above. <b>NOTE:</b>	^
If a battery terminal is disconnected during the ALARM phase, theft warning alarm stops. But when the battery terminal is reconnected, theft warning alarm is activated again.	A
PRE-RESET Phase The PRE-RESET phase is the transient state between each phase and DISARMED phase. If only the condi- tion of hood 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.	B
PANIC ALARM	0
<ul> <li>The panic alarm function activates horns and headlamps intermittently when the owner presses the PANIC ALARM button of Intelligent Key outside the vehicle while the power supply position is OFF or LOCK.</li> <li>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</li> </ul>	D
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.	E
<ul> <li>Panic alarm operation is cancelled when BCM receives one of the following signals:</li> <li>LOCK button of Intelligent Key: ON</li> </ul>	F
<ul> <li>UNLOCK button of Intelligent Key: ON</li> <li>PANIC ALARM button of Intelligent Key: Long pressed</li> </ul>	
- Any door request switch: ON	G
	)
	Н

J

L

Μ

Ν

Ο

# DIAGNOSIS SYSTEM (BCM) COMMON ITEM

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

INFOID:000000013377242

# APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

Direct Diagnostic Mode	Description
ECU Identification	The BCM part number is displayed.
Self Diagnostic Result	The BCM self diagnostic results are displayed.
Data Monitor	The BCM input/output data is displayed in real time.
Active Test	The BCM activates outputs to test components.
Work support	The settings for BCM functions can be changed.
Configuration	<ul><li>The vehicle specification can be read and saved.</li><li>The vehicle specification can be written when replacing BCM.</li></ul>
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

# SYSTEM APPLICATION BCM can perform the following functions:

		Direct Diagnostic Mode							
System	Sub System	ECU Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN Diag Support Mntr	
Door lock	DOOR LOCK		×	×	×	×			
Rear window defogger	REAR DEFOGGER			×	×	×			
Warning chime	BUZZER			×	×				
Interior room lamp timer	INT LAMP			×	×	×			
Exterior lamp	HEADLAMP			×	×	×			
Wiper and washer	WIPER			×	×	×			
Turn signal and hazard warning lamps	FLASHER			×	×	×			
Air conditioner	AIR CONDITIONER			×					
Intelligent Key system	INTELLIGENT KEY		×	×	×	×			
Combination switch	COMB SW			×					
BCM	BCM	×	×			×	×	×	
Immobilizer	IMMU		×	×	×				
Interior room lamp battery saver	BATTERY SAVER			×	×				
Back door open	TRUNK			×					
Vehicle security system	THEFT ALM			×	×	×			
RAP system	RETAINED PWR			×					
Signal buffer system	SIGNAL BUFFER			×	×				
TPMS	AIR PRESSURE MONITOR		×	×	×				

FREEZE FRAME DATA (FFD)

# **DIAGNOSIS SYSTEM (BCM)**

### < SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

А

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

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

### NOTE:

\*: Power 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

Ρ 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)

INFOID:000000013377243

0

SELF DIAGNOSTIC RESULT Refer to BCS-52, "DTC Index".

**Revision: December 2015** 

# < SYSTEM DESCRIPTION >

# **DIAGNOSIS SYSTEM (BCM)**

# [WITH INTELLIGENT KEY SYSTEM]

# DATA MONITOR

Monitor Item [Unit]	Main	Description		
REQ SW -DR [On/Off]	×	Indicates condition of door request switch LH.		
REQ SW -AS [On/Off]	×	Indicates condition of door request switch RH.		
REQ SW -BD/TR [On/Off]	×	Indicates condition of back door request switch.		
PUSH SW [On/Off]		Indicates condition of push-button ignition switch.		
SHIFTLOCK SOLENOID PWR SUPPLY [On/Off]	×	Indicates condition of power supply to shiftlock solenoid.		
BRAKE SW 1 [On/Off]	×	Indicates condition of brake switch.		
BRAKE SW 2 [On/Off]		Indicates condition of brake switch.		
DETE/CANCL SW [On/Off]	×	Indicates condition of P (park) position.		
SFT PN/N SW [On/Off]	×	Indicates condition of P (park) or N (neutral) position.		
UNLK SEN -DR [On/Off]	×	Indicates condition of door unlock sensor.		
PUSH SW -IPDM [On/Off]		Indicates condition of push-button ignition switch received from IPDM E/R on CAN communication line.		
IGN RLY1 -F/B [On/Off]		Indicates condition of ignition relay 1 received from IPDM E/R on CAN commu- nication line.		
DETE SW -IPDM [On/Off]		Indicates condition of park position switch received from TCM on CAN commu- nication line.		
SFT PN -IPDM [On/Off]		Indicates condition of P (park) or N (neutral) position from TCM on CAN com- munication line.		
SFT P -MET [On/Off]		Indicates condition of P (park) position from TCM on CAN communication line.		
SFT N -MET [On/Off]		Indicates condition of N (neutral) position from IPDM E/R on CAN communica- tion line.		
ENGINE STATE [Stop/Start/Crank/Run]	×	Indicates condition of engine state from ECM on CAN communication line.		
VEH SPEED 1 [mph/km/h]	×	Indicates condition of vehicle speed signal received from ABS on CAN commu- nication line.		
VEH SPEED 2 [mph/km/h]	×	Indicates condition of vehicle speed signal received from combination meter on CAN communication line.		
DOOR STAT -DR [LOCK/READY/UNLK]	×	Indicates condition of driver side door status.		
DOOR STAT -AS [LOCK/READY/UNLK]	×	Indicates condition of passenger side door status.		
DOOR STAT -RR [LOCK/READY/UNLK]	×	Indicates condition of rear right side door status.		
DOOR STAT -RL [LOCK/READY/UNLK]	×	Indicates condition of rear left side door status.		
BK DOOR STATE [LOCK/READY/UNLK]	×	Indicates condition of back door status.		
ID OK FLAG [Set/Reset]		Indicates condition of Intelligent Key ID.		
PRMT ENG STRT [Set/Reset]		Indicates condition of engine start possibility.		
PRMT RKE STRT [Set/Reset]		Indicates condition of engine start possibility from Intelligent Key.		
I-KEY OK FLAG [Key ON/Key OFF]	×	Indicates condition of Intelligent Key OK flag.		
PRBT ENG STRT [Set/Reset]		Indicates condition of engine start prohibit.		
ID AUTHENTICATION CANCEL TIMER [under a stop]		Indicates condition of Intelligent Key ID authentication.		
ACC BATTERY SAVER [under a stop]		Indicates condition of battery saver.		
CRNK PRBT TMR [On/Off]		Indicates condition of crank prohibit timer.		
AUT CRNK TMR [On/Off]		Indicates condition of automatic engine crank timer from Intelligent Key.		
CRANKING TME [sec]		Indicates condition of engine cranking time from Intelligent Key.		
ST RLY -REQ		Indicates condition of starter relay.		
IGN RLY 1 -REQ		Indicates condition of ignition 1 relay.		
IGN RLY 2 -REQ		Indicates condition of ignition 2 relay.		

Revision: December 2015

**SEC-20** 

2016 Murano NAM

# **DIAGNOSIS SYSTEM (BCM)**

# < SYSTEM DESCRIPTION >

# [WITH INTELLIGENT KEY SYSTEM]

Monitor Item [Unit]	Main	Description
DETE SW PWR [On/Off]		Indicates condition of park position switch voltage.
ACC RLY -REQ [On/Off]		Indicates condition of accessory relay control request.
RKE OPE COUN1 [0-19]	×	When remote keyless entry receiver receives the signal transmitted while oper- ating on Intelligent Key, the numerical value start changing.
RKE OPE COUN2 [0-19]	×	When remote keyless entry receiver receives the signal transmitted while oper- ating on Intelligent Key, the numerical value start changing.
TRNK/HAT MNTR [On/Off]		Indicates condition of luggage room lamp switch.
RKE-LOCK [On/Off]		Indicates condition of lock signal from Intelligent Key.
RKE-UNLOCK [On/Off]		Indicates condition of unlock signal from Intelligent Key.
RKE-TR/BD [On/Off]		Indicates condition of back door open signal from Intelligent Key.
RKE-PANIC [On/Off]		Indicates condition of panic signal from Intelligent Key.
RKE-MODE CHG [On/Off]		Indicates condition of mode change signal from Intelligent Key.
RKE PBD		Indicates condition of power back door signal from Intelligent Key.

# ACTIVE TEST

Test Item	Description	
INTELLIGENT KEY LINK (CAN)	This test is able to check Intelligent Key identification number [Off/ID No1/ID No2/ID No3/ID No4/ID No5].	
INT LAMP	This test is able to check interior room lamp operation [On/Off].	
FLASHER	This test is able to check hazard lamp operation [LH/RH/Off].	
HORN	This test is able to check horn operation [On].	
BATTERY SAVER	This test is able to check battery saver operation [On/Off].	
TRUNK/BACK DOOR	This test is able to check back door actuator operation [Open].	
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation [On/Off].	
INSIDE BUZZER	This test is able to check combination meter warning chime operation [Take Out/Knob/Key/ Off].	
INDICATOR	This test is able to check combination meter warning lamp operation [KEY ON/KEY IND/Off].	
IGN CONT2	This test is able to check ignition relay-2 control operation [On/Off].	22
ENGINE SW ILLUMI	This test is able to check push-button ignition switch START indicator operation [On/Off].	
PUSH SWITCH INDICATOR	This test is able to check push-button ignition switch indicator operation [On/Off].	
ACC CONT	This test is able to check accessory relay control operation [On/Off].	
IGN CONT1	This test is able to check ignition relay-1 control operation [On/Off].	
ST CONT LOW	This test is able to check starter control relay operation [On/Off].	
IGNITION RELAY	This test is able to check ignition relay operation [On/Off].	
REVERSE LAMP TEST	This test is able to check reverse lamp illumination operation [On/Off].	
DOOR HANDLE LAMP TEST	This test is able to check door handle lamp illumination operation [On/Off].	
TRUNK/LUGGAGE LAMP TEST	This test is able to check cargo lamp illumination operation [On/Off].	
KEYFOB PW TEST	This test is able to check power window operation using the Intelligent Key [P/W up/down OFF/Send P/W down ON/Send P/W up ON].	
SHIFTLOCK SOLENOID TEST	This test is able to check shift lock solenoid operation [On/Off].	
DR SEAT LAMP TEST	This test is able to check driver seat lamp illumination operation [On/Off].	
AS SEAT LAMP TEST	This test is able to check passenger seat lamp illumination operation [On/Off].	
SHIFT SPOT LAMP TEST	This test is able to check shift spot lamp illumination operation [On/Off].	

# WORK SUPPORT

# < SYSTEM DESCRIPTION >

# DIAGNOSIS SYSTEM (BCM)

# [WITH INTELLIGENT KEY SYSTEM]

Support Item	Se	tting	Description	
IGN/ACC BATTERY SAVER	On*		Battery saver function ON.	
IGN/ACC BATTERT SAVER	Off		Battery saver function OFF.	
	On*		Remote engine start function ON.	
REMOTE ENGINE STARTER	Off		Remote engine start function OFF.	
	BUZZER*		Buzzer reminder function by door lock/unlock request switch ON	
	HORN		Horn chirp reminder function by door lock request switch ON.	
ANSWERBACK I-KEY LOCK UNLOCK	Off		No reminder function by door lock/unlock request switch.	
	INVALID		This mode is not used.	
ANSWERBACK KEYLESS LOCK UN-	On*		Buzzer or horn chirp reminder when doors are locked/unlocked with Intelligent Key.	
LOCK	Off		No buzzer or horn chirp reminder when doors are locked/unlocked with Intelligent Key.	
ANSWER BACK	On*		Horn chirp reminder when doors are locked with Intelligent Key.	
ANSWER DACK	Off		No horn chirp reminder when doors are locked with Intelligent Key.	
RETRACTABLE MIRROR SET	On		Retractable mirror set ON.	
RETRACTABLE MIRROR SET	Off*		Retractable mirror set OFF.	
LOCK/UNLOCK BY I-KEY	On*		Door lock/unlock function from Intelligent Key ON.	
LOCK UNLOCK BT I-RET	Off		Door lock/unlock function from Intelligent Key OFF.	
ENGINE START BY I-KEY	On*		Engine start function from Intelligent Key ON.	
ENGINE START BT FRET	Off		Engine start function from Intelligent Key OFF.	
TRUNK/GLASS HATCH OPEN	On*		Buzzer reminder function by back door request switch ON.	
	Off		Buzzer reminder function by back door request switch OFF.	
CONFIRM KEY FOB ID	-	_	Intelligent Key ID code can be checked.	
		70 msec		
SHORT CRANKING OUTPUT	Start	100 msec	Starter motor operation duration times.	
		200 msec		
	End		—	
INSIDE ANT DIAGNOSIS	-	_	This function allows inside key antenna self-diagnosis.	
	MODE7	5 min		
	MODE6 4 min			
	MODE5	3 min		
AUTO LOCK SET	MODE4 2 min		Auto door lock time can be set in this mode.	
	MODE3*	1 min		
	MODE2 30 sec MODE1 Off			

# \*: Initial Setting

# THEFT ALM

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

INFOID:000000013377244

# DATA MONITOR

Monitor Item	Description
REQ SW -DR [On/Off]	Indicates condition of door request switch LH.
REQ SW -AS [On/Off]	Indicates condition of door request switch RH.
REQ SW -RR [On/Off]	Indicates condition of rear door request switch RH.

**SEC-22** 

# DIAGNOSIS SYSTEM (BCM)

### < SYSTEM DESCRIPTION >

# [WITH INTELLIGENT KEY SYSTEM]

Monitor Item	Description	
REQ SW -RL [On/Off]	Indicates condition of rear door request switch LH.	
REQ SW-BD/TR [On/Off]	Indicates condition of back door request switch.	
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.	
UNLK SEN -DR [On/Off]	Indicates condition of door unlock sensor.	
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.	
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.	
DOOR SW-RR [On/Off]	Indicates condition of rear door switch RH.	
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH.	
DOOR SW-BK [On/Off]	Indicates condition of back door switch.	
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch.	
CDL UNLOCK SW [On/Off]	Indicates condition of unlock signal from door lock and unlock switch.	
KEY CYL LK-SW [On/Off]	Indicates condition of lock signal from door key cylinder switch.	
KEY CYL UN-SW [On/Off]	Indicates condition of unlock signal from door key cylinder switch.	
TRNK/HAT MNTR [On/Off]	Indicates condition of luggage room lamp switch.	
TR/BD OPEN SW [On/Off]	Indicates condition of back door opener switch.	
RKE-LOCK [On/Off]	Indicates condition of lock signal from Intelligent Key.	
RKE-UNLOCK [On/Off]	Indicates condition of unlock signal from Intelligent Key.	
RKE-TR/BD [On/Off]	Indicates condition of back door open signal from Intelligent Key.	

# ACTIVE TEST

Test Item	Description	
FLASHER	This test is able to check turn signal lamp operation [LH/RH/Off].	
THEFT IND	This test is able to check security indicator lamp operation [On/Off].	
VEHICLE SECURITY HORN	This test is able to check vehicle security horn operation [On].	
HEADLAMP(HI)	This test is able to check vehicle security lamp operation [On].	

# WORK SUPPORT

Support Item	Setting	Description	
SECURITY ALARM SET	On*	Security alarm ON.	
SECURITY ALARIVISET	Off	Security alarm OFF.	

# \* : Initial setting

# IMMU : CONSULT Function (BCM - IMMU)

# SELF DIAGNOSTIC RESULT Refer to <u>BCS-52. "DTC Index"</u>.

# DATA MONITOR

Monitor Item [Unit]	Description	
CONFRM ID ALL [Yet/DONE]		F
CONFIRM ID4 [Yet/DONE]		
CONFIRM ID3 [Yet/DONE]	Switches to DONE when an Intelligent Key is registered.	
CONFIRM ID2 [Yet/DONE]		
CONFIRM ID1 [Yet/DONE]		

INFOID:000000013377245

SEC

Μ

Ν

Ο

# DIAGNOSIS SYSTEM (BCM)

# < SYSTEM DESCRIPTION >

Monitor Item [Unit]	Description	
TP 4 [Yet/DONE]		
TP 3 [Yet/DONE]	DONE indicates the number of the Intelligent Key ID which has been registered.	
TP 2 [Yet/DONE]		
TP 1 [Yet/DONE]		
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.	
ACTIVE TEST		

Test Item	Description
THEFT IND	This test is able to check security indicator operation [On/Off].

# < SYSTEM DESCRIPTION >

# DIAGNOSIS SYSTEM (IPDM E/R)

CONSULT Function (IPDM E/R)

### **CAUTION:**

After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF  $\rightarrow$  ON (for at least 5 seconds)  $\rightarrow$  OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and a no-start condition.

# APPLICATION ITEM

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

Direct Diagnostic Mode	Description	
ECU Identification	The IPDM E/R part number is displayed.	
Self Diagnostic Result	The IPDM E/R self diagnostic results are displayed.	E
Data Monitor	The IPDM E/R input/output data is displayed in real time.	
Active Test	The IPDM E/R activates outputs to test components.	

### ECU IDENTIFICATION The IPDM E/R part number is displayed.

The IPDM E/R part number is displaye

SELF DIAGNOSTIC RESULT Refer to <u>PCS-21, "DTC\_Index"</u>.

DATA MONITOR

Monitor Item [Unit]	Main Signals	Description	
MOTOR FAN REQ [%]	×	Indicates cooling fan speed signal received from ECM on CAN communication line.	
AC COMP REQ [On/Off]	×	Indicates A/C compressor request signal received from ECM on CAN commu- nication line.	
TAIL&CLR REQ [On/Off]	×	Indicates position light request signal received from BCM on CAN communica- tion line.	
HL LO REQ [On/Off]	×	Indicates low beam request signal received from BCM on CAN communication line.	
HL HI REQ [On/Off]	×	Indicates high beam request signal received from BCM on CAN communication line.	
FR FOG REQ [On/Off]	×	Indicates front fog light request signal received from BCM on CAN communica- tion line.	
FR WIP REQ [Stop/1LOW/Low/Hi]	×	Indicates front wiper request signal received from BCM on CAN communication line.	
WIP AUTO STOP [STOP P/ACT P]	×	Indicates condition of front wiper auto stop signal.	
WIP PROT [Off/BLOCK]	×	Indicates condition of front wiper fail-safe operation.	
GN RLY1 -REQ [On/Off]		Indicates ignition switch ON signal received from BCM on CAN communication line.	
GN RLY [On/Off]	×	Indicates condition of ignition relay.	
PUSH SW [On/Off]		Indicates condition of push-button ignition switch.	
NTER/NP SW [On/Off]		Indicates condition of CVT shift position.	
ST RLY CONT [On/Off]		Indicates starter relay status signal received from BCM on CAN communication line.	
IHBT RLY -REQ [On/Off]		Indicates starter control relay signal received from BCM on CAN communication line.	
ST/INHI RLY [Off/ ST /INHI]		Indicates condition of starter relay and starter control relay.	
DETENT SW [On/Off]		Indicates condition of CVT shift selector (park position switch).	

Revision: December 2015

А

INFOID:000000013377246

В

С

Н

# DIAGNOSIS SYSTEM (IPDM E/R)

# < SYSTEM DESCRIPTION >

# [WITH INTELLIGENT KEY SYSTEM]

Monitor Item [Unit]	Main Signals	Description	
DTRL REQ [Off]		Indicates daytime light request signal received from BCM on CAN communica- tion line.	
HOOD SW [On/Off]		Indicates condition of hood switch.	
THFT HRN REQ [On/Off]		Indicates theft warning horn request signal received from BCM on CAN comm nication line.	
HORN CHIRP [On/Off]		Indicates horn reminder signal received from BCM on CAN communication line.	
HOOD SW 2 [On/Off]		Indicates condition of hood switch 2.	

# ACTIVE TEST

Test item	Description
HORN	This test is able to check horn operation [On].
FRONT WIPER	This test is able to check wiper motor operation [Hi/Lo/Off].
MOTOR FAN	This test is able to check cooling fan operation [4/3/2/1].
EXTERNAL LAMPS	This test is able to check external lamp operation [Fog/Hi/Lo/Tail/Off].

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

# List of ECU Reference

INFOID:000000012875980

[WITH INTELLIGENT KEY SYSTEM]

ECU	Reference	
	EC-84, "Reference Value"	
ECM	EC-102. "Fail-safe"	
ECIVI	EC-104. "DTC Inspection Priority Chart"	
	EC-105, "DTC Index"	
	PCS-13, "Reference Value"	
IPDM E/R	PCS-20, "Fail Safe"	
	PCS-21, "DTC Index"	
ВСМ	BCS-30, "Reference Value"	
	BCS-50, "Fail Safe"	
	BCS-51, "DTC Inspection Priority Chart"	
	BCS-52, "DTC Index"	

J

SEC

L

Μ

Ν

Ο

Ρ

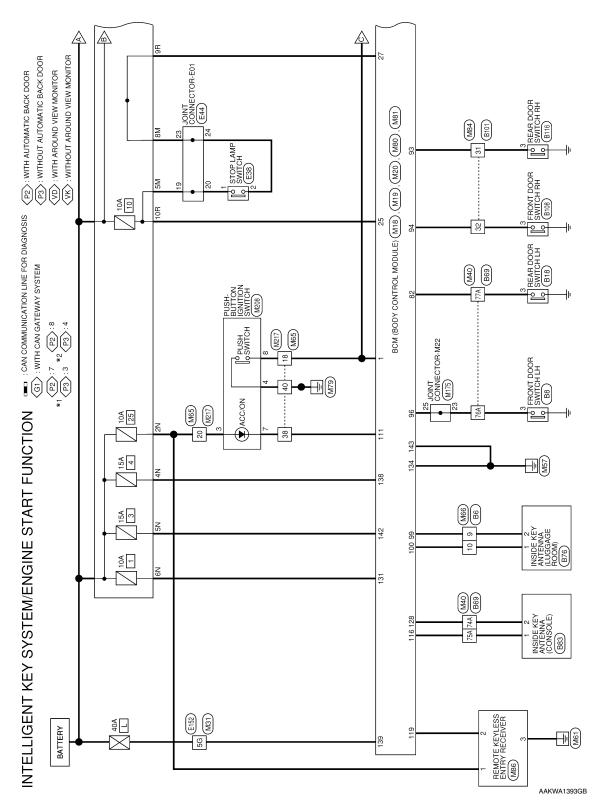
А

# WIRING DIAGRAM

# INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

# Wiring Diagram

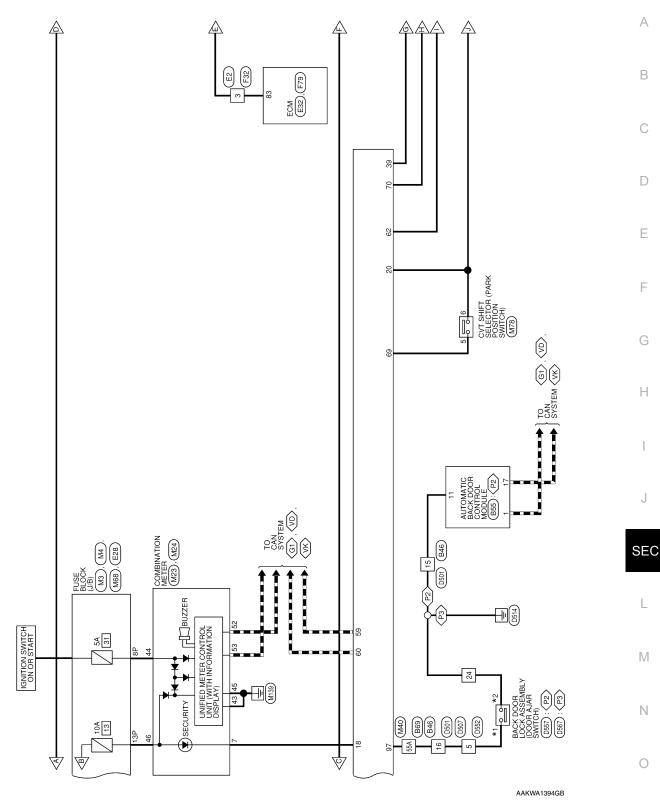
INFOID:000000012875981

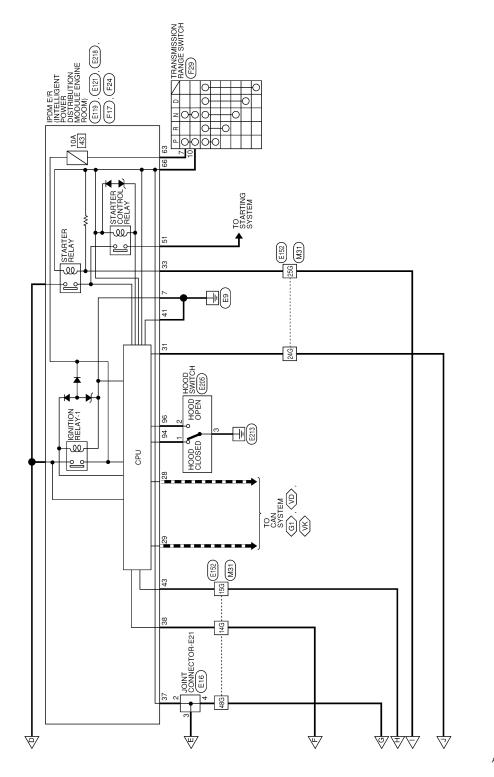


# INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

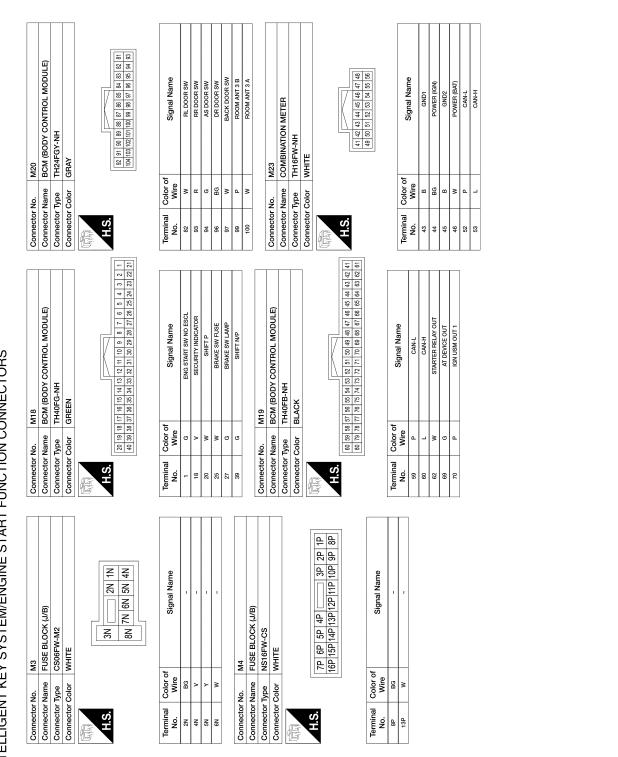


[WITH INTELLIGENT KEY SYSTEM]





AAKWA1395GB



INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION CONNECTORS

AAKIA3355GB

Ρ

0

А

В

С

D

Е

F

Н

J

SEC

L

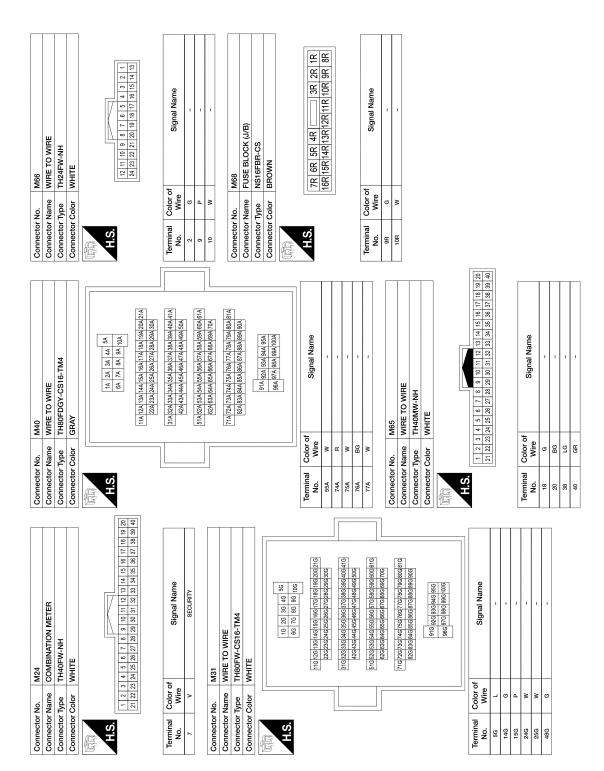
Μ

Ν

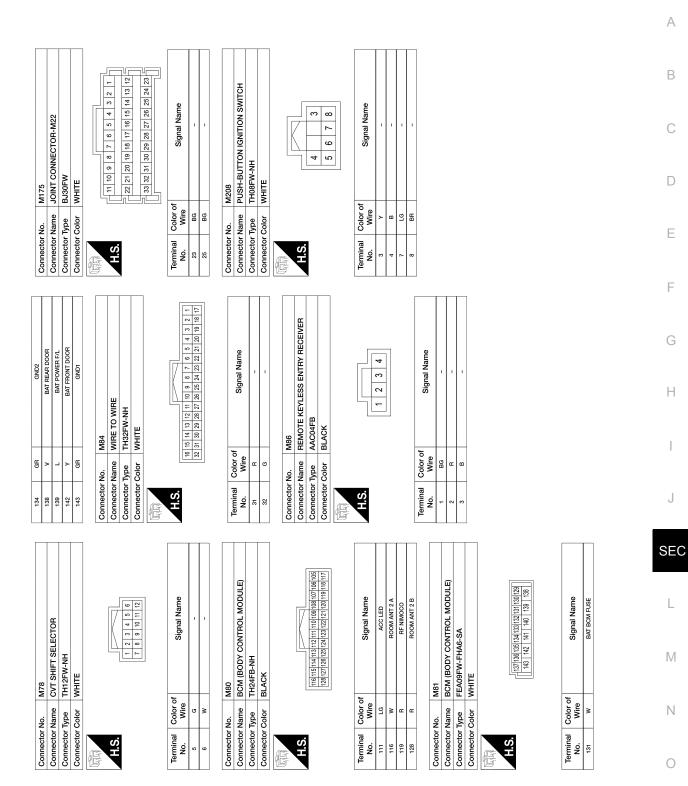
### INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION [WITH INTELLIGENT KEY SYSTEM] < WIRING DIAGRAM >

**Revision: December 2015** 

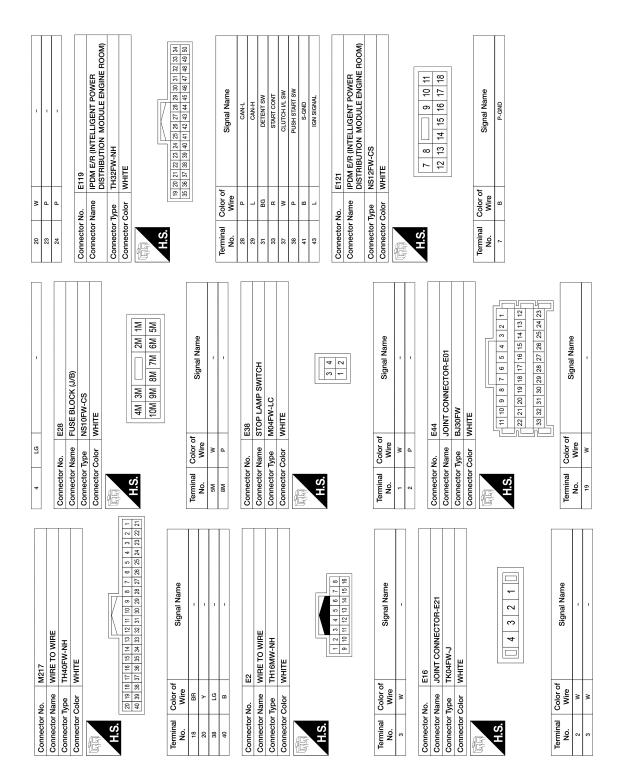
2016 Murano NAM



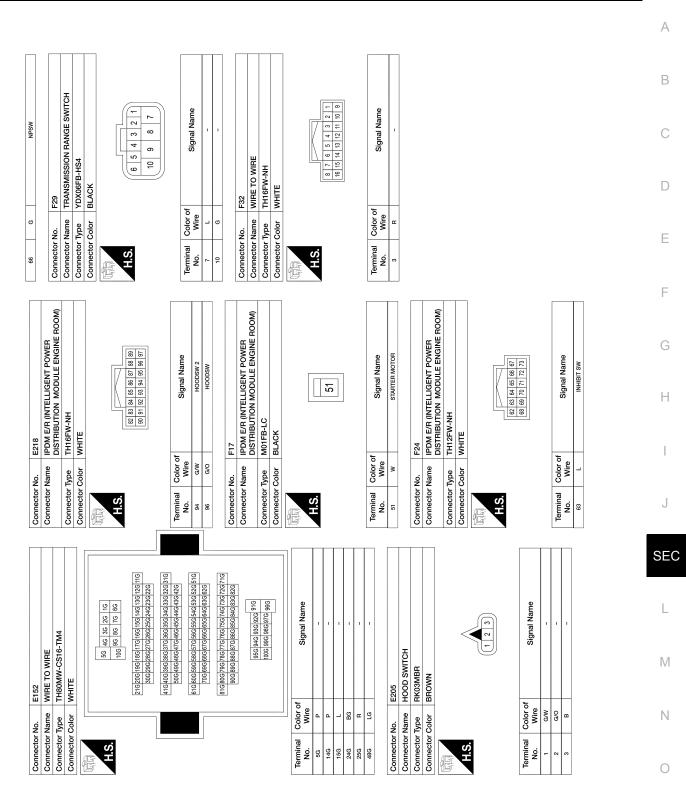
AAKIA3356GB



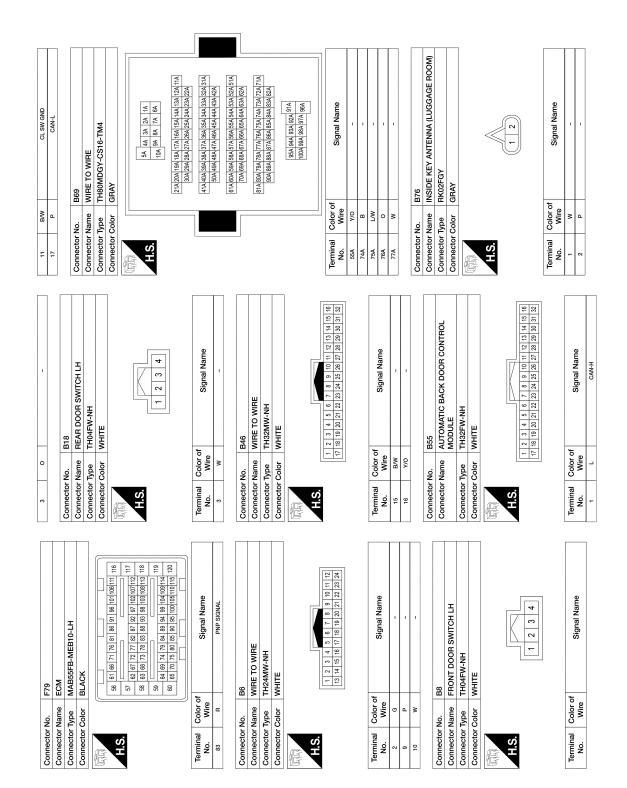
AAKIA3357GB



AAKIA3358GB

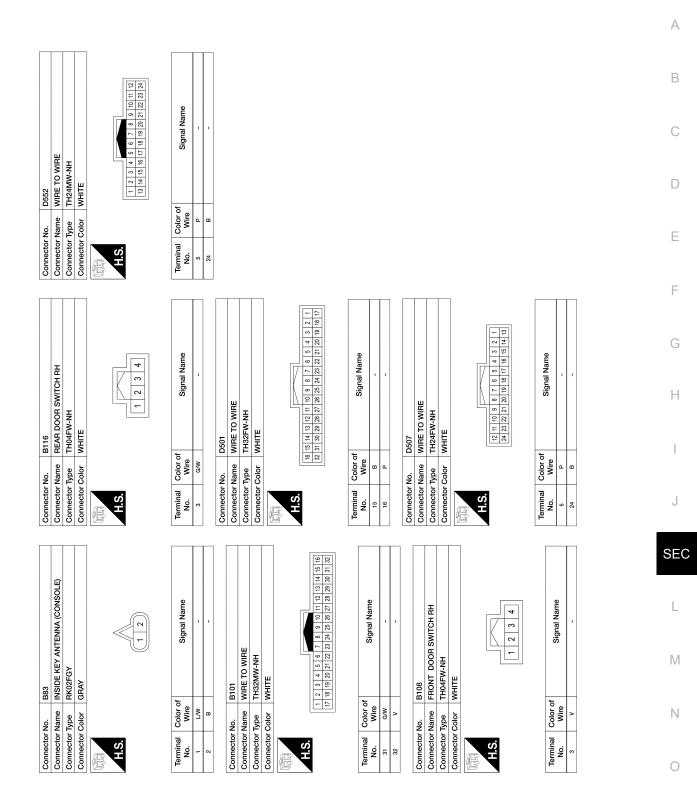


AAKIA3359GB



AAKIA3360GB

#### INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION < WIRING DIAGRAM > [WITH INTELLIGENT KEY SYSTEM]



AAKIA3361GB

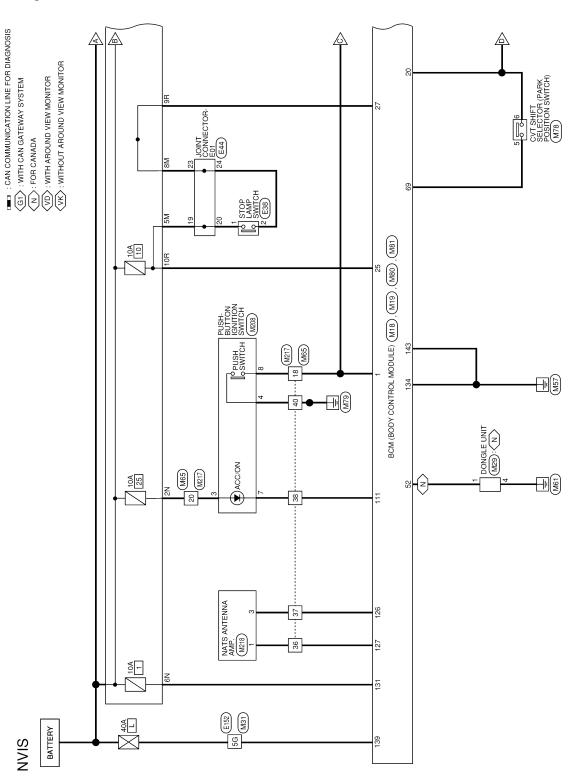
Ρ

## NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS < WIRING DIAGRAM > [WITH INTELLIGENT KEY SYSTEM]

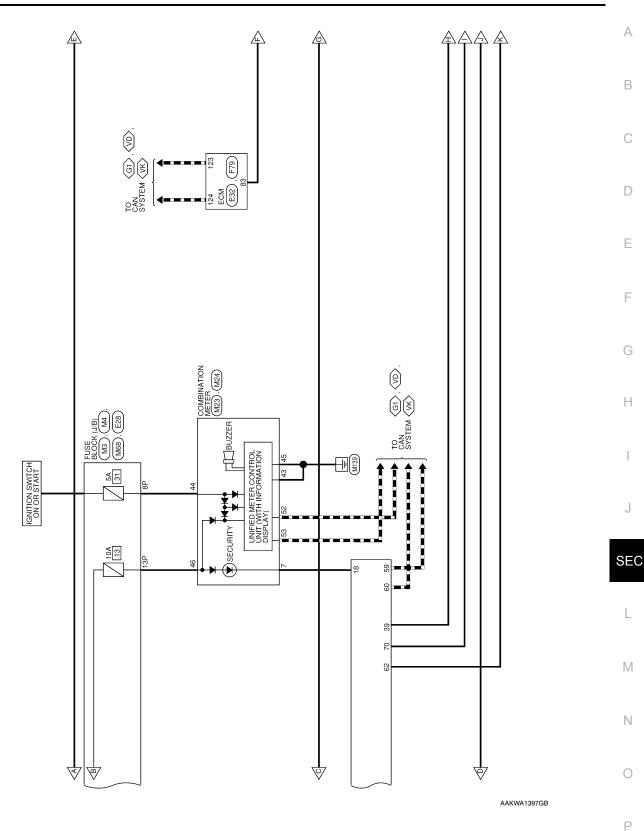
## NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

## Wiring Diagram

INFOID:000000012875982



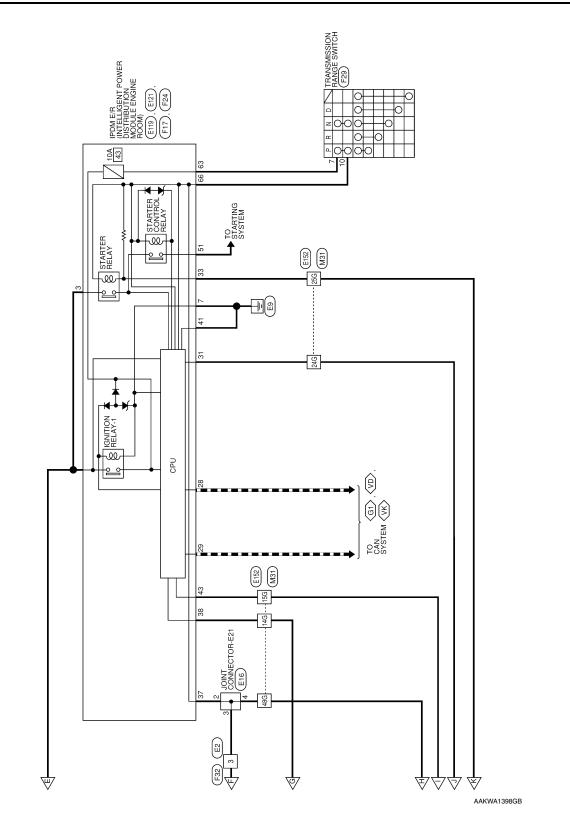
AAKWA1396GB



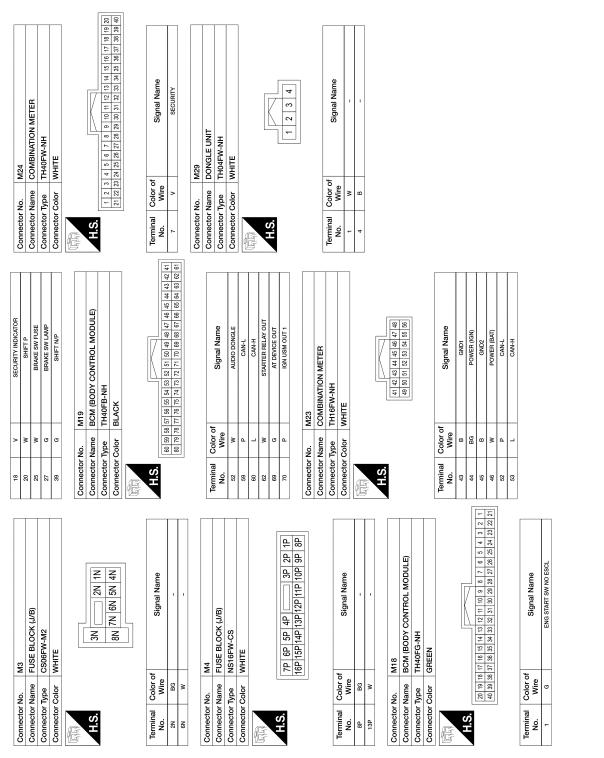
NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS M > [WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

< WIRING DIAGRAM >



# NVIS CONNECTORS



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

Revision: December 2015

AAKIA3362GB

А

В

С

D

Ε

F

Н

J

SEC

L

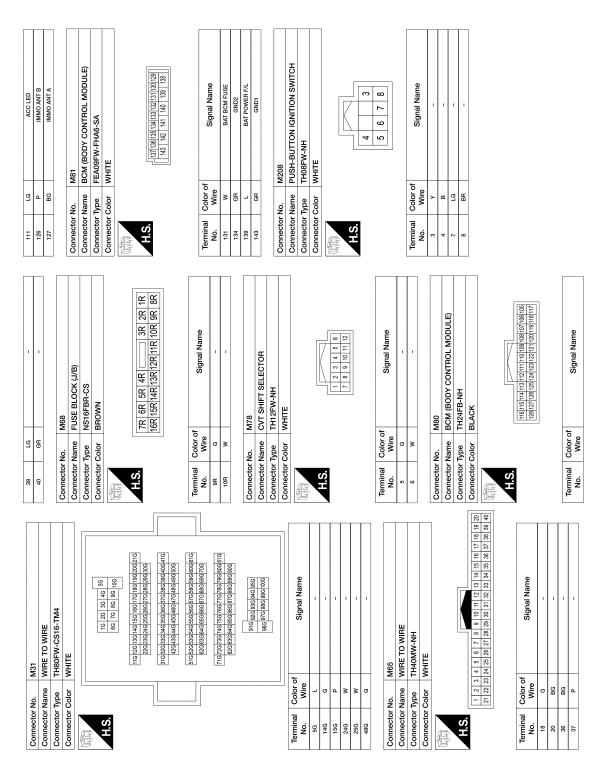
Μ

Ν

0

Ρ

#### NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS (WITH INTELLIGENT KEY SYSTEM)



AAKIA3363GB

MRE to MIRE boin     Connector Name bian     MRE to MIRE bian       Oldin mine     MIRE to MIRE bian     Connector Name bian     MIRE to MIRE bian       Oldin mine     MIRE to MIRE bian     Connector Name bian     MIRE to MIRE bian       Oldin mine     MIRE to MIRE bian     MIRE to MIRE bian     MIRE to MIRE bian       Oldin mine     MIRE to MIRE bian     MIRE to MIRE bian     MIRE to MIRE bian       Oldin mine     MIRE to MIRE bian     MIRE to MIRE bian     MIRE to MIRE bian       Oldin mine     MIRE to MIRE bian     MIRE to MIRE bian     MIRE to MIRE bian       Oldin mine     MIRE to MIRE bian     MIRE to MIRE bian     MIRE to MIRE bian       Oldin mine     MIRE to MIRE bian     MIRE to MIRE bian     MIRE to MIRE bian       MIRE to MIRE	me         ECM           0r         BLACK           0r         BLACK           0r         BLACK           0r         BLACK           0r         BLACK           0r         Signal Name           0r         Signal Name           0r         CAN-L           0r         CAN-L           0r         CAN-L           0r         CAN-L           0r         Signal Name           0r         CAN-L           0r         CAN-L           0r         MITE           0r         MITE           0r         Signal Name           0r         Signal Name           0r         MITE
Connector Nype         Intowu-nit         Connector Color         Mine         Connector Nype         Intowu-nit         Connector Nype         Intowu-nit         Connector Nype         Intowu-nit         Connector Nype	
Connector Color         WHLE         Connector Name	e of white
	of white
8 83 81 83 22 13       1	of white
Signal Name       Ferminal       Color of Wire       Signal Name         -<	od E38 MO4FW-LC WHITE Od MO4FW-LC
3       w       -	e of MHITE
1       1       124       1         1       1       1       1       1       1         1 </td <td>e e e e e e e e e e e e e e e e e e e</td>	e e e e e e e e e e e e e e e e e e e
Image: connector No.       E16         Connector Name       JOINT CONNECTOR-E21         Connector Name       Joint Connector Name         Joint Name       Joint Connector Name         Signal Name       Joint Connector Name         Joint Name       Joint Connector Name         Joint Name       Joint On         Joint Name       Jo	e e e e e e e e e e e e e e e e e e e
Connector Name       JONT CONNECTOR-E31       Connector Name       JONT CONNECTOR-E31         Connector Type       TK04FW-J       Connector Name       Connector Name         V       Connector Color       WHITE       Connector Name         V       Connector Color       WHITE       Connector Name         V       Connector Name       Connector Name       Connector Name         V       Connector Color       WHITE       Connector Name         V       Connector Name       Connector Name       Connector Name         V       Connector Name       Connector Name       Connector Name         V       Connector Name       Connector Name       Connector Name         Signal Name       Signal Name       Connector Name       Connector Name         Connector Non       E28       Connector Name       Connector Name         Connector Name       Connector Name       Connector Name       Connector Name	esa STOPLAMP SW MHITE WHITE
Image: Connector Color       WITE         V       Connector Color         V       Connector Color         V       Image: Co	MORFW-LC MORFW-LC of of
V     Image: Signal Name       Signal Name     Image: Signal Name       Signal Name     Image: Signal Name       Image: Signal Name     Image: Signal Name	
V       Image: Constrained and the second	
Signal Name     1     1 <ul> <li></li></ul>	
Terminal No.     Color of Nire     Signal Name       2     W     -       2     W     -       3     W     -       4     LG       Connector No.     E28       Connector Name     FUSE BLOCK (J/B)       Connector Type     NS10FW-CS       Connector Color     WHITE	
Terminal No.     Color of Wire     Signal Name       0.     Wire     Signal Name       1     -     -       3     W     -       4     LG     -       Connector No.     E28       Connector Nome     FUSE BLOCK (J/B)       Connector Type     NS10FW-CS       Connector Color     WHITE	
2         W         -         No.           3         W         -         1         1           4         LG         -         -         1         1           Connector No.         E28         -         -         2         2         2           Connector Name         FUSE BLOCK (J/B)         -         -         -         2<	
4     1       4     1       6     2       Connector No.     E28       Connector Name     FUSE BLOCK (J/B)       Connector Type     NS10FW-CS       Connector Color     WHITE	
Connector No. Connector Name Connector Type Connector Color	
Connector Name Connector Type Connector Color	
10M 9M 8M 7M 6M 5M	
Terminal Color of Signal Name No. Wire	
5M W -	
8M P .	

#### AAKIA3364GB

Ρ

Ο

# NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS < WIRING DIAGRAM > [WITH INTELLIGENT KEY SYSTEM]

SEC

Μ

Ν

J

F

А

В

С

D

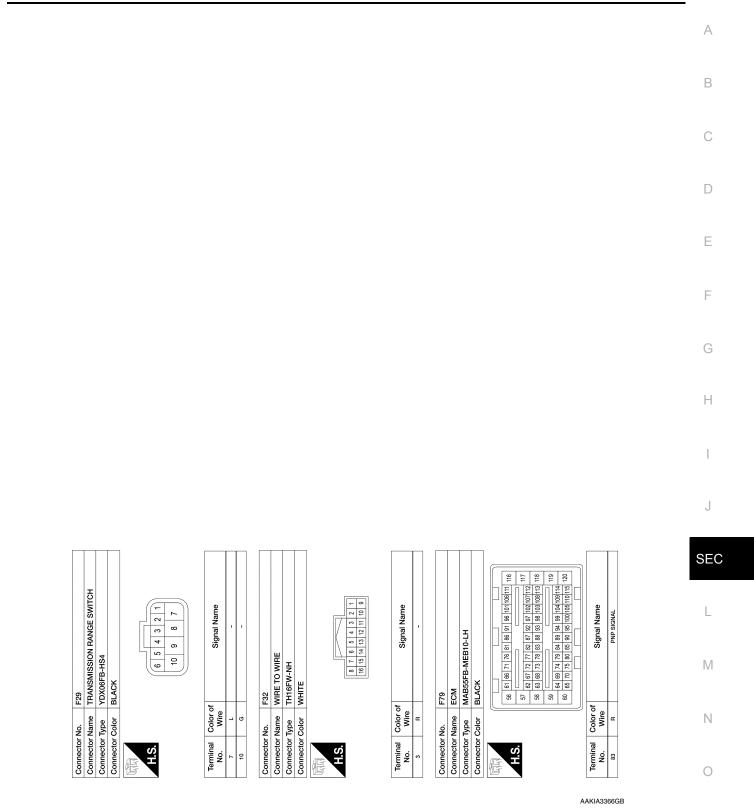
Е

G

Н

E44         Connector Num         E121           JONT CONNECTOR-EGI         JONT CONNECTOR-EGI         Connector Num         POM ERI (NITLUCE           BJ30PW         Connector Num         POM ERI (NITLUCE         Connector Num         Distribution MOD           PL30PW         Signal Name         Signal Name         Nastrenucros         Connector Num         Distribution MOD           P         Signal Name         Signal Name         Nastrenucros         Connector Num         Distribution MOD           P         -         -         -         -         -         -         -           P         - <t< th=""><th>Connector No. F17</th><th>Connector Name IPDM E/R (INTELLIGENT POWER DM) DISTRIBUTION MODULE ENGINE ROOM)</th><th>Connector Type M01FB-LC</th><th>Connector Color BLACK</th><th>H.S.</th><th>51</th><th></th><th>al</th><th>. Wire</th><th>51 W STARTER MOTOR</th><th>Connector No. F24</th><th>Connector Name IPDM E/R (INTELLIGENT POWER</th><th></th><th></th><th>Connector Color WHITE</th><th></th><th></th><th><math>\left( \right)</math></th><th>62 63 64 65 66 67 co co 70 70 70 70 70</th><th></th><th></th><th>Terminal Color of Signal Name No. Wire</th><th></th><th>66 G NPSW</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></t<>	Connector No. F17	Connector Name IPDM E/R (INTELLIGENT POWER DM) DISTRIBUTION MODULE ENGINE ROOM)	Connector Type M01FB-LC	Connector Color BLACK	H.S.	51		al	. Wire	51 W STARTER MOTOR	Connector No. F24	Connector Name IPDM E/R (INTELLIGENT POWER			Connector Color WHITE			$\left( \right)$	62 63 64 65 66 67 co co 70 70 70 70 70			Terminal Color of Signal Name No. Wire		66 G NPSW										
e44 builder       Joint connector Name busgerwith       Connector Name busgerwith       Connector Name Connector Type Connector Type Connector Type Connector Type Connector Type Connector Type Connector Type Connector Type Connector Color       Connector Name Connector Type Connector Color         of       Signal Name -       -       -       Connector Type Connector Type -       Connector Type Connector Type -         of       Signal Name -       -       -       -       Connector Type Connector Type -       Connector Name Connector Color         of       Signal Name -       -       -       -       -       Connector Name Connector Name -         of       Signal Name -       -       -       -       -       Connector Name Connector Name -       Connector Name -         of       Signal Name -       -       -       -       -       -       -         of       Signal Name -       -       -       -       -       -       -         of       Signal Name -       -       -       -       -       -       -       -         of       Signal Name -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       - <td< th=""><th>E121</th><th>IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROC</th><th>NS12FW-CS</th><th>WHITE</th><th>8 9 10</th><th>13 14 15 16 17</th><th></th><th></th><th>2</th><th>P-GND</th><th>E152</th><th>WIRE TO WIRE</th><th>TH80MW-CS16-TM4</th><th>WHITE</th><th></th><th></th><th>5G 4G 3G 2G 1G</th><th>106 96 86 76 66</th><th>216/206/196/186/176/166/156/146/136/126/116</th><th>306296286276266256246236226</th><th>416406396386376366356346336326316</th><th>506 496 486 476 466 456 446 436 426</th><th>61G 60G 59G 58G 57G 56G 55G 54G 53G 52G 51G 700 600 600 607 607 607 607 607 607 607</th><th></th><th>81G 80G 79G 78G 77G 76G 75G 74G 73G 72G 71G</th><th>906 896 886 876 866 856 846 836 826</th><th>95G 94G 93G 92G 91G</th><th>100G 99G 98G 97G 96G</th><th></th><th>I</th><th>I</th><th>1</th><th>1</th><th>-</th></td<>	E121	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROC	NS12FW-CS	WHITE	8 9 10	13 14 15 16 17			2	P-GND	E152	WIRE TO WIRE	TH80MW-CS16-TM4	WHITE			5G 4G 3G 2G 1G	106 96 86 76 66	216/206/196/186/176/166/156/146/136/126/116	306296286276266256246236226	416406396386376366356346336326316	506 496 486 476 466 456 446 436 426	61G 60G 59G 58G 57G 56G 55G 54G 53G 52G 51G 700 600 600 607 607 607 607 607 607 607		81G 80G 79G 78G 77G 76G 75G 74G 73G 72G 71G	906 896 886 876 866 856 846 836 826	95G 94G 93G 92G 91G	100G 99G 98G 97G 96G		I	I	1	1	-
e44       JOINT CONNECTOR-E01         JUNIT CONNECTOR-E01         Bu30PW         WHITE         MHITE         Image: state st	connector No.	connector Name	connector Type		H.S.				+	7 B	connector No.	connector Name	connector Type				H.S.										 			 _				25G R
Donnector Donnec		R-E01	WHITE		22 21 20 19 18 17 16 15 14 13	31 30 29 28 27 26 25 24	Color of	Wire Signal Name			1				DISTRIBUTION MODULE ENGINE ROOM)	TH32FW-NH				19         20         21         22         23         24         25         26         27         28         29         30         31         32         33	35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50		Color of						IGN SIGNAL					

AAKIA3365GB



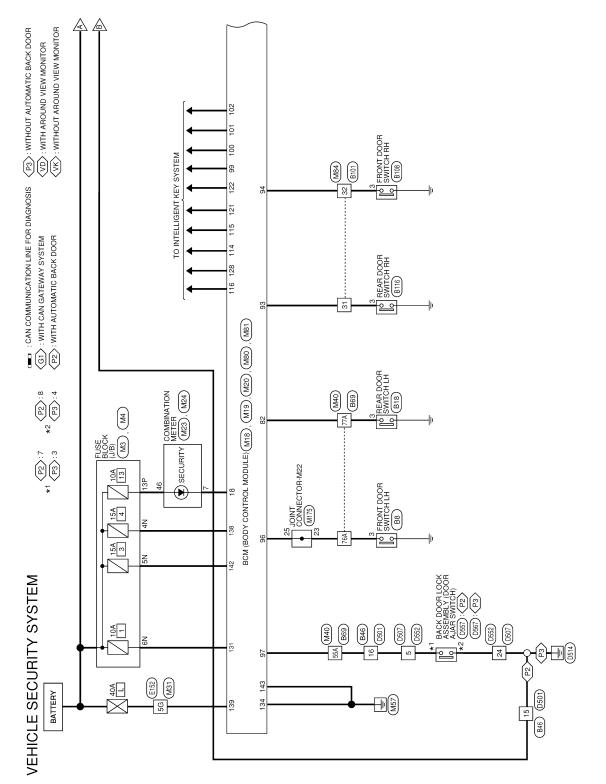
Ρ

## [WITH INTELLIGENT KEY SYSTEM]

## VEHICLE SECURITY SYSTEM

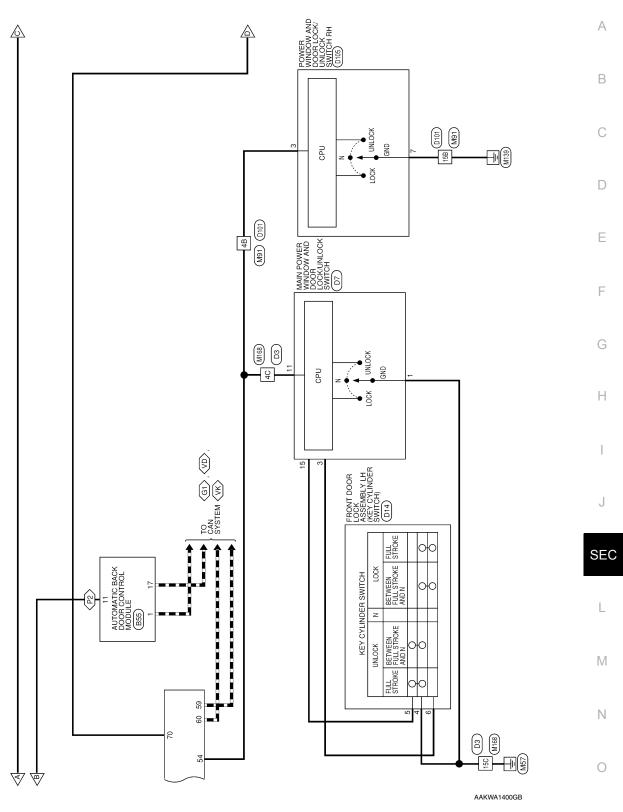
## Wiring Diagram

INFOID:000000012875983

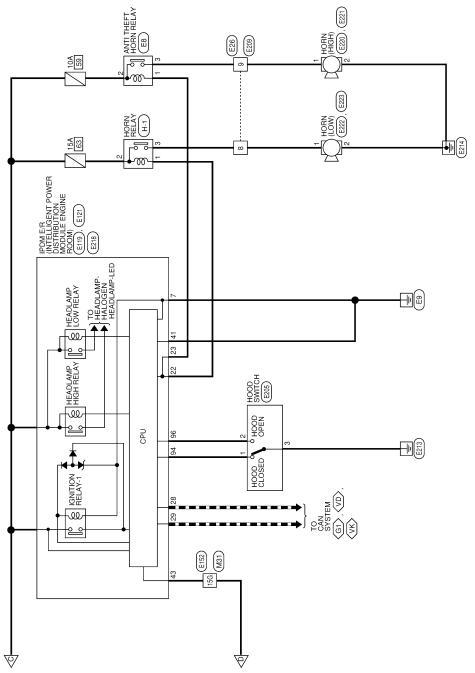


AAKWA1399GB

#### [WITH INTELLIGENT KEY SYSTEM]



Ρ



AAKWA1401GB

FUSE BLOCK (J/B) CS06FW-M2 WHITE	Connector No.				
CS06FW-M2 WHITE		M19		Connector Name	COMBINATION METER
WHITE	Connector Name	+		Connector Type	TH16FW-NH
5	Connector Type	+	THADER-NH	Connector Color	WHITE
G	Connector Color		X	L L L	
3N 2N 1N	APP APP			ЪЧ	
RN 7N 6N 5N 4N	H.S.				41 42 43 44 45 46 47 48 40 50 54 52 53 54 55 56
		30 59 58 57 56 30 79 78 77 76	60         59         58         57         56         55         54         53         52         51         50         49         48         47         46         45         44         43         42         41           80         78         77         76         75         74         73         72         71         70         69         68         67         66         65         64         63         22         61		
Terminal Color of				Terminal Color	
Wire Signal Name	ŀ			No. Wire	Signal Name
1	al	Color of	Signal Name	46 W	POWER (BAT)
-	20	wire			
	54	8	PW LIN	Connector No.	M24
	59	۹.	CAN-L	Connector Name	COMBINATION METER
Connector No. M4	99	_	CAN-H	Connector Tune	
eu	20	٩.	IGN USM OUT 1	Collification Type	
				Connector Color	WHILE
N310FW-C3	Connector No.	o. M20			
Connector Color WHITE Connector Color	Connector Name		BCM (BODY CONTROL MODULE)	14Hhh	
	nnootor Tv				
	Connector Type				
				7 1 2	
7P 6P 5P 4P 7 3P 2P 1P 7 16P 15P 14P 13P 12P 11P 10P 9P 8P	EB			77 12	121 22 23 24 25 26 27 28 30 31 32 32 38 39 39 30 31 32
	H.S.		IVE	Terminal Color	
		10	92 91 90 89 88 87 86 85 84 83 82 81 1041031021011000 99 98 97 96 95 94 93	No. Wire	Signal Name
Terminal Color of Signal Name No. Wire				7 V	SECURITY
	- F				
	Terminal C	Color of	Signal Name		
Connector No. M18	.0N 8	wire			
Connector Name BCM (BODY CONTROL MODULE)	8	: a	BR DOOR SW		
Connector Type TH40FG-NH	5	: 0	AS DOOR SW		
Connector Color GREEN	96	BG	DR DOOR SW		
	97	×	BACK DOOR SW		
	66	٩	ROOM ANT 3 B		
	100	M	ROOM ANT 3 A		
	101	æ	BACK DOOR ANT B		
8 7 6 5 4	102	IJ	BACK DOOR ANT A		
27 26 25		5			
Terminal Color of Signal Name					
wire					

VEHICLE SECURITY SYSTEM CONNECTORS

AAKIA3367GB

Р

#### < WIRING DIAGRAM >

[WITH INTELLIGENT KEY SYSTEM]

А

В

С

D

Е

F

G

Н

J

SEC

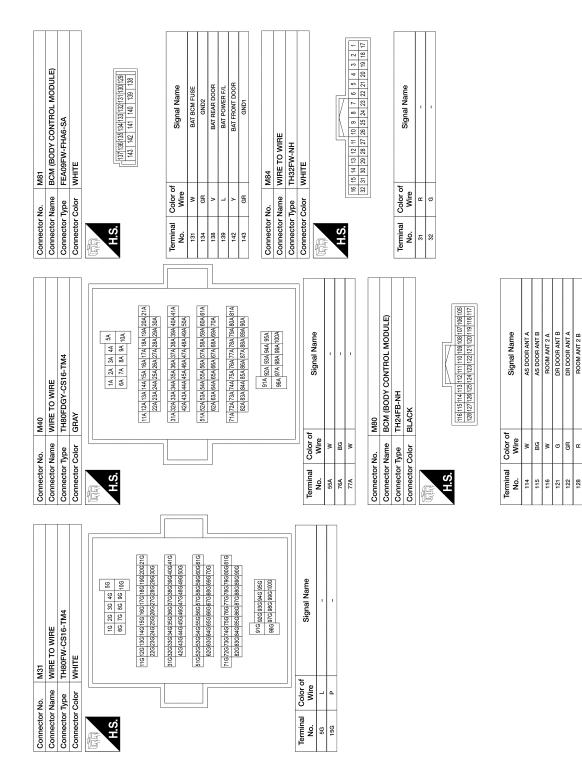
L

Μ

Ν

Ο

Revision: December 2015



AAKIA3368GB

me     me     me     me     me     me       me     me     me     me     me     me			Connector No. N	M91	Connector No.	E8	8	> a	HOHN SW
				WIRE TO WIRE	Connector Name	ANTI THEFT HORN RELAY	29	<u> </u>	CAN-L CAN-H
				TH40MW-CS15	Connector Type	M03FW-R-LC	41	- œ	S-GND
				WHITE	Connector Color	WHITE	43		IGN SIGNAL
					E		Connector		
				I					
				3B 4B 5B 68 7B 88 9B 10B 11B 12B 13B 14B 15B	H.S.	c	Connector		1 e/r (intelligent power Biblitioni Modili e engine poom)
			1681781881	8028038048058068		7			
			2782885	8328338348358		3 1	Connector		rtw-CS
							Connector		Ш
							f		
								l	
							H.S.H		
Image: state in the state	Image: state in the state	Image: constraint in the image: constrai	N	1	-	-			8 ]1
Image: state in the state	Image: second	Image: state of the stateoo of the state of the state of the stateoo of the state of the st	8	-		-			13 14 15 16 17
						1			
WRET O WIRE IntroMWCSIS       WRET O WIRE IntroMWCSIS       Multic TO WIRE Connector Name Connector Name Co	WRE TO WIRE Induktions     Connector Nume induktion     Connector Nume in			M168					
HuddwrCsts       Connector Name       WIRE: TO WIRE       Connector Name       WIRE: TO WIRE <ul> <li></li></ul>		Intomuccists       Connector hane       WIRE TO WIRE         Revelor type       Revelo		WIRE TO WIRE	Connector No.	E26	Terminal	Color of	
WHIT       Concentor Type       NERAWACS         2	WHIT       Concentor Type       NETABANUCS         Ex ed a (a (b (a (b (b (a (b (b (a (a (b (a	WHIT       Concenter type       NERMW-CS         2		TH40MW-CS15	Connector Name	WIRE TO WIRE	NO	Wire	Signal Name
		all all all all all all all all		AULITE	Connector Type	NS16MW-CS	~		UND-9
Image: Signal Name     Image: Signal Name       Image: Signal Name     Image: Signal Name <td>Image: Signal Name     Image: Signal Name       Image: Signal Name     Image: Signal Name<td>Image: Signal Name     Image: Signal Name       Image: Signal Name     Image: Signal Name<td></td><td></td><td>Connector Color</td><td></td><td>-</td><td>•</td><td></td></td></td>	Image: Signal Name     Image: Signal Name       Image: Signal Name     Image: Signal Name <td>Image: Signal Name     Image: Signal Name       Image: Signal Name     Image: Signal Name<td></td><td></td><td>Connector Color</td><td></td><td>-</td><td>•</td><td></td></td>	Image: Signal Name     Image: Signal Name       Image: Signal Name     Image: Signal Name <td></td> <td></td> <td>Connector Color</td> <td></td> <td>-</td> <td>•</td> <td></td>			Connector Color		-	•	
2         2	次         %         %	2         2							
Image: Signal Name     Image: Signal Name       Image: Signal Name     Image: Signal Name <td>二         二         二         一         1</td> <td>Image: Signal Name     Image: Signal Name       Image: Signal Name     Image: Signal Name<td></td><td></td><td></td><td></td><td></td><td></td><td></td></td>	二         二         二         一         1	Image: Signal Name     Image: Signal Name       Image: Signal Name     Image: Signal Name <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
26. 1% % [w] (m] [w] [w] [w] [w] [w] [w] [w] [w] [w] [w	26. 1% 1% 1% 1% 1%       1% 1% 1% 1% 1%       1% 1% 1% 1%         1% 1% 1%       1% 1% 1%       1% 1% 1%       1% 1% 1%         1% 1% 1%       1% 1% 1%       1% 1% 1%       1% 1%         1% 1% 1%       1% 1%       1% 1%       1% 1%         1% 1% 1%       1% 1%       1% 1%       1% 1%         1% 1% 1%       1% 1%       1% 1%       1% 1%         1% 1% 1%       1% 1%       1% 1%       1% 1%         1% 1% 1%       1% 1%       1% 1%       1% 1%         1% 1% 1%       1% 1%       1% 1%       1%       1%         1% 1% 1%       1% 1%       1% 1%       1%       1%       1%         1% 1% 1% 1%       1% 1%       1% 1%       1%       1%       1%       1%         1% 1% 1% 1% 1%       1% 1%       1% 1%       1%	26. 1% % [w] (m] [w] [w] [w] [w] [w] [w] [w] [w] [w] [w			14HAN				
Implementation     Signal Name       of     Signal Name       intro     intro       busice     Connector Name       intro     intro       intro	Implementer     Signal Name       of     Signal Name       of     Signal Name       of     Signal Name       of     Signal Name       JOINT CONNECTOR-Machine     Connector No.       JOINT CONNECTOR-Machine     Connector No.       of     Signal Name       -     -       JOINT CONNECTOR-Machine     Connector No.       Bu3orW     Connector No.       of     Signal Name       -     -       0     -       33 23 31 30 (25 24 (23 (25 (24 (23 (25 (24 (23 (25 (24 (23 (25 (24 (23 (25 (24 (23 (25 (24 (23 (25 (24 (23 (25 (24 (23 (25 (24 (23 (25 (24 (23 (25 (24 (23 (25 (24 (23 (24 (23 (25 (24 (23 (24 (24 (24 (24 (24 (24 (24 (24 (24 (24	Implementation     Signal Name       of     Signal Name       introduction     introduction       of     Signal Name       introduction     introduction       of     Signal Name       introduction     introduction		3C 4C 5C 6C 7C 8C 9C 10C 11C 12C 13C 14C 15C					
of     Signal Name       of     Signal Name       of     Signal Name       JUNT CONNECTOR-M22     Image: Signal Name       Image: Signal Name     Image: Signal Name	of     Signal Name       of     Signal Name       of     Signal Name           JOINT 56        JOINT 75        JOINT 76        JOINT 77	of     Signal Name       of     Signal Name       of     Signal Name	16/17/18/11	Pach3701381	H.S.	2 3 <b>1</b> 5 6			
of     Signal Name       of     Signal Name       -     -       M175     -       JOINT CONNECTOR-M22     -       <	of Signal Name 	of     Signal Name       of     Signal Name       i     Signal Name       i     i       i     i       JOINT CONNECTOR-M22     i       JOINT CONNECTOR-M22     i       JOINT CONNECTOR-M22     i       JUSP     i <td< td=""><td>2702802</td><td>470481</td><td></td><td>0 10 11 12 12 12 14 15 0</td><td></td><td></td><td></td></td<>	2702802	470481		0 10 11 12 12 12 14 15 0			
of     Signal Name       -     -       M175     -       JOINT CONNECTOR-M22     -       JOINT JOINT CONNECTOR-M22     -       JOINT JOINT JOINT JOINT JOINT CONNECTOR-M22     -       JOINT JO	of     Signal Name       -     -       M175     -       JUNT CONNECTOR-M22     -       JUNT CONNECTOR-M22 </th <th>of     Signal Name       -     -</th> <th></th> <th></th> <th></th> <th>CI 41 CI 71 11 01 8</th> <th></th> <th></th> <th></th>	of     Signal Name       -     -				CI 41 CI 71 11 01 8			
of         Signal Name           - <t< td=""><td>of         Signal Name           -         -           -         -           M175         -           JOINT CONNECTOR-M22         JOINT CONNECTOR-M22           JOINT CONNECTOR-M22         JOINT CONNECTOR-M22           JOINT CONNECTOR-M22         Connector No.           WHITE         Connector No.           0         222212019161716141312           33231302928272522         Connector Color           33231302928272522         Connector Color           0         Signal Name           -         -           0         Signal Name           0         Signal Name</td><td>of         Signal Name           -         -           -         -           M175         -           JOINT CONNECTOR-M22         -           JOINT JOINT FROM FROM FROM FROM FROM FROM FROM FROM</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	of         Signal Name           -         -           -         -           M175         -           JOINT CONNECTOR-M22         JOINT CONNECTOR-M22           JOINT CONNECTOR-M22         JOINT CONNECTOR-M22           JOINT CONNECTOR-M22         Connector No.           WHITE         Connector No.           0         222212019161716141312           33231302928272522         Connector Color           33231302928272522         Connector Color           0         Signal Name           -         -           0         Signal Name           0         Signal Name	of         Signal Name           -         -           -         -           M175         -           JOINT CONNECTOR-M22         -           JOINT JOINT FROM FROM FROM FROM FROM FROM FROM FROM							
mine     Color of a     Immal     Immal     Color of a     Immal	of     0 </td <td>e     -     -     Terminal     Color of the color of the</td> <td></td> <td>Signal Na</td> <td></td> <td></td> <td></td> <td></td> <td></td>	e     -     -     Terminal     Color of the		Signal Na					
M175     -     -     No.     Wine       JOINT CONNECTOR-M22     JOINT CONNECTOR-M22     Busselw     Connector No.       Busselw     WHITE     Connector Name       Passelw     Connector Name	of     Signal Name       of     Signal Name       of     Signal Name       of     Signal Name	M175     -     -     No.     Nue       JOINT CONNECTOR-M22     JOINT CONNECTOR-M22     Busser     -     -       JUNT CONNECTOR-M22     Domector Name     -     -     -       MHTE     Connector Name     Connector Name     -     -       MHTE	_						
mirits     - <td< td=""><td>M175    </td><td>mirits     -     <td< td=""><td>&gt;</td><td>1</td><td>_</td><td></td><td></td><td></td><td></td></td<></td></td<>	M175	mirits     - <td< td=""><td>&gt;</td><td>1</td><td>_</td><td></td><td></td><td></td><td></td></td<>	>	1	_				
M175     M175       JOINT CONNECTOR-M22     Connector Name       BJ30FW     Connector Name       WHTE     Connector Name       (110) 8 / 7 6 5 4 3 2 1     Connector Name       (22) 23 23 33 33 23 33 23 23 23 22 22 22     Connector Color       (33) 32 31 30 22 8 27 28 25 24 23     Connector Color       (33) 32 31 30 22 8 27 28 25 24 23     Connector Color       (31) 10 9 8 / 7 6 5 4 3 2     Connector Color       (33) 23 31 30 22 8 27 28 25 24 23     Connector Color       (31) 10 9 8 / 7 6 5 4 3 2     Connector Color       (32) 33 23 13 00 20 28 27 28 25 24 23     Connector Color       (33) 29 13 00 20 28 27 28 25 24 23     Connector Color       (31) 10 9 8 / 7 6 5 4 3 2     Connector Color       (32) 10 00     Connector Color       (33) 10 00 00     Connector Color       (34) 10 10 10 10     Connector Color       (35) 10 00     Connector Color       (36) 11 10 10 10     Connector Color       (36) 11 10 10 10     Connector Color       (36) 11 10 10 10     Connector Color       (30) 10 10     Connector Color       (30) 10 10     Connector Color       (30) 10 10     Connector Color       (31) 10 10 10     Connector Color       (32) 20 10     Connector Color       (32) 20 10     Connector Color	M175     9     L       JOINT CONNECTOR-M22     BJ30FW     Connector Name       BJ30FW     Connector Name     Connector Name       Image: Signal Name     Image: Signal Name     Image: Signal Name       Image: Signal Name     Image: Signal Name     Image: Signal Name       Image: Signal Name     Image: Signal Name     Image: Signal Name	M175     M175       JOINT CONNECTOR-M22     Connector Name       BJ30FW     Connector Name       WHTE     Connector Name       (110) 9 8 7 6 5 4 3 2 1     Connector Name       (222) 231 30 (282) (222) (232) (2010)     Connector Color       (33) 33 31 30 (282) (222) (2010)     (310)       (310) (310) (311) (310)     Connector Color       (310) (311) (312) (322) (3	8	1	_	1			
M175       JOINT CONNECTOR-M22         JOINT CONNECTOR-M22       BU38FW         BU38FW       Connector No.         MHTE       Connector Name         2212121918171161541312       Connector Type         221221201918171161541312       Connector Color         332231302928272825423       Mine         of       Signal Name         -       -         -       -         22       -         23       -         23       -         23       -         23       -         23       -         23       -         23       -         33       -         33       -         33       -         33       -         33       -         -       -         -       -         -       -         -       -         -       -         -       -         -       -         -       -         -       -         -       -         -       -         -	M175       JOINT CONNECTOR-M22         JOINT CONNECTOR-M22       BU30FW         BU30FW       Onmector Nuc         WHITE       Connector Nuc         Ommetor Type       Connector Type         222 21 20 19 16 17 16 15 14 13 12       Connector Color         33 23 33 20 29 28 27 28 22 42       Connector Color         of       Signal Name         -       -         0       -         22       -         0       -         0       -         22       -         20       -         0       -         20       -         20       -         20       -         20       -	M175       JOINT CONNECTOR-M22         JOINT CONNECTOR-M22       BU38FW         BU38FW       Connector No.         MHTE       Connector Name         221212191918171161541312       Connector Name         221221201918171161541312       Connector Color         333231302928272825423       Mine         of       Signal Name         -       -         No.       Wire         23       -         24       -         23       -         23       -         23       -         23       -         23       -         23       -         23       -         23       -         23       -         23       -         23       -         23       -			_	I			
JOINT CONNECTOR-M22     Connector No.       BJ30FW     Connector Name       WHITE     Connector Type       0     22 21 20 19 18 17 16 15 14 13 12       33 22 31 30 29 28 27 28 52 24 25     Connector Color       33 23 31 30 29 28 27 28 52 24 25     Connector Color       0     Signal Name       -     -       2     -       0     -       2     -       2     -       0     -	JOINT CONNECTOR-M22     Connector No.       BJ30FW     Connector Name       WHITE     Connector Type       11109     8       12221     20       19     8       33     31       33     31       33     31       33     31       33     31       33     31       30     32       31     30       33     31       30     30       31     30       33     31       30     30       31     0       1     1	JOINT CONNECTOR-M22     Connector No.       BJ30FW     Connector Name       WHITE     Connector Type       0     22 21 20 19 18 17 16 15 14 13 12       33 23 31 30 29 28 22 22 22 22 22 22 22 22 22 22 22 22		M175					
Businessen     Connector Name       Businessen     Connector Name       WHITE     Connector Name       (1110)     8       222     2120       3332     3130       2332     2120       3332     3130       22     2120       3332     3130       23     2120       0     Signal Name       -     No.       22     -       22     -       22     -       22     -       22     -       22     -       22     -       22     -       22     -	Businer     Connector Name       Businer     Connector Name       WHITE     Connector Name       11110     8       2222120     18       2323130     29       3323130     29       3323130     29       3323130     29       3323130     29       3323130     29       3323130     29       3323130     29       30     29       30     29       30     20       30     20       30     20       30     20       30     20       30     20       30     20       30     20       30     20       30     20       30     20       30     20       30     20       10     10       10     10       10     10       20     1	Businessen     Connector Name       Businessen     Connector Name       WHITE     Connector Name       1110987     165141312       22212019181711615141312     Connector Color       23323130223282728522423     Connector Color       33323130223282728522423     Connector Color       0     Signal Name       -     -       22     -       22     -		DINT CONNECTOR-M00	Connector No.	E119			
bu30rW WHITE       Connector Name         2212120191817761541312       Connector Type         22212019181776155233302928272852423       Connector Color         e       -         e       -         0       -         20       -         20       -         22       -         22       -         22       -         22       -         22       -	Businerw       Connector name         wHTE       0         11       10       8       7       6       4       3       1         22       21       19       18       17       16       14       13       12         33       23       33       22       22       24       3	bu30rW WHITE       Connector Name         2221201918171615141312       Connector Type         232231302922222       Connector Color         33223130292222       Signal Name         e       -         1       -         22       -         23       -         22       -         22       -         22       -         22       -         22       -         22       -			Connoctor Nomo	IDDM E/D /INTELLICENT DOMED			
WHITE     Connector Type       1110987     876131       22212091817     1615141312       33233130292827     2822423       33233130292827     2822423       3323130292827     2822423       3323130292827     2822423       3323130292827     2822423       3323130292827     2822423       3323130292827     2822423       3323130292827     2822423       3323130292827     2822423       3323130292827     2822423       3323130292827     2822423       3323130292827     2822423       3323130292827     2822423       3323130292827     2822423       3323130292827     2822423       3323130292827     2822423       3323130292827     2822423       6     5       6     -       7     -       7     -       23     -       22     -	WHITE     Connector Type       1110     9     7     6     4     3     2     1       22     22     22     10     17     16     16     17     16     16     17     16     16     17     16     16     17     16     16     17     16     16     17     16     16     17     16     17     16     17     16     17     16     17     16     17     16     17     16     17     16     17     16     17     16     17     16     17     16     16     17     16     16     17     16     16     17     16     16     17     16     16     17     16     16     17     16     16     17     16     16     17     16     16     16     16     16     16     17     16     16     16     17     16     16     17     16     16     17     16     16     16     16     17     16     16     17     16     16     17     16     16     17     16     16     17     16     16     17     16     16     17     16     16     17 <td>WHITE     Connector Type       1110987     16161       22212091817     16151       3323130292827     252423       3323130292827     252423       3323130292827     252423       3323130292827     252423       3323130292827     252423       3323130292827     252423       3323130292827     252423       3323130292827     252423       3323130292827     252423       3323130292827     32323130       3323130292827     252423       3323130292827     32323130       3323130292827     32323130       3323130292827     32323130       3323130292827     32323130       3323130292827     32323130       3323130292827     32323130       332313029292827     32323130       332313029292827     32323130       332313029292827     32323130       332313029292827     32323130       3321310     1817       0     0       1     10000000       2     1</td> <td></td> <td>3J30FW</td> <td>CONTRACTOR INVENTION</td> <td></td> <td></td> <td></td> <td></td>	WHITE     Connector Type       1110987     16161       22212091817     16151       3323130292827     252423       3323130292827     252423       3323130292827     252423       3323130292827     252423       3323130292827     252423       3323130292827     252423       3323130292827     252423       3323130292827     252423       3323130292827     252423       3323130292827     32323130       3323130292827     252423       3323130292827     32323130       3323130292827     32323130       3323130292827     32323130       3323130292827     32323130       3323130292827     32323130       3323130292827     32323130       332313029292827     32323130       332313029292827     32323130       332313029292827     32323130       332313029292827     32323130       3321310     1817       0     0       1     10000000       2     1		3J30FW	CONTRACTOR INVENTION				
Connector Type     Connector Type       11     10     8     7     6     5     4     3     1       22     21     20     19     18     17     16     5     4     3       22     21     20     33     23     13     33     23     13     22       0     0     0     Signal Name     1     1     1     1       0     0     0     0     0     0       0     -     -     -     0       0     -     -     0     0	Connector Type     22     21     20     19     17     16     5     4     3     1     1       22	Connector Type     Connector Type       11     10     8     7     6     5     4     3     2       22     21     20     19     18     17     16     5     4     3       22     21     20     19     18     17     16     14     13     12       22     21     20     28     27     28     25     24     23       Mire     Signal Name     -     -     -     0.0     0.0       Bd     -     -     -     22     Vir		NHITE					
Connector Color     22     21     20     11     10     8     7     6     5     4     3     1     11     12     12     13     12     13     12     13     13     12     13     14     13     13     13     14     13     13     14     14     13     13     14	Connector Calor     22221201918171615141312       22221201918171615141312       332231302928272822323       3322313029282728232       Signal Name       Bs       -       22	Connector Color     22     21     20     11     10     8     7     6     5     4     3     1       22     21     20     19     16     17     16     13     12       23     23     33     29     28     27     26     23     23       23     23     33     29     28     27     26     23       Wite     -     -     -     -     0.0.       B6     -     -     -     0.0.       22     -     -     -     0.0.			Connector Type	TH32FW-NH			
Image: Constraint of the second se	Image: Color of Big     Image: Color of Color of Color of Big     Image: Color of	11     10     8     7     6     6     3     2     1       22     21     20     9     16     17     16     15     14     13     12       22     21     20     9     16     17     16     15     14     13     12       23     23     23     27     26     28     24     23       0     0     Signal Name     Signal Name     1     1       86     -     -     22     1     00       86     -     -     22     1     00			Connector Color	WHITE			
22     21     20     13     12       23     33     33     33     33     33       Color of Wire     Signal Name	22     <	22     21     20     13     12       23     33     33     33     13     13       28     28     27     28     28     28       28     28     27     28     28     28       29     33     32     31     30     28       29     33     32     31     30     28       21     00     33     32     13     02       20     Wire     Signal Name     1     1       20     -     -     22     Vir	Ľ	8 7 6 5 4 3 2	-0-1				
22     21     20     19     16     17     16     13     12       33     32     31     30     29     28     27     26     23     23       Color of Wite     Signal Name     -     -     -     -     0.0.       B6     -     -     -     -     -     -	22         21         22         21         22         21         22         7         22         22         1         22 <td>22     21     22     17     16     17     16     12       33     32     31     30     29     28     27     26       33     32     31     30     29     28     27       Color of Wire     Signal Name     Image: Signal Name     Image: Signal Name     Image: Signal Name       B6         W.</td> <td></td> <td></td> <td>C C C C C C C C C C C C C C C C C C C</td> <td></td> <td></td> <td></td> <td></td>	22     21     22     17     16     17     16     12       33     32     31     30     29     28     27     26       33     32     31     30     29     28     27       Color of Wire     Signal Name     Image: Signal Name     Image: Signal Name     Image: Signal Name       B6         W.			C C C C C C C C C C C C C C C C C C C				
Color of Big         Signal Name         Terminal Color           Big         -         -         22	Color of Bis         Signal Name         Terminal Color         Terminal Color         Color           Bis         -         22         -         22         Vire         Vire         22         Vire	Color of Big         Signal Name         Terminal Color           Big         -         -         22		22 21 20 19 18 17 16 15 14 13 12					
33         32         31         31         31         31         31         31         31         31         31         31         32         41<	33         28         37         30         28         27         28         28         27         28         28         27         28         28         27         28         28         27         28         28         27         28         28         27         28         28         27         28         28         27         28         28         27         28         28         27         28         28         27         20         20         1         1         1         1         1         20         0 <td>33         32         31         31         32         32         32&lt;</td> <td></td> <td></td> <td>H.S.</td> <td></td> <td></td> <td></td> <td></td>	33         32         31         31         32         32         32<			H.S.				
Color of Signal Name Bis	Color of Signal Name Big	Color of Signal Name Bis							
Color of Wire     Signal Name       Bis     -       Bis     -       22     Y	Color of Signal Name Wire Ba - Nu. Wire Ba - 22 V	Color of Signal Name Wire Signal Name BG - No. Wir BB - 22 Y				8 20 21 22 20 24 23 20 21 20 29 30 31 32 33 34 5 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50			
Color of Wire     Signal Name       Ba     _       Ba     _       22     Y	Color of Wire     Signal Name       Bd     -       Bd     -       22     Y	Color of Wire     Signal Name       Bis        Bis        22     Y			2				
Big - No. Wire Big - 22 Y No. Wire 22 Y No. Wire 22 Y No. Wire 22 Y No. 22	Wite         -         Terminal         Color of           BG         -         No.         Mire         22	Wite     -     Terminal       BG     -     No.       BG     -     -		Signal Name					
- lemmaa No. Wire 22 Y	- Letimination Color of No. Write 22 Y		_						
22 4			BG	-					
			Bg	1	+				
					22 Y	HORN RLY			

Ο

А

В

С

D

Е

F

G

Н

J

SEC

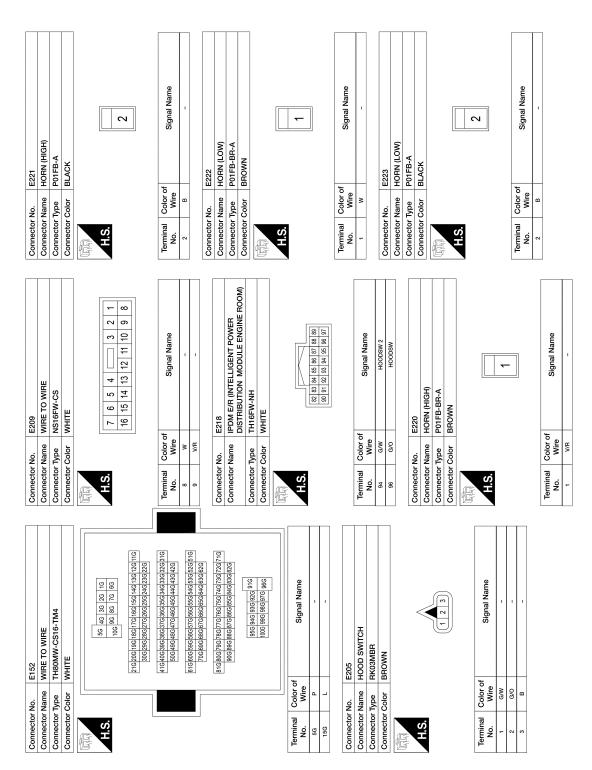
L

Μ

Ν

#### VEHICLE SECURITY SYSTEM [WITH INTELLIGENT KEY SYSTEM]

Revision: December 2015



AAKIA3370GB

No. B101 Name WIRE TO WIRE Type TH32MW-NH Color WHITE		Color of wire     Signal Name       wire     Signal Name       wire     -       wire     FRONT DOOR SWITCH RH       Those     B108       Name     FRONT DOOR SWITCH RH       Type     TH04FW-NH       Color     WHITE       No     B116       No     B108       Nine     Signal Name       No     B116       No     B116       Name     REAR DOOR SWITCH RH       Name     REAR DOOR SWITCH RH       Under     Signal Name       Wire     -       own     Signal Name       wire     -	
Connector No. Connector Name Connector Type Connector Color		Terminal     Color       31     Color       32     Connector No.       32     Connector No.       0     Connector Name       0     Connector Name       0     No.       3     Virt       3     Connector No.       3     Connector Name       0     Connector Name       0     No.       1     No.       3     Connector Name       0     Connector Name	
B55 AUTOMATIC BACK DOOR CONTROL MODULE TH32FW-NH	WHITE           1         2         3         4         5         6         7         8         9         10         11         12         13         4         15         6         7         8         9         10         11         12         13         14         15         16         17         13         13         12	F         Signal Name           CAN-H         CAN-H           CAN-L         CAN-L           CAN-L<	
	Connector Color	Terminal     Color of Wire       1     L       1     L       1     Bww       1     Bww       1     Bww       1     Bww       1     Bww       1     Connector Name       V     Connector Name       V     Connector Name       V     Connector Name       V     Connector Name       No     Mine       Same     Vine       73A     V	
лтсн цн	5	of B18 REAR DOOR SWITCH LH TH04FW-NH WHITE MHITE Signal Name of Signal Name - - - - - - - - -	
B8 FRONT DOOR SWITCH LH TH04FW-NH WHITE		of     Signal Na       B18     B18       B18     B18       REAR DOOR SWITCH LH     TH04FW-NH       WHITE     WHITE       WHITE     Signal Na       of     Signal Na	
Connector No. Connector Name Connector Type Connector Color		Terminal     Color of Wire       0     3       0     Connector No.       0     Connector Name       0     Connector Name       1     Connector Name       1     Connector Name       0     Mire       0     Wire       1     Vire       0     Wire       1     Vire       1     Connector No.       1     Vire       1     Vire       1     Vire       1     Vire       1     Vire       1     Vire	

AAKIA3371GB

Р

#### VEHICLE SECURITY SYSTEM [WITH INTELLIGENT KEY SYSTEM]

Revision: December 2015

Connector No. D501	Connector Name WIRE TO WIRE	Connector Type TH32FW-NH	Connector Color WHITE		H.S.	16         15         14         13         12         11         10         9         8         7         6         3         2         1           20         34         30         29         37         36         32         32         31         31         30         38         37         36         32         32         32         31         31         31         30         32	01 01 07 17 77 07		Terminal Color of Signal Name		d		Connector No. D507	Connector Name WIRE TO WIRE	Connector Type TH24FW-NH	Connector Color WHITE		HS.	12 11 10 9 8 7 6 5 4 3	24 23 22 21 20 19 18 17 16 15 14 13	ŀ	Terminal Color of Signal Name No.	5 P	24 B –	ľ			Connector Color WHILE		1 2 3 4 5 6 7 8	13 14 15 16 17 18 19 20 21 22 23 24	Terminal Color of Signal Name		
4 B		_	Connector No D101	e	Connector Color WHITE			H.S. 158 148 138 128 148 108 98 88 78 68 58 48 38 28 18	Heiskivasperiaterinakivaskirateri nakvaspasispanajasis jaseparetasiasperaterinakisetereseteresetereseteresetereseteresetereseteresetereseteresetereseteresetereseteres			al			2	Connector No. D105	e	Connector Type NS12FW-CS	Connector Color WHITE			1         2         4         5           6         7         8         9         10         11         12			Terminal Color of		7 B GND							
Connector No. D3	Connector Name WIRE TO WIRE				H.S. 15C 14C 13C 12C 11C 10C 9C 8C 7C 6C 5C 4C 3C 2C 1C	48C/45C/44C/41C/44C/38C/38C/38C/37C/38C			Terminal Color of Signal Name	AIL	8		Connector No. D7	Connector Name MAIN POWER WINDOW AND DOOR LOCK/			Connector Color WHITE		H.S.	9 10 11 12 13 14		Terminal Color of Signal Name		а ;	3 BH DLOCKACIRDR 11 V/I COM		Connector No. D14	Connector Name FRONT DOOR LOCK ASSEMBLY LH	Connector Color GRAY			1 2 3 4 5 6	Color of	No. Wire signal Name

AAKIA3372GB

## [WITH INTELLIGENT KEY SYSTEM]

#### **BASIC INSPECTION** А DIAGNOSIS AND REPAIR WORK FLOW Work Flow INFOID:000000012875984 В **OVERALL SEQUENCE** Inspection start D Ε 1. Get information for symptom Get the detailed information about symptom from the customer. 2. Check DTC Print out DTC and freeze frame data (or, write it down). Check related service bulletins. Symptom is not described. Symptom is described. Symptom is described. DTC is detected. DTC is detected. DTC is not detected. Н 3. Confirm the symptom 4. Confirm the symptom Try to confirm the symptom described Try to confirm the symptom described by the customer. by the customer. Also study the normal operation and failsafe related to the symptom. 5. Perform DTC CONFIRMATION PROCEDURE SEC 6. Detect malfunctioning system by SYMPTOM DIAGNOSIS 7. Detect malfunctioning part by Diagnosis Procedure L Symptom is Symptom is not described. described. Μ 8. Repair or replace the malfunctioning part Check input/output signal or voltage Ν DTC is 9. Final check detected. Check that the symptom is not detected. Symptom remains. Perform DTC CONFIRMATION PROCEDURE again, and then check that the malfunction is repaired. DTC is not detected. Symptom does not remain. Ρ Inspection End

ALAIA0158GB

DETAILED FLOW

**Revision: December 2015** 

< BASIC INSPECTION >

## **1.**GET INFORMATION FOR SYMPTOM

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

#### >> GO TO 2.

## 2.CHECK DTC

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

#### Are any symptoms described and any DTC detected?

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

#### **3.**CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer. Also study the normal operation and fail-safe related to the symptom. Verify relation between the symptom and the condition when the symptom is detected.

#### >> GO TO 5.

#### **4**.CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer. Verify relation between the symptom and the condition when the symptom is detected.

#### >> GO TO 6.

#### **5.**PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC CONFIRMATION PROCEDURE for the detected DTC, and then check that DTC is detected again. At this time, always connect CONSULT to the vehicle, and check self diagnostic results in real time. If two or more DTCs are detected, refer to <u>BCS-51. "DTC Inspection Priority Chart"</u> and determine trouble diagnosis order.

#### NOTE:

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

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

#### Is DTC detected?

YES >> GO TO 7.

NO >> Check according to <u>GI-42. "Intermittent Incident"</u>.

6. Detect malfunctioning system by symptom diagnosis

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

#### 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 >	[WITH INTELLIGENT KEY SYSTEM]
Inspect according to Diagnosis Procedure of the system.	
Is malfunctioning part detected?	Å
YES >> GO TO 8.	
NO >> Check according to <u>GI-42. "Intermittent Incident"</u> .	-
<b>8.</b> REPAIR OR REPLACE THE MALFUNCTIONING PART	E
1. Repair or replace the malfunctioning part.	
<ol> <li>Reconnect parts or connectors disconnected during Diagnosis ment.</li> </ol>	Procedure again after repair and replace-
3. Check DTC. If DTC is detected, erase it.	
	F
>> GO TO 9.	L
9.FINAL CHECK	
When DTC is detected in step 2, perform DTC CONFIRMATION PR	OCEDURE again, and then check that the
malfunction is repaired securely.	umptom in stop 2 or 4 and shock that the
When symptom is described by the customer, refer to confirmed system is not detected.	
Is DTC detected and does symptom remain?	F
YES-1 >> DTC is detected: GO TO 7.	
YES-2 >> Symptom remains: GO TO 4.	
NO >> Before returning the vehicle to the customer, always era	
	ŀ

J

L

Μ

Ν

0

Ρ

#### ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT [WITH INTELLIGENT KEY SYSTEM] < BASIC INSPECTION >

## ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT ECM

ECM : Description

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

\*: New one means an ECM that has never been energized on-board. (In this step, initialization procedure by CONSULT is not necessary)

#### NOTE:

If multiple keys are attached to the key holder, separate them before beginning work.

Distinguish keys with unregistered key IDs from those with registered IDs.

## ECM : Work Procedure

INFOID:000000012875986

INFOID:000000012875985

#### 1 PERFORM ECM RECOMMUNICATING FUNCTION

- 1. Install ECM.
- Contact back side of registered Intelligent Key\* to push-button ignition switch, then turn ignition switch to ON.
  - \*: To perform this step, use the key that is used before performing ECM replacement.
- 3. Maintain ignition switch in the ON position for at least 5 seconds.
- 4 Turn ignition switch to OFF.
- 5. Check that the engine starts.

#### >> GO TO 2.

#### 2.PERFORM ADDITIONAL SERVICE WHEN REPLACING ECM

Perform EC-150, "Work Procedure".

>> End.

#### BCM

BCM : Description

INFOID:000000012875987

#### BEFORE REPLACEMENT

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

#### NOTE:

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

#### AFTER REPLACEMENT

#### CAUTION:

When replacing BCM, always perform "WRITE CONFIGURATION" with CONSULT. Not doing so will cause the BCM control function to not operate normally.

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

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

BCM : Work Procedure

**1**.SAVING VEHICLE SPECIFICATION

#### (P)CONSULT Configuration

Perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to BCS-63, "CONFIG-URATION (BCM) : Description".

NOTE:

INFOID 000000012875988

## ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

[WITH INTELLIGENT KEY SYSTEM]

#### < BASIC INSPECTION >

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

>> GO TO 2. 2.REPLACE BCM В Replace BCM. Refer to BCS-79, "Removal and Installation". >> GO TO 3. **3.**WRITING VEHICLE SPECIFICATION D CONSULT Configuration Perform "WRITE CONFIGURATION - Config file" or "WRITE CONFIGURATION - Manual selection" to write vehicle specification. Refer to BCS-63, "CONFIGURATION (BCM) : Work Procedure". Ε >> GO TO 4. **4.**INITIALIZE BCM (NATS) F Perform BCM initialization. (NATS) >> Inspection End. Н

J

А

L

Μ

Ν

Ο

Ρ

#### < DTC/CIRCUIT DIAGNOSIS >

## DTC/CIRCUIT DIAGNOSIS P1610 LOCK MODE

#### DTC Description

INFOID:000000012875989

DTC DETECTION LOGIC

#### NOTE:

- If DTC P1610 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-66, "DTC Description"</u>.
- If DTC P1610 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-67, "DTC Description"</u>.

DTC No.	CONSULT screen terms (Trouble diagnosis content)		DTC Detection Condition
		Diagnosis condition	When ignition switch is ON.
		Signal (terminal)	-
P1610	LOCK MODE	Threshold	When ECM detects a communication malfunction between ECM and BCM 5 times or more
		Diagnosis delay time	-

#### POSSIBLE CAUSE

#### FAIL-SAFE

\_\_\_\_

#### DTC CONFIRMATION PROCEDURE

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

#### CONSULT

- 1. Turn ignition switch ON.
- 2. Select "Self Diagnostic Result" mode of "ENGINE".
- Check DTC.

#### Is DTC detected?

- YES >> Go to SEC-60. "Diagnosis Procedure".
- NO >> Inspection End.

#### **Diagnosis** Procedure

#### **1.**CHECK ENGINE START FUNCTION

- 1. Check that there are no DTC's except for DTC P1610 detected. If detected, erase the DTC after fixing.
- 2. Turn ignition switch OFF.
- 3. Contact the registered Intelligent Key backside to push-button ignition switch and wait 5 seconds.
- 4. Turn ignition switch ON.
- 5. Turn ignition switch OFF and wait 5 seconds.
- 6. Repeat steps 3 and 5 twice (a total of 3 times).
- 7. Check that engine can start.

>> Inspection End.

INFOID:0000000012875990

#### P1611 ID DISCORD, IMMU-ECM

#### < DTC/CIRCUIT DIAGNOSIS >

## P1611 ID DISCORD, IMMU-ECM

#### DTC Description

DTC No.

P1611

BCM

ECM

FAIL-SAFE

А INFOID:000000012875991 DTC DETECTION LOGIC CONSULT screen terms **DTC Detection Condition** (Trouble diagnosis content) **Diagnosis** condition When the ignition switch is ON Signal (terminal) ID DISCORD, IMMU-ECM The ID verification results between BCM and ECM are not Threshold good Diagnosis delay time Ε POSSIBLE CAUSE Harness or connectors (The CAN communication line is open or shorted.)

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

#### CONSULT

- 1. Turn ignition switch ON.
- 2 Select "Self Diagnostic Result" mode of "ENGINE".
- Check DTC.

#### Is DTC detected?

- YES >> Go to SEC-61, "Diagnosis Procedure".
- NO >> Inspection End.

## Diagnosis Procedure

**1.**PERFORM INITIALIZATION

Perform initialization of BCM and reregistration of all Intelligent Keys using CONSULT. Can the system be initialized and can the engine be started with reregistered Intelligent Key?

YES >> Inspection End. NO >> GO TO 2.

2.CHECK SELF DIAGNOSTIC RESULT

#### CONSULT

- Select "Self Diagnostic Result" mode of "ENGINE". 1.
- 2. Erase DTC.
- 3. Perform DTC CONFIRMATION PROCEDURE for DTC P1611. Refer to <u>SEC-61, "DTC Description"</u>. Is DTC detected?
- YES >> GO TO 3.
- NO >> Inspection End.

## 3.REPLACE BCM

#### CONSULT

Replace BCM. Refer to BCS-79, "Removal and Installation". 1.

- Perform initialization of BCM and registration of all Intelligent Keys using CONSULT. 2.
- Can the system be initialized and can the engine be started with registered Intelligent Key?
- >> Inspection End. YES

Н

SEC

L

M

Ν

Ρ

INFOID:000000012875992

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

NO >> GO TO 4.

- 4.REPLACE ECM
- Replace ECM. Refer to <u>EC-574, "Removal and Installation"</u>.
   Perform "ADDITIONAL SERVICE WHEN REPLACING ECM". Refer to <u>EC-150, "Work Procedure"</u>.

>> Inspection End.

#### P1612 CHAIN OF ECM-IMMU

#### < DTC/CIRCUIT DIAGNOSIS >

## P1612 CHAIN OF ECM-IMMU

#### DTC Description

#### DTC DETECTION LOGIC

#### NOTE:

- If DTC P1612 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-66, "DTC Description"</u>.
- If DTC P1612 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-67, "DTC Description"</u>.

DTC No.	CONSULT screen terms (Trouble diagnosis content)		DTC Detection Condition	D
		Diagnosis condition	When the ignition switch is ON.	
P1612	CHAIN OF BCM-ECM	Signal (terminal)	-	
P1012		Threshold	Inactive communication between BCM and ECM	
		Diagnosis delay time		F

#### POSSIBLE CAUSE

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

#### FAIL-SAFE

#### DTC CONFIRMATION PROCEDURE

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

#### CONSULT

- 1. Turn ignition switch ON.
- 2. Select "Self Diagnostic Result" mode of "BCM".
- Check DTC.

#### Is DTC detected?

- YES >> Go to <u>SEC-63</u>, "Diagnosis Procedure".
- NO >> Inspection End.

#### Diagnosis Procedure

#### NOTE:

- If DTC P1612 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to M BCS-66, "DTC Description".
- If DTC P1612 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-67, "DTC Description"</u>.
- 1.CHECK BCM POWER SUPPLY AND GROUND CIRCUIT.
   O

   Check BCM power supply and ground circuit. Refer to BCS-72, "Diagnosis Procedure".
   O

   Is the inspection result normal?
   YES >> GO TO 2.

   NO >> Repair or replace the harness.
   P

   2.CHECK ECM POWER SUPPLY AND GROUND CIRCUIT.
   Check ECM power supply and ground circuit. Refer to EC-184, "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the harness.

[WITH INTELLIGENT KEY SYSTEM]

А

В

INFOID:000000012875993

SEC

Ν

Н

INFOID:000000012875994

#### P1612 CHAIN OF ECM-IMMU

< DTC/CIRCUIT DIAGNOSIS >

**3.**PERFORM DTC CONFIRMATION PROCEDURE.

Perform the DTC confirmation procedure. Refer to <u>SEC-63, "DTC Description"</u>.

Does the DTC return?

- YES >> Replace BCM. Refer to <u>BCS-79. "Removal and Installation"</u>.
- NO >> Inspection End.

## P1614 CHAIN OF IMMU-KEY

#### < DTC/CIRCUIT DIAGNOSIS >

## P1614 CHAIN OF IMMU-KEY

## **DTC Description**

[WITH INTELLIGENT KEY SYSTEM]

DTC No.	CONSULT screen terms (Trouble diagnosis content)		DTC Detection Condition
		Diagnosis condition	When the ignition switch is ON.
		Signal (terminal)	
P1614	CHAIN OF IMMU-KEY	Threshold	Inactive communication between NATS antenna amp. and BCM
		Diagnosis delay time	_
NATS ar Harness (NATS a BCM	E CAUSE ntenna amp. or connector intenna amp. circuit is ope nt Key fob	n or shorted.)	
AIL-SAF	-		
_	ORM DTC CONFIRMATIO	N PRUCEDURE 1	
. Selec . Check	ict Intelligent Key back sid t "Self Diagnostic Result" r < DTC.		ion switch.
<u>s DTC de</u>			
	·> GO TO <u>SEC-65. "Diagr</u> ·> GO TO 2.	osis Procedure".	
-	ORM DTC CONFIRMATIO	N PROCEDURE 2	
CONSI			
	<u>tected?</u> ▹> GO TO_ <u>SEC-65, "Diagr</u> ⊧> Inspection End.	nosis Procedure".	
10 -			
	sis Procedure		INFOID:00000001287599
)iagnos	Wiring Diagram informati	on, refer to <u>SEC-38.</u>	
)iagnos Regarding		on, refer to <u>SEC-38.</u>	

NO >> Repair or replace as necessary.

2. CHECK NATS ANTENNA AMP. CIRCUIT

A

## P1614 CHAIN OF IMMU-KEY

#### < DTC/CIRCUIT DIAGNOSIS >

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

В	СМ	NATS ant	enna amp.	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M80	126	M218	3	Yes
MOO	127	WIZ TO	1	165

#### 3. Check continuity between BCM harness connector and ground.

BC	CM		Continuity
Connector	Terminal	Ground	Continuity
 M80	126	Ground	No
	127		NO

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## **3.**CHECK NATS ANTENNA AMP INPUT SIGNAL 1

- 1. Turn ignition switch ON.
- 2. Check signal between BCM harness connector and ground using oscilloscope.

	(+) BCM		Condition	Signal (Reference value)	
Connector	Terminal				
M80	126, 127	Ground	When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 1 5 10 1 5 10 1 5 10 1 5 10 1 5 10 1 5 10 10 15 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 15 10 10 10 10 10 10 10 10 10 10 10 10 10	
Wee	120, 121	Ground	When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 1 1 1 1 1 1 5 0 1 1 5 0 1 1 5 0 1 5 0 1 5 0 1 5 0 1 5 1 5	

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-79, "Removal and Installation"</u>.

NO >> Replace NATS antenna amp. Refer to <u>SEC-138</u>, "Removal and Installation".

#### **B210B STARTER CONTROL RELAY**

#### < DTC/CIRCUIT DIAGNOSIS >

## **B210B STARTER CONTROL RELAY**

#### DTC Description

Starter control relay, integrated in IPDM E/R, permits the starter relay operation when in N (Neutral) or P (Park) position. It is installed in parallel with the starter relay.

#### DTC DETECTION LOGIC

#### NOTE:

- If DTC B210B is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-66, "DTC Description"</u>.
- If DTC B210B is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-67. "DTC Description".

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC Detection Condition		
		Diagnosis condition	When the ignition switch is ON.	
		Signal (terminal)	-	г
B210B	START CONT RLY ON	Threshold	<ul> <li>IPDM E/R detects that the relay is stuck at ON position even if the following conditions are met for about 1 second:</li> <li>Starter control relay ON/OFF signal from BCM</li> <li>Transmission range switch input signal</li> </ul>	F
		Diagnosis delay time	-	

#### POSSIBLE CAUSE

- IPDM E/R
- Harness or connector

#### FAIL-SAFE

## DTC CONFIRMATION PROCEDURE 1.PERFORM DTC CONFIRMATION PROCEDURE

#### Turn the power supply position to start under the following conditions and wait for at least 1 second: 1. SEC CVT selector lever is in the P (Park) or N (Neutral) position. Depress the brake pedal 2. Check "Self Diagnostic Result" mode. Is DTC detected? YES >> Refer to SEC-67, "Diagnosis Procedure". NO >> Inspection End. Μ Diagnosis Procedure INFOID:000000012875998 **1.INSPECTION START** Ν (P) CONSULT 1. Turn ignition switch ON. Check "Self Diagnostic Result" mode. 2. Touch "ERASE". 3. Perform DTC Confirmation Procedure. 4 See BCS-52, "DTC Index". Ρ Is the DTC B210B displayed again? >> Replace IPDM E/R. Refer to PCS-36, "Removal and Installation". YES NO >> Inspection End.

}>

## [WITH INTELLIGENT KEY SYSTEM]

INFOID:000000012875997

А

Н

#### **B210C STARTER CONTROL RELAY**

#### < DTC/CIRCUIT DIAGNOSIS >

## **B210C STARTER CONTROL RELAY**

#### DTC Description

Starter control relay, integrated in IPDM E/R, permits the starter relay operation when in N (Neutral) or P (Park) position. It is installed in parallel with the starter relay.

#### DTC DETECTION LOGIC

#### NOTE:

- If DTC B210C is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-66, "DTC Description"</u>.
- If DTC B210C is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-67. "DTC Description"</u>.

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC Detection Condition		
		Diagnosis condition	When the ignition switch is ON.	
		Signal (terminal)	_	
B210C	START CONT RLY OFF	Threshold	<ul> <li>IPDM E/R detects that the relay is stuck at OFF position even if the following conditions are met for about 1 second:</li> <li>Starter control relay ON/OFF signal from BCM</li> <li>Transmission range switch input signal</li> </ul>	
_		Diagnosis delay time	—	

#### POSSIBLE CAUSE

- IPDM E/R
- Harness or connector

#### FAIL-SAFE

#### DTC CONFIRMATION PROCEDURE

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

#### CONSULT

- Turn the power supply position to start under the following conditions and wait for at least 1 second:
- CVT selector lever is in the P (Park) or N (Neutral) position.
- Depress the brake pedal
- 2. Check "Self Diagnostic Result" mode.

#### Is DTC detected?

- YES >> Refer to <u>SEC-68, "Diagnosis Procedure"</u>.
- NO >> Inspection End.

#### Diagnosis Procedure

#### **1.**INSPECTION START

#### CONSULT

- Turn ignition switch ON.
- 2. Check "Self Diagnostic Result" mode.
- 3. Touch "ERASE".

#### 4. Perform DTC Confirmation Procedure. Refer to <u>PCS-21, "DTC Index"</u>.

#### Is the DTC B210C displayed again?

- YES >> Replace IPDM E/R. Refer to <u>PCS-36, "Removal and Installation"</u>.
- NO >> Inspection End.

INFOID:000000012876000

INFOID:000000012875999

#### **B210D STARTER RELAY**

#### < DTC/CIRCUIT DIAGNOSIS >

## B210D STARTER RELAY

## DTC Description

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

#### DTC DETECTION LOGIC

#### NOTE:

- If DTC B210D is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-66, "DTC Description"</u>.
- If DTC B210D is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-67, "DTC Description".

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC Detection Condition		
		Diagnosis condition	When the ignition switch is ON.	
		Signal (terminal)	IPDM E/R terminal 3	F
B210D	STARTER RELAY ON	Threshold	<ul> <li>IPDM E/R detects that the relay is stuck at ON position even if the following conditions are met for about 1 second:</li> <li>Starter control relay ON/OFF signal from BCM</li> <li>Transmission range switch input</li> </ul>	G
		Diagnosis delay time	_	

#### POSSIBLE CAUSE

IPDM E/R

Harness or connector

#### FAIL-SAFE

#### DTC CONFIRMATION PROCEDURE 1.PERFORM DTC CONFIRMATION PROCEDURE CONSULT SEC Ignition switch ON under the following conditions and wait for at least 1 second: 1. CVT selector lever is in the P (Park) or N (Neutral) position Do not depress the brake pedal Select "Self Diagnostic Result" mode. 2. 3. Check DTC. Is DTC detected? Μ YES >> Refer to SEC-69, "Diagnosis Procedure". >> Inspection End. NO Diagnosis Procedure INFOID:000000012876002 Ν Regarding Wiring Diagram information, refer to SEC-28, "Wiring Diagram".

#### 1. CHECK STARTER RELAY POWER SUPPLY CIRCUIT

2. Disconnect IPDM E/R harness connector.

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

В

Н

Ο

Ρ

INFOID:000000012876001

## **B210D STARTER RELAY**

#### < DTC/CIRCUIT DIAGNOSIS >

IPDI	M E/R	Ground	Voltage (Approx.)	
Connector	Terminal	Ground		
E120	3	Ground	Battery voltage	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-36, "Removal and Installation".

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

#### **B210E STARTER RELAY**

#### < DTC/CIRCUIT DIAGNOSIS >

### **B210E STARTER RELAY**

#### DTC Description

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

DTC DETECTION LOGIC

#### NOTE:

- If DTC B210E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-66, "DTC Description"</u>.
- If DTC B210E is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-67. "DTC Description"</u>.

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC Detection Condition		
		Diagnosis condition	When the ignition switch is ON.	
		Signal (terminal)	-	_
B210E	STARTER RELAY OFF	Threshold	<ul> <li>IPDM E/R detects that the relay is stuck at ON position even if the following conditions are met for about 1 second:</li> <li>Starter control relay ON/OFF signal from BCM</li> <li>Transmission range switch input</li> </ul>	F
		Diagnosis delay time	—	

#### POSSIBLE CAUSE

- IPDM E/R
- Harness or connector

#### FAIL-SAFE

#### DTC CONFIRMATION PROCEDURE 1.PERFORM DTC CONFIRMATION PROCEDURE Turn ignition switch ON under the following conditions and wait for at least 1 second: 1. SEC CVT selector lever is in the P (Park) or N (Neutral) position. Do not depress the brake pedal. 2. Select "Self Diagnostic Result" mode. 3. Check DTC. Is DTC detected? YES >> Refer to SEC-71, "Diagnosis Procedure". Μ >> Inspection End. NO Diagnosis Procedure INFOID:000000012876004 Ν Regarding Wiring Diagram information, refer to SEC-28, "Wiring Diagram". 1.CHECK STARTER RELAY OUTPUT SIGNAL/CVT MODELS

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

3. Check voltage between BCM harness connector ground.

В

D

Н

Ρ

INFOID:000000012876003

#### **B210E STARTER RELAY** < DTC/CIRCUIT DIAGNOSIS >

## [WITH INTELLIGENT KEY SYSTEM]

BCM co	onnector			Condition		Voltage
Connector	Terminal	Ground	Ignition switch	Brake pedal	CVT selector le- ver	(Approx.)

M19	62	Ground	ON	Depressed	P (Park) or N (Neutral)	Battery voltage
WIG	02	Cround	ÖN	Depressed	Other than above	0

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

## 2.check starter relay output signal circuit

Disconnect IPDM E/R harness connector. 1.

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

IPDI	IPDM E/R		BCM	
Connector	Terminal	Connector	Terminal	Continuity
E119	33	M19	62	Yes

3. Check continuity between BCM harness connector and ground.

IPDM E/R		Ground	Continuity	
Connector	Terminal	Glouid	Continuity	
E119	33	Ground	No	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-36, "Removal and Installation".

NO >> Repair harness connector.

**3.**CHECK STARTER RELAY POWER SUPPLY CIRCUIT

#### 1. Turn ignition switch OFF.

2. Disconnect IPDM E/R harness connector.

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

IPDN	/IE/R	Ground	Voltage (V)	
Connector	Terminal		(Approx.)	
E119	33	Ground	Battery voltage	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-36, "Removal and Installation".

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

## **B210F TRANSMISSION RANGE SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

# B210F TRANSMISSION RANGE SWITCH

## DTC Description

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

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

#### DTC DETECTION LOGIC

#### NOTE:

- If DTC B210F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-66, "DTC Description"</u>.
- If DTC B210F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-67, "DTC Description".

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC Detection Condition			
		Diagnosis condition	When the ignition switch is ON.		
	B210F TRANSMISSION RANGE SWITCH	Signal (terminal)	_	F	
B210F		Threshold	<ul> <li>IPDM E/R detects a mismatch between the signals below for 1 second or more:</li> <li>Transmission range switch input signal</li> <li>Shift position signal from BCM (CAN)</li> </ul>	G	
		Diagnosis delay time	-		
				Н	

## FAIL-SAFE

#### POSSIBLE CAUSE

- Transmission range switch
- Harness or connector Transmission range switch circuit is open or shorted

## DTC CONFIRMATION PROCEDURE

## 1.PERFORM DTC CONFIRMATION PROCEDURE

(P) CONSULT	3EC
<ol> <li>Turn ignition switch ON under the following conditions and wait for at least 1 second:</li> <li>CVT selector lever is in the P (Park) or N (Neutral) position</li> </ol>	
- Do not depress the brake pedal	L
<ol> <li>Select "Self Diagnostic Result" mode.</li> <li>Check DTC.</li> </ol>	
Is DTC detected?	M
YES >> Refer to <u>SEC-73. "Diagnosis Procedure"</u> . NO >> Inspection End.	
Diagnosis Procedure	ND:000000012876006
Regarding Wiring Diagram information, refer to SEC-28, "Wiring Diagram".	0

# **1**.CHECK DTC WITH BCM

Refer to BCS-52, "DTC Index".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

**2.**CHECK TRANSMISSION RANGE SWITCH INPUT SIGNAL

Ρ

INFOID:000000012876005

А

В

# **B210F TRANSMISSION RANGE SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

1. Turn ignition switch OFF.

- 2. Disconnect IPDM E/R harness connector.
- 3. Turn ignition switch ON.

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

IPDM E/R		Ground	Conc	dition	Voltage
Connector	Terminal	Ground	Conc		(Approx.)
E119	E119 37 Ground CVT selector lev		CVT selector lever	P (Park) or N (Neutral)	Battery voltage
L119	57	Ground		Other than above	0

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-36, "Removal and Installation".

NO >> GO TO 3.

# $\mathbf{3}$ .check transmission range switch circuit for continuity

1. Turn ignition switch OFF.

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

IPDM E/R			Conditior	Continuity	
Connector	Terr	ninals	Condition	I	Continuity
F24	63 66	66	Transmission range switch	P or N	Yes
Γ24		Transmission range switch	Other	No	

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 5.

### **4.**CHECK TRANSMISSION RANGE SWITCH CIRCUIT FOR SHORT

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

IPD	M E/R	Ground	Continuity	
Connector	Terminal	Giouna		
F24	63	Ground	No	
1 24	66	Gibuna	NU	

Is the inspection result normal?

YES >> Replace the IPDM E/R. Refer to <u>PCS-36, "Removal and Installation"</u>.

NO >> Repair or replace harness.

# **5.** CHECK TRANSMISSION RANGE SWITCH INPUT SIGNAL CIRCUIT

1. Disconnect transmission range switch harness connector.

2. Check continuity between transmission range switch and IPDM E/R harness connectors.

Transmissio	n range switch	IPDN	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
F29	7	F24	63	Yes
F29	10	Γ24	66	Tes

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

Transmission	n range switch	Ground	Continuity	
Connector	Terminal	Gibunu	Continuity	
F29	7	Ground	No	
125	10	Ground	NO	

Is the inspection result normal?

## **B210F TRANSMISSION RANGE SWITCH**

< DTC/CIRCUIT DIAGNOSIS >	[WITH INTELLIGENT KEY SYSTEM]
YES >> GO TO 6. NO >> Repair harness or connector. <b>6.</b> CHECK INTERMITTENT INCIDENT	
Refer to GI-42, "Intermittent Incident".	
>> Inspection End.	

J

А

В

С

D

Ε

F

G

Н

L

Μ

Ν

0

Ρ

## **B2110 TRANSMISSION RANGE SWITCH**

### < DTC/CIRCUIT DIAGNOSIS >

# B2110 TRANSMISSION RANGE SWITCH

## DTC Description

INFOID:000000012876007

[WITH INTELLIGENT KEY SYSTEM]

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

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

### DTC DETECTION LOGIC

#### NOTE:

- If DTC B2110 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-66, "DTC Description"</u>.
- If DTC B2110 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-67, "DTC Description".

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC Detection Condition			
		Diagnosis condition	When the ignition switch is ON.		
	TRANSMISSION RANGE SWITCH	Signal (terminal)	IPDM E/R terminals 63 and 66		
B2110		Threshold	<ul><li>IPDM E/R detects mismatch between the signal below for 1 second or more:</li><li>Transmission range switch input signal</li></ul>		
		Diagnosis delay time	_		

#### POSSIBLE CAUSE

- Transmission range switch
- Transmission range switch circuit is open or shorted.
- Harness or connector

FAIL-SAFE

## DTC CONFIRMATION PROCEDURE

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

#### CONSULT

- 1. Turn the ignition switch ON under the following conditions and wait for at least 1 second:
- CVT selector lever is in the P (Park) or N (Neutral) position.
- Do not depress the brake pedal.
- 2. Select "Self Diagnostic Result" mode.
- 3. Check DTC.

#### Is DTC detected?

- YES >> Refer to <u>SEC-76, "Diagnosis Procedure"</u>.
- NO >> Inspection End.

## **Diagnosis** Procedure

INFOID:000000012876008

Regarding Wiring Diagram information, refer to <u>SEC-28, "Wiring Diagram"</u>.

## **1.**CHECK DTC WITH BCM

Refer to BCS-52, "DTC Index".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CHECK TRANSMISSION RANGE SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.

# **B2110 TRANSMISSION RANGE SWITCH**

### < DTC/CIRCUIT DIAGNOSIS >

### 2. Disconnect IPDM E/R harness connector.

- 3. Turn ignition switch ON.
- 4. Check voltage between IPDM E/R harness connector and ground under following condition:

IPDN	1 E/R	Orourd		~	ondition		Voltage
Connector	Terminal	Ground		C	ondition		(Approx.)
E119	37	Ground	CVT se	elector lever	-	ark) or N (Neutral)	Battery voltage
the inspection	a requit perm				0	ther than above	0
ES >> Rep IO >> GO CHECK TRA	olace IPDM TO 3. NSMISSIO n switch OF	E/R. Refer to <u>P(</u> N RANGE SWIT	CH CIRCU	IIT FOR CO			
. Check cont	-						
	IPDM E/R			Co	ondition		Continuity
Connector	T	erminals				P or N	Yes
F24	63	66	Transmiss	ion range swi	itch –	Other	No
the inspection		2012					
	IPDM E/I			Ground			Continuity
Connecto	or	Terminal					
F24		63 66	Ground			No	
the inspection	n result norm						
YES >> Rep NO >> Rep .CHECK TRA Disconnect	place the IP pair or repla NSMISSIO transmissio	DM E/R. Refer to ce harness. N RANGE SWIT n range switch h	CH INPUT	SIGNAL C	CIRCU		ctors.
Trans	mission range	switch		IPD	M E/R		
Connector		Terminal	Conr			Terminal	Continuity
F29		7 10	- F	24		63 66	Yes
. Check cont	inuity betwe		range swit	ch harness	conne	ector and ground	1.
	Transmission	range switch					
Connec		Termin	al		Ground		Continuity
		7			Groupd		No
F29		10		Ground			No

А

YES >> GO TO 6.

NO >> Repair harness or connector.

6.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

## **B2192 ID DISCORD, IMMU-ECM**

### < DTC/CIRCUIT DIAGNOSIS >

## B2192 ID DISCORD, IMMU-ECM

## **DTC** Description

## DTC DETECTION LOGIC

#### NOTE:

- If DTC B2192 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-66, "DTC Description".
- If DTC B2192 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-67, "DTC Description".

DTC No.	CONSULT screen terms (Trouble diagnosis content)		DTC Detection Condition
		Diagnosis condition	When the ignition switch is ON.
		Signal (terminal)	-
B2192	ID DISCORD BCM-ECM	Threshold	The ID verification results between BCM and ECM are not good
		Diagnosis delay time	
	E CAUSE or connector N communication line is o	pen or shorted.)	
FAIL-SAFI	E		
	FIRMATION PROCED		
4	RM DTC CONFIRMATIO		
CONSU	JLT Inition switch ON.		
2. Select	"Self Diagnostic Result" r	mode of "BCM".	
3. Check			
Is DTC det		Drooduro"	
	> GO TO <u>SEC-79, "Diagr</u> Inspection End.	IUSIS PTOCEQUIE".	
	is Procedure		INFOID:000000012876010
1.PERFO	RM INITIALIZATION		
		•	lligent Keys using CONSULT.
-		n the engine be star	ted with reregistered Intelligent Key?
	Inspection End. GO TO 2.		
•	SELF-DIAGNOSIS RES	ШТ	
		<u> </u>	
<ul><li>CONSU</li><li>Select</li></ul>	"Self Diagnostic Result" r	mode of "BCM".	
2. Erase	DTC.		
		PROCEDURE for D	TC B2192. Refer to <u>SEC-79, "DTC Description"</u> .
Is DTC det YES >>	<u>ected?</u> > GO TO 3.		
-			
NO >>	Inspection End.		

**Revision: December 2015** 

1.

Replace BCM. Refer to BCS-79, "Removal and Installation".

[WITH INTELLIGENT KEY SYSTEM]

А

В

С

## **B2192 ID DISCORD, IMMU-ECM**

#### < DTC/CIRCUIT DIAGNOSIS >

2. Perform initialization of BCM and reregistration of all Intelligent Keys using CONSULT. Can the system be initialized and can the engine be started with registered Intelligent Key?

YES >> Inspection End.

NO >> GO TO 4.

**4.**REPLACE ECM

1. Replace ECM. Refer to EC-574, "Removal and Installation".

2. Perform "ADDITIONAL SERVICE WHEN REPLACING ECM". Refer to EC-150, "Work Procedure".

>> Inspection End.

## B2193 CHAIN OF ECM-IMMU

### < DTC/CIRCUIT DIAGNOSIS >

## B2193 CHAIN OF ECM-IMMU

## DTC Description

## DTC DETECTION LOGIC

#### NOTE:

- If DTC B2193 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-66, "DTC Description"</u>.
- If DTC B2193 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-67, "DTC Description"</u>.

DTC No.	CONSULT screen terms (Trouble diagnosis content)		DTC Detection Condition	D
<b>D</b> 0400	CHAIN OF BCM-ECM	Diagnosis condition	When the ignition switch is ON.	_
		Signal (terminal)	-	E
B2193		Threshold	Inactive communication between BCM and ECM	-
		Diagnosis delay time	-	F

#### POSSIBLE CAUSE

- ECM
- BCM
- Harness or connector

(The CAN communication line is open or shorted.)

## FAIL-SAFE

### DTC CONFIRMATION PROCEDURE

## 1.PERFORM DTC CONFIRMATION PROCEDURE

#### CONSULT

- 1. Turn ignition switch ON.
- 2. Select "Self Diagnostic Result" mode of "BCM".
- Check DTC.

#### Is DTC detected?

YES >> GO TO <u>SEC-81, "Diagnosis Procedure"</u>. NO >> Inspection End.

## **Diagnosis** Procedure

#### NOTE:

- If DTC B2193 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to M BCS-66, "DTC Description".
- If DTC B2193 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-67, "DTC Description".
- 1.CHECK BCM POWER SUPPLY AND GROUND CIRCUIT.
   O

   Check BCM power supply and ground circuit. Refer to BCS-72, "Diagnosis Procedure".
   O

   Is the inspection result normal?
   YES >> GO TO 2.

   NO >> Repair or replace the harness.
   P

   2.CHECK ECM POWER SUPPLY AND GROUND CIRCUIT.
   Check ECM power supply and ground circuit. Refer to EC-184, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace ECM. Refer to EC-574, "Removal and Installation". GO TO 3.

NO >> Repair or replace the harness.

[WITH INTELLIGENT KEY SYSTEM]

А

В

INFOID:000000012876011

SEC

Ν

Н

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

< DTC/CIRCUIT DIAGNOSIS >

**3.**PERFORM DTC CONFIRMATION PROCEDURE.

Perform the DTC confirmation procedure. Refer to <u>SEC-81, "DTC Description"</u>.

Does the DTC return?

- YES >> Replace BCM. Refer to <u>BCS-79. "Removal and Installation"</u>.
- NO >> Inspection End.

# **B2195 ANTI-SCANNING**

# **DTC Description**

DTC DETECTION LOGIC

INFOID:000000012876013

А

В

DTC No.	CONSULT screen terms (Trouble diagnosis content)		DTC Detection Condition
		Diagnosis condition	When the ignition switch is ON.
		Signal (terminal)	-
B2195	ANTI-SCANNING	Threshold	ID verification between BCM and ECM that is out of the des- ignated specification is detected
		Diagnosis delay time	—
ID verific	E CAUSE ation request out of the de	esignated specificatio	n
FAIL-SAF	E		
	IFIRMATION PROCED		
	RM DTC CONFIRMATIO	N PROCEDURE	
	gnition switch ON.		
<ol> <li>Select</li> <li>Check</li> </ol>	: "Self Diagnostic Result" r c DTC.	mode of "BCM".	
Is DTC de			
	> Refer to <u>SEC-83, "Diagr</u>	nosis Procedure".	
	> Inspection End.		
Diagnos	is Procedure		INFOID:000000012876014
1.СНЕСК	SELF DIAGNOSTIC RES	SULT 1	
	ILT		
<ol> <li>Select</li> <li>Erase</li> </ol>	: "Self Diagnostic Result" r	mode of "BCM".	-
		PROCEDURE for DT	C B2195. Refer to <u>SEC-83, "DTC Description"</u> .
<u>Is DTC de</u>	tected?		
	> GO TO 2.		
-	> Inspection End. KEQUIPMENT OF THE V		
	t unspecified accessory pa fied accessory part related	v	
	> GO TO 3.		
-	> GO TO 4.		
3.CHECK	SELF DIAGNOSTIC RE	SULT 2	
	ILT		-
1. Obtair remov		to remove unspecifie	ed accessory part related to engine start, and then
	: "Self Diagnostic Result" r	mode of "BCM".	
3. Erase			C D2105 Defende SEC 22 "DTC Description"
4. Perfor		PROCEDURE for DI	C B2195. Refer to <u>SEC-83, "DTC Description"</u> .

#### Is DTC detected?

YES >> GO TO 4.

>> Inspection End.

# 4.REPLACE BCM

NO

- Replace BCM. Refer to <u>BCS-79, "Removal and Installation"</u>.
   Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> Inspection End.

## **B2196 DONGLE UNIT**

#### < DTC/CIRCUIT DIAGNOSIS >

## **B2196 DONGLE UNIT**

BCM performs ID verification between BCM and dongle unit.

**DTC** Description

	CONSULT screen terms (Trouble diagnosis content)		DTC Detection Condition
		Diagnosis condition	When the ignition switch is ON.
D2106	DONGLE NG	Signal (terminal)	-
B2196	DONGLE NG	Threshold	The ID verification results between BCM and dongle unit is not good
		Diagnosis delay time	_
	ULI gnition switch ON.		
2. Turn i 3. Turn i	gnition switch OFF. gnition switch ON.	10de.	
<ol> <li>Turn i</li> <li>Turn i</li> <li>Selec</li> <li>Checl</li> </ol>	gnition switch OFF. gnition switch ON. t "Self Diagnosis Result" n < DTC.	node.	
2. Turn i 3. Turn i 4. Selec 5. Checl Is the DTC	gnition switch OFF. gnition switch ON. t "Self Diagnosis Result" n < DTC. <u>C detected?</u>		
2. Turn i 3. Turn i 4. Selec 5. Checl <u>Is the DT(</u> YES >	gnition switch OFF. gnition switch ON. t "Self Diagnosis Result" n < DTC.		
2. Turn i 3. Turn i 4. Selec 5. Checl <u>Is the DT(</u> YES > NO >	gnition switch OFF. gnition switch ON. t "Self Diagnosis Result" n < DTC. <u>C detected?</u> >> Refer to <u>SEC-85, "Diag</u> u		INFCID:0000000128760
2. Turn i 3. Turn i 4. Selec 5. Checl <u>Is the DT(</u> YES > NO >	gnition switch OFF. gnition switch ON. t "Self Diagnosis Result" n < DTC. <u>C detected?</u> -> Refer to <u>SEC-85, "Diag</u> r -> Inspection End.		INFOID:0000000128760

DTC No.	CONSULT screen terms (Trouble diagnosis content)		DTC Detection Condition	Е
		Diagnosis condition	When the ignition switch is ON.	
		Signal (terminal)	-	Г
B2196	DONGLE NG	Threshold	The ID verification results between BCM and dongle unit is not good	F
		Diagnosis delay time	—	G

>> GO TO 2. NO

2. CHECK DONGLE UNIT CIRCUIT

1. Turn ignition switch OFF.

Disconnect BCM connector and dongle unit connector. 2.

INFOID:000000012876015

А

В

С

D

Н

J

SEC

L

Μ

Ν

Ο

Ρ

## **B2196 DONGLE UNIT**

#### < DTC/CIRCUIT DIAGNOSIS >

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

BCM		Dong	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
M19	52	M29	1	Yes

4. Check continuity between BCM harness connector and ground.

BC	CM		Continuity
Connector Terminal		Ground	Continuity
M19	52		No

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK DONGLE UNIT GROUND CIRCUIT

Check continuity between dongle unit harness connector and ground.

Dong	le unit		Continuity
Connector	Terminal	Ground	Continuity
M29	4		Yes

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

## DTC DETECTION LOGIC

#### NOTE:

- If DTC B2198 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-66, "DTC Description".
- If DTC B2198 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-67, "DTC Description".

DTC No.	CONSULT screen terms (Trouble diagnosis content)		DTC Detection Condition
		Diagnosis condition	When the ignition switch is ON.
		Signal (terminal)	-
B2198	NATS ANTENNA AMP	Threshold	Inactive communication between NATS antenna amp. and BCM
		Diagnosis delay time	—
<ul> <li>Harness</li> </ul>	tenna amp. or connector S antenna amp. circuit is	open or shorted)	
DTC CON	FIRMATION PROCED	URE	
1.PERFO	RM DTC CONFIRMATIO	N PROCEDURE 1	
2. Select 3. Check Is DTC det YES >> NO >>	ct Intelligent Key back side "Self Diagnostic Result" r DTC.	node of "BCM".	ion switch.
	the push-button ignition s "Self Diagnostic Result" r		
	<u>ected?</u> > GO TO <u>SEC-87, "Diagr</u> > Inspection End.	nosis Procedure".	
Diagnosi	s Procedure		INFOID:0000000128:
Degerding	Wiring Diagram informati		

Regarding Wiring Diagram information, refer to SEC-38, "Wiring Diagram".

# **1**.CONNECTOR INSPECTION

1. Disconnect BCM and NATS antenna amp.

2. Check connectors and terminals for deformation, disconnection, looseness or damage.

Is the inspection result normal?

## **SEC-87**

[WITH INTELLIGENT KEY SYSTEM]

А

В

С

### YES >> GO TO 2.

NO >> Repair or replace as necessary.

2. CHECK NATS ANTENNA AMP. CIRCUIT

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

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

E	BCM	NATS ant	enna amp.	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M80	126	M218	3	Yes
INIOU	127	IVIZ TO	1	165

3. Check continuity between BCM harness connector and ground.

ВС	CM		Continuity
Connector	Terminal	Ground	Continuity
M80	126	Ground	No
100	127		NO

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

**3.**CHECK NATS ANTENNA AMP INPUT SIGNAL 1

1. Turn ignition switch ON.

2. Check signal between BCM harness connector and ground using oscilloscope.

	+) CM	(-)	Condition	Signal (Reference value)	
Connector	Terminal				
M80	126, 127	Ground	When Intelligent Key is in the antenna detection area.	(V) 15 10 5 0 1 5 10 5 0 1 5 10 5 0 1 5 10 5 0 15 10 5 0 15 10 5 0 15 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 15 10 10 10 10 10 10 10 10 10 10 10 10 10	
MOU	120, 121	Glound	When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 11 1 1 1 1 1 1 1 1 1 1 1 1 1	

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-79</u>, "Removal and Installation".

NO >> Replace NATS antenna amp. Refer to <u>SEC-138, "Removal and Installation"</u>.

# B2555 STOP LAMP

DTC DETECTION LOGIC

## **DTC** Description

DTC No.	CONSULT screen terms (Trouble diagnosis content)		DTC Detection Condition
		Diagnosis condition	When the ignition switch is ON.
		Signal (terminal)	—
B2555	STOP LAMP	Threshold	BCM makes a comparison between the upper voltage and lower voltage of stop lamp switch. It judges from their values to detect the malfunctioning circuit
		Diagnosis delay time	-
<ul><li>Stop lam</li><li>Fuse</li><li>BCM</li><li>Harness</li></ul>	E CAUSE up switch or connector np switch circuit is open o	r shorted.)	
FAIL-SAF	E		
— ====================================			
	IFIRMATION PROCED		
	ORM DTC CONFIRMATIO	N PROCEDURE	
	ss the brake pedal and wa t "Self Diagnostic Result" r		
<u>Is DTC de</u>			
YES > NO >	> Go to <u>SEC-89, "Diagnos</u> > Inspection End.	<u>sis Procedure"</u> .	
Diagnos	is Procedure		INFOID:0000000128760
Regarding	Wiring Diagram informati	on, refer to <u>SEC-28, '</u>	"Wiring Diagram".
1.CHECK	K BRAKE SWITCH FUNC	TION	
	gnition switch ON.	KE SW2" in "Data M	onitor" mode of "INTELLIGENT KEY".

2. Select "BRAKE SW1" and "BRAKE SW2" in "Data Monitor" mode of "INTELLIGENT KEY".

3. Check "BRAKE SW1" and "BRAKE SW2" indication under the following conditions:

Monitor item		Condition	
	Droke nodel	Depressed	OFF
BRAKE SW1	Brake pedal	Released	ON
BRAKE SW2	Droke nodel	Depressed	ON
BRAKE SWZ	Brake pedal	Released	OFF

#### Is the inspection result normal?

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

Ο

[WITH INTELLIGENT KEY SYSTEM]

INFOID:000000012876019

А

В

## B2555 STOP LAMP

#### < DTC/CIRCUIT DIAGNOSIS >

NO-1 >> If "BRAKE SW1" is incorrect. GO TO 2.

NO-2 >> If "BRAKE SW2" is incorrect. GO TO 3.

2. CHECK STOP LAMP SWITCH INPUT SIGNAL 1

## 1. Turn ignition switch OFF.

2. Disconnect BCM connector.

3. Check voltage between BCM harness connector and ground.

(+) BCM		(-)	Voltage (Approx.)
Connector	Terminal		( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )
M18	25	Ground	Battery voltage

Is the inspection normal?

YES >> GO TO 7.

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

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

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

1. Disconnect BCM connector.

2. Check voltage between BCM harness connector and ground.

	(+) BCM (-)		Condition		Voltage (Approx.)
Connector	Terminal	*			( ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) )
M18	27	Ground Brake pedal		Depressed	Battery voltage
IVI I O	21	Ground	Brake pedal	Not depressed	0

Is the inspecting result normal?

YES >> GO TO 7.

NO >> GO TO 4.

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

1. Disconnect stop lamp switch connector.

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

(+) Stop lamp switch		(-)	Voltage (Approx.)
Connector	Terminal		
E38	1	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 5.

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

# 5. CHECK STOP LAMP SWITCH CIRCUIT

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

Stop lan	np switch	B	CM	Continuity
Connector	Terminal	Connector	Terminal	Continuity
E38	2	M18	27	Yes

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

Stop lan	np switch		Continuity
Connector	Terminal	Ground	Continuity
E38	2		No

## **B2555 STOP LAMP**

#### - - - -. .

< DTC/CIRCUIT DIAC	GNOSIS >		[WITH INTELLI	GENT KEY SYSTEM]	
Is the inspection result	normal?				
YES >> GO TO 6.					Α
NO >> Repair or I	replace harness.				
6.CHECK STOP LAN	IP SWITCH				D
Refer to SEC-91, "Con	nponent Inspection".				В
Is the inspection result	normal?				
YES >> GO TO 9.					С
_		r to <u>BR-20, "Exploded</u>	<u>View"</u> .		
7.CONNECTOR INSP	PECTION				
Check BCM connector	s and terminals for de	eformation, disconnec	tion, looseness or da	mage.	D
Is the inspection result	normal?				
YES >> GO TO 8.					F
NO >> Repair or I	replace as necessary.				
8.REPLACE BCM					
1. Replace BCM. Re	fer to <u>BCS-79, "Remo</u>	val and Installation".			F
2. Perform initialization	on of BCM and registr	ration of all Intelligent	Keys using CONSUL	.T.	
>> Inspection					G
9. CHECK INTERMIT	TENT INCIDENT				
Refer to GI-42, "Interm	ittent Incident".				Н
>> Inspection	End.				
Component Inspe	ction			INFOID:000000012876021	
1.CHECK STOP LAN	IP SWITCH				
					J
<ol> <li>Turn ignition switch</li> <li>Disconnect stop late</li> </ol>	imp switch connector.				
	etween stop lamp sw				
					SE
Stop lan	np switch	Con	dition	Continuity	
Terr	minal	Con		Continuity	
1	2	Brake nedal	Not depressed	No	Ĺ
1	· · · · · ·	Brake bedai		1	

Is the inspection result normal?

YES >> Inspection End.

1

>> Replace stop lamp switch. Refer to <u>BR-20, "Exploded View"</u>. NO

2

Ν

Μ

Ο

Ρ

Brake pedal

Depressed

Yes

#### B2556 PUSH-BUTTON IGNITION SWITCH DSIS > [WITH INTELLIGENT KEY SYSTEM]

## < DTC/CIRCUIT DIAGNOSIS >

# B2556 PUSH-BUTTON IGNITION SWITCH

# **DTC Description**

INFOID:000000012876022

## DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC Detection Condition		
		Diagnosis condition	When the ignition switch is ON.	
	2556 PUSH-BTN IGN SW	Signal (terminal)	_	
B2556		Threshold	BCM detects the push-button ignition switch stuck at ON for 100 seconds or more	
		Diagnosis delay time	_	

#### POSSIBLE CAUSE

- · Push-button ignition switch
- BCM
- Harness or connector
   (Duck butter institute and the context of the conte
  - (Push-button ignition switch circuit is shorted.)

FAIL-SAFE

## DTC CONFIRMATION PROCEDURE

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

#### CONSULT

- T. 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. Select "Self Diagnostic Result" mode of "BCM".
- 4. Check DTC.

#### Is DTC detected?

YES >> GO TO SEC-92, "Diagnosis Procedure".

NO >> Inspection End.

## **Diagnosis** Procedure

INFOID:000000012876023

Regarding Wiring Diagram information, refer to <u>SEC-28, "Wiring Diagram"</u>.

## 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.

(+)			N/ 14
Push-button ignition switch		(-)	Voltage (Approx.)
Connector	Terminal		( FF - )
M208	8	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

2.check push-button ignition switch circuit

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

# **B2556 PUSH-BUTTON IGNITION SWITCH**

### < DTC/CIRCUIT DIAGNOSIS >

# [WITH INTELLIGENT KEY SYSTEM]

Push-button igni	Push-button ignition switch BCM		Continuity	
Connector	Terminal	Connector	Terminal	Continuity
M208	8	M18	1	Yes
Check continuity betw	een push-button ig	nition switch harness	s connector and gr	ound.
Push-butto	on ignition switch			
Connector	Termina	al (	Ground	Continuity
M208	8			No
the inspection result nor	mal?			
(ES >> GO TO 3.				
IO >> Repair or repla	ace harness.			
REPLACE BCM				
Replace BCM. Refer t				
Perform initialization c	I DOW and registra		Reys using CONS	ULI.
>> Inspection En	d			
CHECK PUSH-BUTTO		сн		
efer to <u>SEC-93, "Compo</u> the inspection result nor				
ES >> GO TO 5.	<u>mar:</u>			
	-button ignition swi	itch. Refer to <u>SEC-13</u>	9. "Removal and I	nstallation".
CHECK INTERMITTEN	IT INCIDENT			
fer to GI-42, "Intermitter	nt Incident".			
>> Inspection En	d.			
omponent Inspection	on			INFOID:00000001287602
	N IGNITION SWIT	СН		
Turn ignition switch O		appostor		
Turn ignition switch O Disconnect push-butto	on ignition switch c		ls.	
Turn ignition switch O Disconnect push-butto	on ignition switch c		ls.	
Turn ignition switch O Disconnect push-butto	on ignition switch c een push-button ig			Continuity

#### Is the inspection result normal?

8

YES >> Inspection End.

4

NO >> Replace push-button ignition switch. Refer to <u>SEC-139</u>, "Removal and Installation".

switch

Push-button ignition

Р

Ο

Ν

Pressed

Not pressed

Yes

No

# B2557 VEHICLE SPEED

DTC Description

## DTC DETECTION LOGIC

#### NOTE:

- If DTC B2557 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-66, "DTC Description".
- If DTC B2557 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-67, "DTC Description"</u>.

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC Detection Condition		
		Diagnosis condition	When the ignition switch is ON.	
		Signal (terminal)	—	
B2557	VEHICLE SPEED	Threshold	<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 more</li> </ul>	
		Diagnosis delay time	—	

### POSSIBLE CAUSE

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

FAIL-SAFE

## DTC CONFIRMATION PROCEDURE

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

#### CONSULT

- 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. Select "Self Diagnostic Result" mode of "BCM".
- 4. Check DTC.

#### Is DTC detected?

- YES >> GO TO <u>SEC-94. "Diagnosis Procedure"</u>.
- NO >> Inspection End.

## **Diagnosis** Procedure

INFOID:000000012876026

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

#### CONSULT

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

## Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to <u>BRC-228, "DTC Index"</u>. NO >> GO TO 2.

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

## 

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

# < DTC/CIRCUIT DIAGNOSIS > Is DTC detected? А YES >> Perform the trouble diagnosis related to the detected DTC. Refer to MWI-29, "DTC Index". NO >> GO TO 3. 3. CHECK INTERMITTENT INCIDENT В Refer to GI-42, "Intermittent Incident". >> Inspection End. С D Е F G Н

J

L

Μ

Ν

Ο

Ρ

## **B2560 STARTER CONTROL RELAY**

#### < DTC/CIRCUIT DIAGNOSIS >

# **B2560 STARTER CONTROL RELAY**

## DTC Description

Starter control relay, integrated in IPDM E/R, permits the starter relay operation when in N (Neutral) or P (Park) position.

DTC DETECTION LOGIC

#### NOTE:

- If DTC B2560 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-66, "DTC Description"</u>.
- If DTC B2560 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-67. "DTC Description"</u>.

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC Detection Condition		
		Diagnosis condition	When the ignition switch is ON.	
		Signal (terminal)	-	
B2560	STARTER CONTROL RE- LAY	Threshold	BCM detects a mismatch between the OFF request of starter control relay to IPDM E/R and the feedback. (The feedback is ON instead of OFF)	
		Diagnosis delay time	_	

### POSSIBLE CAUSE

IPDM E/R

### FAIL-SAFE

## DTC CONFIRMATION PROCEDURE

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

#### CONSULT

- 1. Turn ignition switch ON under the following conditions and wait for at least 2 seconds:
- CVT selector lever is in the P (Park) position.
- Depress the brake pedal.
- 2. Select "Self Diagnostic Result" mode.
- 3. Check DTC.

#### Is DTC detected?

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

NO >> Inspection End.

## **Diagnosis** Procedure

**1.**CHECK DTC WITH IPDM E/R

#### CONSULT

Check "Self Diagnostic Result" mode. Refer to PCS-21, "DTC Index".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

2016 Murano NAM

NTROL RELAY [WITH INTELLIGENT KEY SYSTEM]

## **B2601 SHIFT POSITION**

### < DTC/CIRCUIT DIAGNOSIS >

## **B2601 SHIFT POSITION**

## **DTC** Description

## DTC DETECTION LOGIC

#### NOTE:

- If DTC B2601 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-66, "DTC Description".
- If DTC B2601 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-67, "DTC Description".

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC Detection Condition		
		Diagnosis condition	When the ignition switch is ON.	_
		Signal (terminal)	_	E
B2601	SHIFT POSITION	Threshold	When there is a difference between P (Park) range signal from CVT shift selector (park position switch) and P (Park) position signal from IPDM E/R (CAN)	F
		Diagnosis delay time	-	

#### F

POSSIBLE CAUSE <ul> <li>CVT shift selector (park position switch)</li> </ul>		G
<ul> <li>BCM</li> <li>Harness or connector (The CAN communication line is open or shorted.)</li> <li>Harness or connector [CVT shift selector (park position switch) circuit is open or shorted.]</li> </ul>		Н
FAIL-SAFE		
— DTC CONFIRMATION PROCEDURE  1.PERFORM DTC CONFIRMATION PROCEDURE		J
CONSULT		SEC
<ol> <li>Shift the selector lever to the P (Park) position.</li> <li>Turn ignition switch ON and wait 2 seconds or more.</li> <li>Shift the selector lever to any position other than P (Park) and wait 2 seconds or more.</li> <li>Select "Self Diagnostic Result" mode of "BCM".</li> <li>Check DTC.</li> </ol>		L
<u>Is DTC detected?</u> YES >> Go to <u>SEC-97, "Diagnosis Procedure"</u> . NO >> Inspection End.		Μ
Diagnosis Procedure	INFOID:000000012876030	Ν
Regarding Wiring Diagram information, refer to <u>SEC-28, "Wiring Diagram"</u> .		0
1. CHECK CVT SHIFT SELECTOR SWITCH FUNCTION		P

## CONSULT

- Turn ignition switch ON. 1.
- Select "DETE/CANCEL SW" and "DETENT SW IPDM" in "Data Monitor" mode. 2.
- Check "DETE/CANCEL SW" and "DETENT SW IPDM" indication under the following conditions: 3.

[WITH INTELLIGENT KEY SYSTEM]

А

В

С

## **B2601 SHIFT POSITION**

#### < DTC/CIRCUIT DIAGNOSIS >

Monitor item	Condition		Indication
DETE/CANCEL SW	CVT Shift selector		OFF
DETE/CANCEL SW		P (Park)	ON
DETENT SW - IPDM	CVT Shift selector	In any position other than P (Park)	OFF
		P (Park)	ON

Is the inspection result normal?

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

NO-1 >> If "DETE/CANCEL SW" function is incorrect. GO TO 2.

NO-2 >> If "DETENT SW - IPDM" function is incorrect. GO TO 5.

2. CHECK CVT SHIFT SELECTOR CIRCUIT (BCM)

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

CVT shift selector (park position switch)		ВС	Continuity	
Connector	Terminal	Connector Terminal		Continuity
M78	6	M18	20	Yes

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

CVT shift selector (	park position switch)		Continuity
Connector	Terminal	Ground	Continuity
M78	6		No

Is the inspection result normal?

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

3.connector inspection

1. Disconnect BCM.

2. Check connectors and terminals for deformation, disconnection, looseness or damage.

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace as necessary.

**4.**REPLACE BCM

- 1. Replace BCM. Refer to BCS-79, "Removal and Installation".
- 2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

#### >> Inspection End.

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

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

CVT shift selector (park position switch)		IPDN	Continuity	
Connector	Connector Terminal		Terminal	Continuity
M78	6	E119	31	Yes

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

**O**.CONNECTOR INSPECTION

# **B2601 SHIFT POSITION**

< DTC/CIRCUIT DIAG	SNOSIS >		[WITH INTELLIG	ENT KEY SYSTEM]
<ol> <li>Disconnect IPDM I</li> <li>Check connectors</li> </ol>		ormation, disconnect	ion, looseness or dama	ige.
Is the inspection result	normal?			
YES >> GO TO 7. NO >> Repair or r	eplace as necessary.			
7.REPLACE IPDM E/	R			
1. Replace IPDM E/F	R. Refer to <u>PCS-36, "F</u>	Removal and Installa	tion".	
>> Inspection	End.			
Component Inspe	ction			INFOID:000000012876031
1.снеск сvт sнігт	SELECTOR (PARK	POSITION SWITCH	)	
	h OFF. hift selector connector etween CVT shift sele		witch) terminals.	
CVT shift selector	(park position switch)	Cor	ndition	Continuity
Ter	minal			Continuity
5	6	Selector lever	P (Park) position	No
0	Ŭ		Other than above	Voc

Other than above

Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace CVT shift selector. Refer to <u>TM-196, "Removal and Installation"</u>.

J

Н

SEC

L

Μ

Ν

Ο

Ρ

## [WITH INTELLIGENT KEY SYSTEM]

# **B2602 SHIFT POSITION**

## DTC Description

DTC DETECTION LOGIC

#### NOTE:

- If DTC B2602 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-66, "DTC Description"</u>.
- If DTC B2602 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-67, "DTC Description"</u>.

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC Detection Condition		
		Diagnosis condition	When the ignition switch is ON.	
		Signal (terminal)	-	
B2602	SHIFT POSITION	Threshold	<ul> <li>BCM detects the following status for 10 seconds:</li> <li>Selector lever is in the P (Park) 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>	
		Diagnosis delay time	_	

#### POSSIBLE CAUSE

- · Harness or connectors
- (CAN communication line is open or shorted.)
- Harness or connectors
- [CVT shift selector (park position switch) circuit is open or shorted.]
- CVT shift selector (park position switch)
- Combination meter
- BCM

FAIL-SAFE

## DTC CONFIRMATION PROCEDURE

## 1.PERFORM DTC CONFIRMATION PROCEDURE

#### 

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

#### Is DTC detected?

- YES >> Go to <u>SEC-100, "Diagnosis Procedure"</u>.
- NO >> Inspection End.

## **Diagnosis** Procedure

INFOID:000000012876033

Regarding Wiring Diagram information, refer to SEC-28, "Wiring Diagram".

## **1**.CHECK CVT SHIFT SELECTOR SWITCH FUNCTION

#### CONSULT

- 1. Turn ignition switch ON.
- 2. Select "DETE/CANCEL SW" and "VEH SPEED 1" in "Data Monitor" mode.
- 3. Check "DETE/CANCEL SW" and "VEH SPEED 1" indication under the following conditions:

## **B2602 SHIFT POSITION**

#### < DTC/CIRCUIT DIAGNOSIS >

		Condition		Indication		
	CV/T Shift as last	tor	In any position other than P (Park)	OFF		
DETE/CANCEL SW	CVT Shift select		P (Park)	ON		
/EH SPEED 1	Vehicle not mov	ing		0		
TEH SFEED I	Vehicle moving	Vehicle moving Varies				
NO-1 >> If "DETE/CA NO-2 >> If "VEH SPE .CHECK DTC OF COI )CONSULT heck DTC in "Self Diag <u>DTC detected?</u> (ES >> Perform the NO >> GO TO 3. .CHECK DTC OF ABS )CONSULT heck DTC in "Self Diag <u>DTC detected?</u>	42. "Intermittent Incide NCEL SW" is incorrect ED 1" is incorrect. GO MBINATION METER nostic Result" mode of trouble diagnosis rela	of "METER/M ated to the de LECTRIC UN	ected DTC. Refer to <u>MWI-29</u>			
CHECK CVT SHIFT S	nnector and IPDM E/F	R connector.	ition switch) harness connec			
Disconnect BCM con Check continuity be connector.	nnector and IPDM E/F tween CVT shift selec	R connector.				
CHECK CVT SHIFT S Disconnect BCM con Check continuity be connector.	nnector and IPDM E/F tween CVT shift selec ark position switch)	R connector. ctor (park pos	BCM			
CHECK CVT SHIFT S Disconnect BCM con Check continuity be connector.	nnector and IPDM E/F tween CVT shift selec ark position switch) Terminal	R connector. ctor (park pos	BCM Terminal	tor and BCM hai Continuity		
CHECK CVT SHIFT S Disconnect BCM con Check continuity be connector. CVT shift selector (pa Connector M78	nnector and IPDM E/F tween CVT shift select ark position switch) Terminal 6	R connector. ctor (park pos Connecto M18	BCM Terminal 20	tor and BCM har Continuity Yes		
CHECK CVT SHIFT S Disconnect BCM con Check continuity be connector.	nnector and IPDM E/F tween CVT shift select ark position switch) Terminal 6 tween CVT shift select ctor (park position switch) Terminal 6	R connector. ctor (park pos Connecto M18	BCM Terminal	tor and BCM har Continuity Yes		

>> Inspection End.

## **B2602 SHIFT POSITION**

# < DTC/CIRCUIT DIAGNOSIS >

## Component Inspection

[WITH INTELLIGENT KEY SYSTEM]

INFOID:000000012876034

# 1. CHECK CVT SHIFT SELECTOR (PARK POSITION SWITCH)

- 1. Turn ignition switch OFF.
- 2. Disconnect CVT shift selector connector.

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

CVT shift selector (park position switch)		Condition		Continuity
Terr	Terminal		Condition	
5	5 6		P (Park) position	No
5	0	Selector lever	Other than above	Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace CVT shift selector. Refer to TM-196, "Removal and Installation".

# **B2603 SHIFT POSITION**

## **DTC** Description

DTC DETECTION LOGIC

#### NOTE:

 If DTC B2603 is displayed with DTC B2601, first perform the trouble diagnosis for DTC B2601. Refer to <u>SEC-97. "DTC Description"</u>.

DTC No.	CONSULT screen terms (Trouble diagnosis content)		DTC Detection Condition
		Diagnosis condition	When the ignition switch is ON.
		Signal (terminal)	-
B2603	SHIFT POSI STATUS	Threshold	<ul> <li>BCM detects the following status when ignition switch is in the ON position:</li> <li>P (Park) position signal from TCM: approx. 0V</li> <li>CVT shift selector (park position switch) signal: approx. 0V</li> </ul>
		Diagnosis delay time	-
[CVT shi • Harness (TCM cir • CVT shif	E CAUSE or connector ift selector (park position s or connectors rcuit is open or shorted.) ft selector (park position sy sembly (TCM)		or shorted.]
FAIL-SAF	E		
—			
4	FIRMATION PROCED		
<b>1.</b> PERFC	ORM DTC CONFIRMATIO	N PROCEDURE 1	
<ol> <li>Turn ig</li> <li>Select</li> </ol>	he selector lever to the P ( gnition switch ON and wai t "Self Diagnostic Result" r	t 1 second or more.	
4. Check Is DTC det			
YES > NO >	<ul> <li>&gt; Go to <u>SEC-103, "Diagno</u></li> <li>&gt; GO TO 2.</li> <li>&gt; M DTC CONFIRMATIO</li> </ul>		
		NT NUCLDURE 2	
1. Shift th	he selector lever to any po t "Self Diagnostic Result" r		Park) and wait 1 second or more.
Is DTC de			
	> Go to SEC-103, "Diagno	osis Procedure".	
	Inspection End.		

Regarding Wiring Diagram information, refer to SEC-28, "Wiring Diagram".

[WITH INTELLIGENT KEY SYSTEM]

INFOID:0000000012876035

В

С

А

## **B2603 SHIFT POSITION**

#### < DTC/CIRCUIT DIAGNOSIS >

# 1. CHECK CVT SHIFT SELECTOR SWITCH FUNCTION

- 1. Turn ignition switch ON.
- 2. Select "DETE/CANCEL SW" and "SFT PN/N SW" in "Data Monitor" mode.
- 3. Check "DETE/CANCEL SW" and "SFT PN/N SW" indication under the following conditions:

Monitor item		Condition	
DETE/CANCEL SW	CVT Shift selector	In any position other than P (Park)	OFF
DETE/CANCEL SW		P (Park)	ON
SFT PN/N SW	CVT Shift selector	In any position other than P (Park)	OFF
SFT FININ SW		P (Park)	ON

#### Is the inspection result normal?

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

- NO-1 >> If "DETE/CANCEL SW" is incorrect. GO TO 6.
- NO-2 >> If "SFT PN/N SW" is incorrect. GO TO 2.

# **2.**CHECK BCM INPUT SIGNAL

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

(+) BCM		(-)	Condition		Voltage (Approx.)	
Connector	Terminal	*			(********)	
M18	39	Ground	Selector lever	P or N position	Battery voltage	
IVIIO		Ground	Selector level	Other than above	0	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

**3.**CHECK BCM INPUT SIGNAL CIRCUIT

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

Transmission range switch		B	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
F29	10	M18	39	Yes

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

Transmissio	n range switch		Continuity	
Connector	Terminal	Ground	Continuity	
F29	10		No	

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 5.

**4.**REPLACE BCM

1. Replace BCM. Refer to BCS-79. "Removal and Installation".

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

>> Inspection End.

## **B2603 SHIFT POSITION**

< DTC/CIRCUIT DIAGNOSIS >

#### 5. CHECK DTC OF TCM Check DTC in "Self Diagnostic Result" mode of "TCM". Is DTC detected? В YES >> Perform the trouble diagnosis related to the detected DTC. Refer to TM-58, "DTC Index". NO >> Perform the trouble diagnosis related to the TCM power and ground circuits. Refer to TM-181. "Diagnosis Procedure". 6.CHECK CVT SHIFT SELECTOR POWER SUPPLY 1. Turn ignition switch OFF. D 2. Disconnect CVT shift selector (park position switch) connector. Check voltage between CVT shift selector (park position switch) harness connector and ground. 3. (+) Ε Voltage CVT shift selector (park position switch) (-) (Approx.) Connector Terminal M78 5 Ground Battery voltage Is the inspection result normal? YES >> GO TO 7. NO >> Repair or replace harness. I.CHECK CVT SHIFT SELECTOR POWER SUPPLY CIRCUIT Н Disconnect BCM connector. Check continuity between CVT shift selector (park position switch) harness connector and BCM harness 2. connector. CVT shift selector (park position switch) BCM Continuity Connector Terminal Connector Terminal M19 69 M78 5 Yes Check continuity between CVT shift selector (park position switch) harness connector and ground. 3. SEC CVT shift selector (park position switch) Continuity Connector Terminal Ground M78 5 No Is the inspection result normal? YES >> GO TO 8. NO >> Repair or replace harness. M 8.CHECK CVT SHIFT SELECTOR CIRCUIT Disconnect BCM connector and IPDM E/R connector. 1. Ν 2. Check continuity between CVT shift selector (park position switch) harness connector and BCM harness connector. BCM CVT shift selector (park position switch) Continuity Connector Terminal Connector Terminal M78 6 M18 20 Yes Ρ 3. Check continuity between CVT shift selector (park position switch) harness connector and ground.

CVT shift selector (park position switch)GroundContinuityConnectorTerminalGroundNoM786No

Is the inspection result normal?

## **B2603 SHIFT POSITION**

< DTC/CIRCUIT DIAGNOSIS >

- YES >> GO TO 9.
- NO >> Repair or replace harness.

**9.**CHECK CVT SHIFT SELECTOR (PARK POSITION SWITCH)

Refer to <u>SEC-106</u>, "Component Inspection".

#### Is the inspection result normal?

YES >> GO TO 10.

NO >> Replace CVT shift selector. Refer to <u>TM-196</u>, "Removal and Installation".

# 10.REPLACE BCM

- 1. Replace BCM. Refer to BCS-79, "Removal and Installation".
- 2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> Inspection End.

## Component Inspection

INFOID:000000012876037

# 1. CHECK CVT SHIFT SELECTOR (PARK POSITION SWITCH)

1. Turn ignition switch OFF.

2. Disconnect CVT shift selector connector.

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

CVT shift selector (park position switch)		Condition		Continuity
Terminal				Continuity
5	6	Selector lever	P (Park) position	No
	0		Other than above	Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace CVT shift selector. Refer to <u>TM-196</u>, "Removal and Installation".

## **B2604 SHIFT POSITION**

## DTC Description

## DTC DETECTION LOGIC

#### NOTE:

- If DTC B2604 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-66, "DTC Description".
- If DTC B2604 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-67, "DTC Description"</u>.

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC Detection Condition		
		Diagnosis condition	When the ignition switch is ON.	_
		Signal (terminal)		E
B2604	PNP/CLUTCH SW	Threshold	<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 (Park) and N (Neutral)</li> <li>P/N position signal is not sent from TCM but shift position signal input (CAN) from TCM is P (Park) or N (Neutral)</li> </ul>	F
		Diagnosis delay time	-	

### POSSIBLE CAUSE

- Harness or connectors
- (CAN communication line is open or shorted.)
- BCM
- TCM
- Harness or connector
- (TCM circuit is open or shorted.)

### FAIL-SAFE

—	
DTC CONFIRMATION PROCEDURE	SEC
1.PERFORM DTC CONFIRMATION PROCEDURE	
CONSULT	L
<ol> <li>Shift the selector lever to the P (Park) position.</li> <li>Turn ignition switch ON and wait 5 seconds or more.</li> </ol>	
3. Shift the selector lever to the N (Neutral) position and wait 5 seconds or more.	M
<ol> <li>Shift the selector lever to any position other than P (Park) and N (Neutral) and wait 5 seconds or more.</li> <li>Select "Self Diagnostic Result" mode of "BCM".</li> </ol>	1 V 1
6. Check DTC.	
Is DTC detected?	Ν
YES >> Go to <u>SEC-107. "Diagnosis Procedure"</u> . NO >> Inspection End.	
Diagnosis Procedure	0
	P

Regarding Wiring Diagram information, refer to SEC-28, "Wiring Diagram".

# 1. CHECK CVT SHIFT SELECTOR SWITCH FUNCTION

- 1. Turn ignition switch ON.
- 2. Select "SFT P -MET", "SFT N -MET" and "SFT PN/N SW" in "Data Monitor" mode.
- 3. Check "SFT P -MET", "SFT N -MET" and "SFT PN/N SW" indication under the following conditions:

## **SEC-107**

2016 Murano NAM

А

В

Н

## **B2604 SHIFT POSITION**

#### < DTC/CIRCUIT DIAGNOSIS >

Monitor item		Condition		
		Selector lever is in any position ex- cept the P (Park) position	OFF	
SFT P -MET	CVT Shift selector	Selector lever is in the P (Park) position	ON	
SFT N -MET	CVT Shift selector	Selector lever is in any position ex- cept the N (Neutral) position	OFF	
SFT N-MET		Selector lever is in the N (Neutral) po- sition	ON	
SFT PN/N SW	CVT Shift selector	Selector lever is in and position ex- cept the P (Park) or N (Neutral) posi- tion	OFF	
		Selector lever is in the P (Park) or N (Neutral) position	ON	

#### Is the inspection result normal?

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

NO-1 >> If "SFT N -MET" or "SFT P -MET" is incorrect. GO TO 7.

NO-2 >> If "SFT PN/N SW" is incorrect. GO TO 2.

# 2. CHECK DTC OF TCM

#### CONSULT

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

#### Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to  $\underline{\text{TM-58}}$ , "DTC Index". NO >> GO TO 3.

# 3.CHECK BCM INPUT SIGNAL

#### 1. Turn ignition switch ON.

2. Check voltage between BCM harness connector and ground.

(+) BCM		()	Condition		Voltage (V) (Approx.)
Connector	Terminal				( + + )
M18	39	Ground	nd Selector lever	P (Park) or N (Neu- tral) position	Battery voltage
				Other than above	0

#### Is the inspection result normal?

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

**4.**REPLACE BCM

1. Replace BCM. Refer to <u>BCS-79, "Removal and Installation"</u>.

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

>> Inspection End.

# 5. CHECK BCM INPUT SIGNAL CIRCUIT

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

# **B2604 SHIFT POSITION**

#### < DTC/CIRCUIT DIAGNOSIS >

#### [WITH INTELLIGENT KEY SYSTEM]

	Transmission ra	ange switch	E	BCM	Continuity	
	Connector	Terminal	Connector	Terminal	Continuity	
	F29	10	M18	39	Yes	
	Check continuity betw	ween transmission r	ange switch harnes	s connector and g	round.	
	Transmis	ssion range switch			Continuity	
	Connector	Termina	I	Ground	Continuity	
	F29	10			No	
	CHECK INTERMITTE er to <u>GI-42, "Intermitte</u> >> Inspection Er	ent Incident".				
.(	CHECK CVT SHIFT S		SWITCH FUNCTIO	ON (METER)		
C	CONSULT Turn ignition switch C Select "SHIFT IND" i Check "SHIFT IND" i	n "Data Monitor" mo		::		
•	Monitor item		Conditio	n	Indicatio	

Monitor item	Condition		Indication
SHIFT IND	CVT Shift selector	P (Park) position	Р
		N (Neutral) position	Ν

Is the inspection result normal?

- YES >> Inspection End.
- NO >> Refer to <u>TM-198</u>, "Inspection".

SEC

L

Μ

Ν

Ο

Ρ

J

# [WITH INTELLIGENT KEY SYSTEM]

# **B2605 SHIFT POSITION**

# DTC Description

DTC DETECTION LOGIC

#### NOTE:

- If DTC B2605 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-66, "DTC Description"</u>.
- If DTC B2605 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-67, "DTC Description"</u>.

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC Detection Condition		
		Diagnosis condition	When the ignition switch is ON.	
	PNP/CLUTCH SW	Signal (terminal)	-	
B2605		Threshold	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	
		Diagnosis delay time	—	

#### POSSIBLE CAUSE

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

#### FAIL-SAFE

# DTC CONFIRMATION PROCEDURE

# **1.**PERFORM DTC CONFIRMATION PROCEDURE

#### CONSULT

- 1. Shift the selector lever to the P (Park) position.
- 2. Turn ignition switch ON and wait 1 second or more.
- 3. Shift the selector lever to the N (Neutral) position and wait 1 second or more.
- 4. Shift the selector lever to any position other than P (Park) and N (Neutral) and wait 1 second or more.
- 5. Select "Self Diagnostic Result" mode of "BCM".
- 6. Check DTC.

#### Is DTC detected?

- YES >> Go to <u>SEC-110, "Diagnosis Procedure"</u>.
- NO >> Inspection End.

# **Diagnosis** Procedure

INFOID:000000012876041

Regarding Wiring Diagram information, refer to SEC-28, "Wiring Diagram".

# **1**.CHECK CVT SHIFT SELECTOR SWITCH FUNCTION

#### CONSULT

- 1. Turn ignition switch ON.
- 2. Select "SFT PN-IPDM" and "SFT PN/N SW" in "Data Monitor" mode.
- 3. Check "SFT PN-IPDM" and "SFT PN/N SW" indication under the following conditions:

# **B2605 SHIFT POSITION**

#### < DTC/CIRCUIT DIAGNOSIS >

Monitor item		Condition	
SFT PN-IPDM	CVT Shift selector	Any position other than P (Park) or N (Neutral) position	OFF
-		P (Park) or N (Neutral) position	ON
FT PN/N SW	CVT Shift selector	Any position other than P (Park) or N (Neutral) position	OFF
		P (Park) or N (Neutral) position	ON

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

NO-1 >> If "SFT PN-IPDM" is incorrect. GO TO 2.

NO-2 >> If "SFT PN/N SW" is incorrect. GO TO 5.

# 2. CHECK IPDM E/R INPUT SIGNAL

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

-	(+) IPDM E/R		()	Condition		Voltage (Approx.)	G
-	Connector	Terminal				()	Н
-	F24	66	Ground	Selector lever	P (Park) or N (Neu- tral) position	Battery voltage	-
_					Other than above	0	

#### Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to PCS-36, "Removal and Installation".
- NO >> GO TO 3.

# 3. CHECK IPDM E/R INPUT SIGNAL CIRCUIT

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

IPDM E/R		Transmissior	Continuity	•	
Connector	Terminal	Connector	Terminal	Continuity	P. 4
E119	37	F29	10	Yes	IVI

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

IPDN	M E/R		Continuity	Ν
Connector	Terminal	Ground	Continuity	
E119	37		No	0

#### Is the inspection result normal?

- YES >> GO TO 4.
- NO >> Repair or replace harness.

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

1. Replace IPDM E/R. Refer to PCS-36, "Removal and Installation".

- >> Inspection End.
- 5. CHECK BCM INPUT SIGNAL

J

SEC

L

Ρ

Ε

F

# **B2605 SHIFT POSITION**

#### < DTC/CIRCUIT DIAGNOSIS >

# [WITH INTELLIGENT KEY SYSTEM]

#### 1. Turn ignition switch ON.

2. Check voltage between BCM harness connector and ground.

	(+) BCM		(-)	Condition		Voltage (Approx.)
Co	onnector	Terminal				(
	M18	39	Ground	Selector lever	P (Park) or N (Neu- tral) position	Battery voltage
_					Other than above	0

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 7.

6.REPLACE BCM

1. Replace BCM. Refer to BCS-79, "Removal and Installation".

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

>> Inspection End.

# 7. CHECK BCM INPUT SIGNAL CIRCUIT

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

Transmissior	n range switch	BC	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
F29	10	M18	39	Yes

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

Transmissio	on range switch		Continuity	
Connector	Terminal	Ground	Continuity	
F29	10		No	

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness.

**8.**CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

# **B2608 STARTER RELAY**

#### < DTC/CIRCUIT DIAGNOSIS >

# **B2608 STARTER RELAY**

# DTC Description

# DTC DETECTION LOGIC

#### NOTE:

- If DTC B2608 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-66, "DTC Description"</u>.
- If DTC B2608 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-67, "DTC Description".

DTC No.	CONSULT screen terms (Trouble diagnosis content)		DTC Detection Condition	D
		Diagnosis condition	When the ignition switch is ON.	_
		Signal (terminal)	-	E
B2608	STARTER RELAY	Threshold	BCM outputs starter motor relay OFF signal but BCM receives starter motor relay ON signal from IPDM E/R (CAN)	F
		Diagnosis delay time	_	I
<ul> <li>IPDM E/</li> <li>Harness (Starter r</li> <li>Harness</li> </ul>	or connectors relay circuit is open or sho or connector N communication line is o			G
DTC CON	FIRMATION PROCED	URF		I
4	RM DTC CONFIRMATIO			
	LT push-button ignition switc	hunder the following	conditions to start ongine:	J
- Shift s	elector lever: In the P (Pa			SE
	pedal: Depressed second after engine start	ed		
<ol> <li>Select</li> <li>Check</li> </ol>	: "Self Diagnostic Result" r : DTC.			L
Is DTC de		acia Dracadura"		
	> Go to <u>SEC-113, "Diagno</u> > Inspection End.	<u>isis Procedure</u> .		M
Diagnos	is Procedure		INFOID:000000012876043	
-				Ν
Regarding	Wiring Diagram information	on. refer to SEC-28. "	Wiring Diagram".	
- () · · · · · · · · · · · · · · · · ·	J 20	, <u> </u>		С
1.CHECK	CDTC OF IPDM E/R			
CONSU Check DT Is DTC de	C in "Self Diagnostic Resu	lt" mode of "IPDM E/F	R".	Ρ
YES >		nosis related to the d	etected DTC. Refer to PCS-21, "DTC Index".	
<b>2.</b> CHECK	BCM POWER SUPPLY	CIRCUIT		

1. Turn ignition switch ON.

[WITH INTELLIGENT KEY SYSTEM]

А

INFOID:000000012876042

В

С

# **B2608 STARTER RELAY**

#### < DTC/CIRCUIT DIAGNOSIS >

2. Check voltage between BCM harness connector and ground.

	(+) BCM		0		Voltage
Connector	CM Terminal	(–) Condition	Condition		
CONNECTOR	Terrininai				
M19	62 Ground Selector lever		N (Neutral) or P (Park) position	Battery voltage	
				Other than above	0

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

**3.**CHECK STARTER RELAY CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect IPDM E/R connector.

3. Disconnect BCM connector.

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

IPDI	M E/R	BCM Connector Terminal		BCM Continuity	
Connector	Terminal			Continuity	
E119	33	M19	62	Yes	

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

IPDM E/R			Continuity
Connector	Terminal	Ground	Continuity
E119	33		No

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-36, "Removal and Installation".

NO >> Repair or replace harness.

**4.**CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

# **B260F ENGINE STATUS**

# **DTC** Description

[WITH INTELLIGENT KEY SYSTEM]

INFOID:000000012876044

А

В

D

Е

Н

SEC

Ρ

DTC DET	ECTION LOGIC			
DTC No.	CONSULT screen terms (Trouble diagnosis content)		DTC Detection Condition	
		Diagnosis condition	When the ignition switch is ON.	
		Signal (terminal)	-	
B260F	ENG STATE SIG LOST	Threshold	BCM has not yet received the engine status signal from ECM when ignition switch is in the ON position.	
		Diagnosis delay time	-	
(The CA • ECM FAIL-SAF	or connectors N communication line is o E ine cranking	pen or shorted.)		
DTC CON	FIRMATION PROCED	URE		
1.CHECK	C DTC PRIORITY			
lf DTC B2 U1010.	60F is displayed with DT	C U1000 or U1010, fi	rst perform the trouble diagnosis for DTC U1000 or	
<u>Is applicat</u>	ble DTC detected?			
	YES >> Perform diagnosis of applicable. U1000: Refer to <u>BCS-66, "DTC Description"</u> . U1010: Refer to <u>BCS-67, "DTC Description"</u> .			
NO >	> GO TO 2.			

2. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON and wait 2 seconds or more.

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

#### Is DTC detected?

- YES >> Refer to SEC-115, "Diagnosis Procedure".
- NO-1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
- NO-2 >> Confirmation after repair: Inspection End.

# Diagnosis Procedure

INFOID:000000012876045

**1.**CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000: Refer to <u>BCS-66, "DTC Description"</u>. U1010: Refer to <u>CBCS-67, "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.
- 3. Touch "ERASE".
- 4. Perform DTC CONFIRMATION PROCEDURE for DTC B260F. Refer to <u>SEC-115, "DTC Description"</u>.

## Is DTC detected?

YES >> GO TO 3. NO >> Inspection End.

Revision: December 2015

# **3.**REPLACE ECM

Replace ECM. Refer EC-574, "Removal and Installation".

>> Inspection End.

#### **B261E VEHICLE TYPE** [WITH INTELLIGENT KEY SYSTEM] < DTC/CIRCUIT DIAGNOSIS > **B261E VEHICLE TYPE** А DTC Description INFOID:000000012876046 There are two types of vehicles. В HEV Conventional DTC DETECTION LOGIC NOTE: If DTC B261E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-66, "DTC Description". D If DTC B261E is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-67, "DTC Description". Е CONSULT screen terms DTC No. **DTC Detection Condition** (Trouble diagnosis content) **Diagnosis condition** When the ignition switch is ON F Signal (terminal) B261E VEHICLE TYPE Threshold Difference of BCM configuration Diagnosis delay time POSSIBLE CAUSE BCM mis-configuration Wrong ECM installed Н FAIL-SAFE DTC CONFIRMATION PROCEDURE **1.**PERFORM DTC CONFIRMATION PROCEDURE Turn ignition switch ON under the following conditions: 1. Shift selector lever is in the P (Park) or N (Neutral) position. Do not depress brake pedal. SEC Select "Self Diagnostic Result" mode. 2 3. Check DTC. Is DTC detected? YES >> GO TO SEC-117, "Diagnosis Procedure".

NO >> Inspection End.

# **Diagnosis** Procedure

# **1.**INSPECTION START

## CONSULT

- Turn ignition switch ON.
- Check "Self Diagnostic Result" mode.
- Touch "ERASE".
- Perform DTC Confirmation Procedure. Refer to <u>SEC-117, "DTC Description"</u>.

Is the 1st trip DTC B261E displayed again?

YES >> GO TO 2.

NO >> Inspection End.

**2.** PERFORM BCM CONFIGURATION.

Perform the BCM configuration. Refer to BCS-63, "CONFIGURATION (BCM) : Work Procedure".

>> GO TO 3.

M

Ν

Ρ

# **3**.INSPECTION START

#### CONSULT

- 1. Turn ignition switch ON.
- 2. Check "Self Diagnostic Result" mode.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure. Refer to <u>SEC-117, "DTC Description"</u>.

Is the 1st trip DTC B261E displayed again?

YES >> GO TO 4.

NO >> Inspection End.

**4.**CONFIRM ECM PART NUMBER.

Confirm the part number of the installed ECM is correct.

Is the ECM part number correct?

YES >> Replace BCM. Refer to <u>BCS-79, "Removal and Installation"</u>.

NO >> Replace ECM. Refer to EC-574, "Removal and Installation".

# **B26F3 STARTER CONTROL RELAY**

#### < DTC/CIRCUIT DIAGNOSIS >

# **B26F3 STARTER CONTROL RELAY**

# DTC Description

# DTC DETECTION LOGIC

#### NOTE:

- If DTC B26F3 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-66, "DTC Description".
- If DTC B26F3 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-67, "DTC Description"</u>.

CONSULT screen terms (Trouble diagnosis content)	DTC Detection Condition			
	Diagnosis condition	When the ignition switch is ON.	_	
	Signal (terminal)	-	F	
START CONT RLY ON	Threshold	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)	F	
	Diagnosis delay time	-		
	(Trouble diagnosis content)	(Trouble diagnosis content)         Diagnosis condition         Signal (terminal)         Threshold	(Trouble diagnosis content)       Diagnosis condition         Diagnosis condition       When the ignition switch is ON.         Signal (terminal)       —         Threshold       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

• IPDM E/R

· Harness or connector

(The CAN communication line is open or shorted.)

(The CAN communication line is open of shorted.)	Н
FAIL-SAFE	
_	
DTC CONFIRMATION PROCEDURE	
1.PERFORM DTC CONFIRMATION PROCEDURE	
<ul> <li>CONSULT</li> <li>Press push-button ignition switch under the following conditions to start engine:</li> <li>Shift selector lever: In the P (Park) position.</li> </ul>	J
<ul> <li>Brake pedal: Depressed</li> <li>Wait 2 seconds after engine started.</li> <li>Select "Self Diagnostic Result" mode of "BCM".</li> <li>Check DTC.</li> </ul>	SEC
Is DTC detected?         YES       >> GO TO SEC-119, "Diagnosis Procedure".         NO       >> Inspection End.	L
Diagnosis Procedure	IVI
1.CHECK DTC OF IPDM E/R	Ν
CONSULT     Check DTC in "Self Diagnostic Result" mode of "IPDM E/R".     Is DTC detected?	0
YES >> Perform the diagnosis procedure related to the detected DTC. Refer to <u>PCS-21, "DTC Index"</u> . NO >> GO TO 2.	
2.CHECK INTERMITTENT INCIDENT	Ρ

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

[WITH INTELLIGENT KEY SYSTEM]

А

INFOID:000000012876048

В

С

# **B26F4 STARTER CONTROL RELAY**

#### < DTC/CIRCUIT DIAGNOSIS >

# B26F4 STARTER CONTROL RELAY

# DTC Description

#### DTC DETECTION LOGIC

#### NOTE:

- If DTC B26F4 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-66, "DTC Description"</u>.
- If DTC B26F4 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-67, "DTC Description"</u>.

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC Detection Condition		
		Diagnosis condition	When the ignition switch is ON.	
		Signal (terminal)	-	
B26F4	START CONT RELAY OFF	Threshold	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	
		Diagnosis delay time	-	

#### POSSIBLE CAUSE

• IPDM E/R

· Harness or connector

(The CAN communication line is open or shorted.)

#### FAIL-SAFE

#### DTC CONFIRMATION PROCEDURE

# **1.**PERFORM DTC CONFIRMATION PROCEDURE

#### CONSULT

- 1. Press push-button ignition switch under the following conditions to start engine, and wait 1 second or more:
- Shift selector lever: In the P (Park) position
- Brake pedal: Depressed
- 2. Select "Self Diagnostic Result" mode of "BCM".
- 3. Check DTC.

#### Is DTC detected?

YES >> GO TO <u>SEC-120, "Diagnosis Procedure"</u>.

NO >> Inspection End.

# Diagnosis Procedure

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

#### CONSULT

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

#### Is DTC detected?

YES >> Perform the diagnosis procedure related to the detected DTC. Refer to <u>PCS-21, "DTC Index"</u>. NO >> GO TO 2.

# 2. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

INFOID:000000012876051

# **B26F7 BCM**

**DTC** Description

[WITH INTELLIGENT KEY SYSTEM]

	oonption		INFOID:000000012878052	
DTC DET	ECTION LOGIC			В
DTC No.	CONSULT screen terms (Trouble diagnosis content)		DTC Detection Condition	С
		Diagnosis condition	When the ignition switch is ON.	
B26F7	BCM	Signal (terminal)	-	_
D2017	DOM	Threshold	Inside key antenna output circuit in BCM is malfunctioning	D
		Diagnosis delay time	—	
POSSIBL • BCM	E CAUSE			Е
FAIL-SAF	E			F
4	ORM DTC CONFIRMATIO			G
<ol> <li>Turn i</li> <li>Select</li> </ol>	ILT door request switch. gnition switch ON. t "Self Diagnostic Result" r < DTC.	node of "BCM".		Н
<u>Is DTC de</u> YES >	-	<u>gnosis Procedure"</u> .		
Diagnos	is Procedure		INFOID:000000012876053	J

1.INSPECTION START	SEC
	- 3EC
<ol> <li>Turn ignition switch ON.</li> <li>Select "Self Diagnostic Result" mode of "BCM".</li> </ol>	
3. Touch "ERASE".	L
<ol> <li>Perform DTC CONFIRMATION PROCEDURE for DTC B26F7. Refer to <u>SEC-121. "DTC Description"</u>. <u>Is DTC detected?</u></li> </ol>	
YES >> GO TO 2.	$\mathbb{M}$
NO >> Inspection End.	
2.REPLACE BCM	Ν
<ol> <li>Replace BCM. Refer to <u>BCS-79, "Removal and Installation"</u>.</li> <li>Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.</li> </ol>	
>> Inspection End.	0

Ρ

# **B26FC KEY REGISTRATION**

#### < DTC/CIRCUIT DIAGNOSIS >

# B26FC KEY REGISTRATION

# DTC Description

INFOID:000000012876054

[WITH INTELLIGENT KEY SYSTEM]

#### DTC DETECTION LOGIC

DTC No.	CONSULT screen terms (Trouble diagnosis content)	DTC Detection Condition		
		Diagnosis condition	When the ignition switch is ON.	
B26FC	KEY REGISTRATION	Signal (terminal)	_	
D201 C	RET REGISTIVATION	Threshold	Intelligent Key that does not match the vehicle is registered	
		Diagnosis delay time	_	

#### POSSIBLE CAUSE

- Improper registration operation
- Intelligent Key
- BCM

FAIL-SAFE

#### DTC CONFIRMATION PROCEDURE

# **1.**PERFORM DTC CONFIRMATION PROCEDURE

#### (E)CONSULT

- T. Perform initialization of BCM and reregistration of all Intelligent Keys.
- 2. Select "Self Diagnostic Result" mode of "BCM".
- 3. Check DTC.

#### Is DTC detected?

- YES >> Go to SEC-122, "Diagnosis Procedure"
- NO >> Inspection End.

#### **Diagnosis** Procedure

# **1.**REPLACE INTELLIGENT KEY

#### 

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

#### Is DTC detected?

- YES >> GO TO 2.
- NO >> Inspection End.

# 2.REPLACE BCM

- 1. Replace BCM. Refer to BCS-79, "Removal and Installation".
- 2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> Inspection End.

# **HEADLAMP FUNCTION**

# [WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS > [WITH INTELLIGENT KEY SYSTE			LLIGENT KEY SYSTEM]
HEADLAMP FUNCT	ION		
Component Function C	Check		INFOID:000000012876056
1. CHECK FUNCTION			I
<ul> <li>CONSULT</li> <li>Perform "HEAD LAMP(H</li> <li>Check headlamps operation</li> </ul>		de of "THEFT ALM" of "BCM	Л".
Test	item	Descri	ption
HEAD LAMP (HI)	ON	Headlamps (Hi)	Light
	OFF		Do not light
	<u>al?</u> 3, "Diagnosis Procedure".		I
Diagnosis Procedure			INFOID:000000012876057
1.CHECK HEADLAMP FUN	ICTION		
Refer to SEC-123, "Compone	ent Function Check".		(
Is the inspection result normal YES >> GO TO 2.			
	e the malfunctioning parts.		ł
2.CHECK INTERMITTENT	INCIDENT		
Refer to GI-42, "Intermittent I	<u>ncident"</u> .		
>> Inspection End.			,

SEC

L

Μ

Ν

Ο

Ρ

# HOOD SWITCH

# Component Function Check

# 1.CHECK FUNCTION

CONSULT

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

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

Monitor item	Condition		Indication
HOOD SW	Hood	Open	ON
	nood	Hood Close	

#### Is the indication normal?

YES >> Hood switch is OK.

NO >> Go to <u>SEC-124, "Diagnosis Procedure"</u>.

# Diagnosis Procedure

INFOID:000000012876059

Regarding Wiring Diagram information, refer to SEC-46, "Wiring Diagram".

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

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

	(+) Hood switch		Voltage (V) (Approx.)
Connector	Terminal		(
E205	1	Ground	Battery voltage
E205	2	Giounu	Dallery Vollage

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

**2.**CHECK HOOD SWITCH SIGNAL CIRCUITS

1. Disconnect IPDM E/R connector.

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

IPD	M E/R	Hood switch		Continuity
Connector	Terminal	Connector	Terminal	Continuity
E218	94	E205	1	Yes
Ezio	96		2	165

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

I	IPDM E/R		Continuity
Connector	Terminal	Ground	Continuity
E218	94	Ground	No
LZIO	96		NO

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-36, "Removal and Installation".

# [WITH INTELLIGENT KEY SYSTEM]

Check continuity between	nood switch n	arness connector ar	la grouna.	
Ноос	d switch			Continuity
Connector	Term	linal	Ground	Continuity
E205 s the inspection result nor	3	•		Yes
YES >> GO TO 4. NO >> Repair or repla 4.CHECK HOOD SWITCH Refer to <u>SEC-125, "Compo</u> <u>s the inspection result nor</u> YES >> GO TO 5.	ace harness. H <u>onent Inspection</u> mal? switch. Refer T INCIDENT <u>on</u> H F. connector.	to <u>DLK-316, "HOOD</u>	LOCK : Removal a	and Installation".
Hood swit				
Termina			Condition	Continuity
1			Press	Yes
	3	Hood switch	Release	No
2			Press	No
—	10		Release	Yes
	mal?			

< DTC/CIRCUIT DIAGNOSIS >

# HORN FUNCTION

# Component Function Check

INFOID:000000012876061

[WITH INTELLIGENT KEY SYSTEM]

# **1.**CHECK FUNCTION 1

- 1. Disconnect anti-theft horn relay.
- 2. Perform "VEHICLE SECURITY HORN" in "Active Test" mode of "THEFT ALM" of "BCM".
- 3. Check the horn operation.

Tes	Test item		ription
VHICLE SECURITY HORN	ON	Anti-theft horn	Sounds (for 0.5 sec)

Is the operation normal?

YES >> GO TO 2.

NO >> Go to <u>SEC-126, "Diagnosis Procedure"</u>.

2. CHECK FUNCTION 2

#### CONSULT

- 1. Reconnect anti-theft horn relay.
- 2. Disconnect horn relay.
- 3. Perform "VEHICLE SECURITY HORN" in "Active Test" mode of "THEFT ALM" of "BCM".
- 4. Check the horn operation.

Tes	Test item		ription
VHICLE SECURITY HORN	ON	Anti-theft horn	Sounds (for 0.5 sec)

#### Is the operation normal?

YES >> Inspection End.

NO >> Go to <u>SEC-126</u>, "Diagnosis Procedure".

# **Diagnosis** Procedure

INFOID:000000012876062

Regarding Wiring Diagram information, refer to SEC-46, "Wiring Diagram".

# **1.**INSPECTION START

Perform inspection in accordance with procedure that confirms malfunction.

#### Which procedure confirms malfunction?

Component Function Check 1>>GO TO 2.

Component Function Check 2>>GO TO 4.

# 2. CHECK HORN FUNCTION

Check that horns function properly using horn switch.

#### Do horns sound?

YES >> GO TO 3.

NO >> Check horn circuit. Refer to <u>HRN-3, "Wiring Diagram"</u>.

3.CHECK HORN CONTROL CIRCUIT

1. Disconnect horn relay.

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

IPDI	IPDM E/R		Horn relay	
Connector	Terminal	Connector Terminal		Continuity
E119	22	H1	1	Yes

# HORN FUNCTION

#### < DTC/CIRCUIT DIAGNOSIS >

# [WITH INTELLIGENT KEY SYSTEM]

	IPDM E/R		-		Continuity
Connector	Termina	al	-	Ground	
E119	22				No
>> Repair or re	DM E/R. Refer to <u>PC</u> place harness. T HORN RELAY PO\			Installation".	
	een anti-theft horn re	elay harne	ss connect	or and ground.	
	(+)				
Anti	i-theft horn relay		-	(-)	Voltage (V)
Connector	Termina	al	1		(Approx.)
E8	2			Ground	Battery voltage
HECK AN H-THEF	T HORN CONTROL	CIRCUIT			
Disconnect IPDM E Check continuity be		rness conr	nector and	anti-theft horn re	elay harness connect
	tween IPDM E/R har	rness conr		anti-theft horn re	
Check continuity be	tween IPDM E/R har				elay harness connect
Check continuity be	tween IPDM E/R har	Con	Anti theft	horn relay	
Check continuity be IPDM Connector E119	tween IPDM E/R har I E/R Terminal	Con	Anti theft nector E8	horn relay Terminal 1	Continuity
Check continuity be IPDM Connector E119	etween IPDM E/R har I E/R Terminal 23	Con	Anti theft nector E8	horn relay Terminal 1	Continuity Yes
Check continuity be IPDM Connector E119	etween IPDM E/R har I E/R Terminal 23 etween IPDM E/R har	Coni E mess conr	Anti theft nector E8 nector and	horn relay Terminal 1	Continuity
Check continuity be IPDM Connector E119 Check continuity be Connector E119	etween IPDM E/R har I E/R Terminal 23 etween IPDM E/R har IPDM E/R Termina 23	Coni E mess conr	Anti theft nector E8 nector and	horn relay Terminal 1 ground.	Continuity Yes
Check continuity be IPDM Connector E119 Check continuity be Connector E119 he inspection result r ES >> GO TO 6. D >> Repair or re CHECK ANTI-THEF	etween IPDM E/R har I E/R Terminal 23 etween IPDM E/R har IPDM E/R IPDM E/R 23 etween IPDM E/R har PDM E/R Terminal 23 PDM E/R PDM	Coni F rness conr al	Anti theft nector E8 nector and	horn relay Terminal 1 ground. Ground	Continuity Yes Continuity
Check continuity be IPDM Connector E119 Check continuity be Connector E119 he inspection result r ES >> GO TO 6. D >> Repair or re CHECK ANTI-THEF	etween IPDM E/R har I E/R Terminal 23 etween IPDM E/R har IPDM E/R IPDM E/R 23 Pormal? Eplace harness. T HORN CIRCUIT etween anti-theft horn	Coni F rness conr al	Anti theft nector nector and	horn relay Terminal 1 ground. Ground	Continuity Yes Continuity No
Check continuity be IPDM Connector E119 Check continuity be Connector E119 he inspection result r ES >> GO TO 6. D >> Repair or re CHECK ANTI-THEF Check continuity be	etween IPDM E/R har I E/R Terminal 23 etween IPDM E/R har IPDM E/R IPDM E/R 23 Pormal? Eplace harness. T HORN CIRCUIT etween anti-theft horn	Conr E rness conr al	Anti theft nector nector and	horn relay Terminal 1 ground. Ground	Continuity Yes Continuity No
Check continuity be IPDM Connector E119 Check continuity be Connector E119 he inspection result r ES >> GO TO 6. D >> Repair or re CHECK ANTI-THEF Check continuity be Anti-theft f	etween IPDM E/R har I E/R Terminal 23 etween IPDM E/R har IPDM E/R IPDM E/R Termina 23 etween IPDM E/R har PDM E/R Termina 23 PDM E/R Termina 23 PDM E/R Terminal 23 PDM E/R PDM PDM PDM PDM PDM PDM PDM PDM PDM PDM	Conr rness conr al	Anti theft nector E8 nector and ness conne Anti-th	horn relay Terminal 1 ground. Ground ector and anti-the	Continuity Yes Continuity No
Check continuity be IPDM Connector E119 Check continuity be Connector E119 he inspection result r ES >> GO TO 6. D >> Repair or re CHECK ANTI-THEF Check continuity be Anti-theft f Connector E8	etween IPDM E/R har I E/R Terminal 23 etween IPDM E/R har IPDM E/R IPDM E/R Terminal 23 eplace harness. T HORN CIRCUIT etween anti-theft horn horn relay Terminal	Coni rness conr al relay hari Coni E:	Anti theft nector E8 nector and ness conne Anti-th nector 220	horn relay Terminal 1 ground. Ground Ground ector and anti-the reft horn Terminal 1	Continuity Continuity Continuity Continuity No
Check continuity be IPDM Connector E119 Check continuity be Connector E119 he inspection result r ES >> GO TO 6. O >> Repair or re CHECK ANTI-THEF Check continuity be Anti-theft f Connector E8 Check continuity be	etween IPDM E/R har I E/R Terminal 23 etween IPDM E/R har IPDM E/R IPDM E/R Terminal 23 normal? eplace harness. T HORN CIRCUIT etween anti-theft horn horn relay Terminal 3	Coni rness conr al relay hari Coni E:	Anti theft nector E8 nector and ness conne Anti-th nector 220	horn relay Terminal 1 ground. Ground Ground ector and anti-the reft horn Terminal 1	Continuity Yes Continuity No eft horn harness conr Continuity Yes I.
Check continuity be IPDM Connector E119 Check continuity be Connector E119 he inspection result r ES >> GO TO 6. O >> Repair or re CHECK ANTI-THEF Check continuity be Anti-theft f Connector E8 Check continuity be	etween IPDM E/R har I E/R Terminal 23 etween IPDM E/R har IPDM E/R IPDM E/R Terminal 23 Pormal? eplace harness. T HORN CIRCUIT etween anti-theft horn horn relay Terminal 3 etween anti-theft horn	Coni rness conr al relay hari Coni E: n relay hari	Anti theft nector E8 nector and ness conne Anti-th nector 220 ness conne	horn relay Terminal 1 ground. Ground Ground ector and anti-the reft horn Terminal 1	Continuity Continuity Continuity Continuity No

YES >> GO TO 7.

NO >> Repair or replace harness.

# 7. CHECK ANTI-THEFT HORN RELAY

Refer to SEC-128. "Component Inspection".

#### Is the inspection result normal?

YES >> Replace anti-theft horn.

NO >> Replace anti-theft horn relay.

# Component Inspection

# 1. CHECK ANTI-THEFT HORN RELAY

- 1. Turn ignition switch OFF.
- 2. Disconnect anti-theft horn relay.
- 3. Check voltage between anti-theft horn relay terminal and ground under the following conditions:

(+) anti-theft horn relay Terminal	(-)	Condition	Voltage (V) (Approx.)
3	Ground	12 V direct current supply between terminals 1 and 2	12
5	Ground	No current supply	0

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace anti-theft horn relay.

#### SECURITY INDICATOR LAMP А **Component Function Check** INFOID:000000012876064 1. CHECK FUNCTION В CONSULT Perform "THEFT IND" in "ACTIVE TEST" mode of "IMMU" of "BCM". 1. 2. Check security indicator lamp operation. Test item Description D ON Illuminates THEFT IND Security indicator lamp OFF Does not illuminate Is the inspection result normal? Е YES >> Inspection End. NO >> Go to SEC-129, "Diagnosis Procedure". Diagnosis Procedure INFOID:000000012876065 Regarding Wiring Diagram information, refer to SEC-46, "Wiring Diagram". 1. CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT Н Turn ignition switch OFF. 1. 2. Disconnect combination meter connector. 3. Check voltage between combination meter harness connector and ground. (+) Voltage (V) Combination meter (-) (Approx.) Connector Terminal M23 46 Ground Battery voltage SEC Is the inspection result normal? YES >> GO TO 2. >> Check 10 A fuse [No. 13, located in the fuse block (J/B)]. NO-1 NO-2 >> Check harness for open or short between combination meter and fuse. 2.CHECK SECURITY INDICATOR LAMP SIGNAL 1. Connect combination meter connector. M Disconnect BCM connector. 2. 3. Check voltage between BCM harness connector and ground. Ν (+) Voltage (V) BCM (-) (Approx.) Connector Terminal M18 18 Ground Battery voltage Is the inspection result normal? Ρ YES >> GO TO 3. NO >> GO TO 4. 3.replace bcm

SECURITY INDICATOR LAMP

[WITH INTELLIGENT KEY SYSTEM]

1. Replace BCM. Refer to BCS-79, "Removal and Installation".

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

>> Inspection End.

< DTC/CIRCUIT DIAGNOSIS >

# SEC-129

# SECURITY INDICATOR LAMP

# < DTC/CIRCUIT DIAGNOSIS >

# 4. CHECK SECURITY INDICATOR LAMP CIRCUIT

- 1. Disconnect combination meter connector.
- 2. Check continuity between combination meter harness connector and BCM harness connector.

Combina	tion meter	BCM				Continuity
Connector	Terminal	Connector	Connector Terminal			
M24	7	M18	18	Yes		

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

Combina	tion meter		Continuity	
 Connector Terminal		Ground	Continuity	
 M24	7		No	

Is the inspection result normal?

YES >> Replace combination meter. Refer to <u>MWI-72, "Removal and Installation"</u>.

NO >> Repair or replace harness.

# INTELLIGENT KEY SYSTEM SYMPTOMS

#### < SYMPTOM DIAGNOSIS >

# [WITH INTELLIGENT KEY SYSTEM]

# SYMPTOM DIAGNOSIS INTELLIGENT KEY SYSTEM SYMPTOMS

# **Diagnosis** Procedure

А

С

INFOID:000000013334824

#### NOTE:

Perform the self-diagnosis with CONSULT before the symptom diagnosis. Perform the trouble diagnosis if any DTC is detected.

# SYMPTOM TABLE 1 (BOTH INTELLIGENT KEYS HAVE THE SAME SYMPTOMS)

No.	Door lock operation (remote keyless en- try)	Door lock operation (request switch of front/rear/back door) or trunk/back door open operation (opener switch of trunk/back door pan- el)	Engine started with push-button ignition switch operation (reg- istered Intelligent Key is within the detection area of inside key an- tenna)	Engine started with push-button ignition switch operation (reg- istered Intelligent Key placed next to push- button ignition switch)	Symptom	E
1	ОК	OK	No start	No start	<u>SEC-132</u>	
2	ОК	NG	OK	OK	DLK-266	G
3	ОК	NG	No crank, No start	OK	DLK-263	
4	NG	NG	No crank, No start	OK	DLK-260	
5	NG	NG	No start	No start	DLK-262	F
6	ОК	ОК	No crank, No start	OK	<u>SEC-133</u>	
7	NG	ОК	ОК	OK	DLK-267	1
8	NG	NG	ОК	OK	DLK-263	
9	Poor range	OK	OK	ОК	DLK-267	

SYMPTOM TABLE 2 (ONE INTELLIGENT KEY HAS THE SYMPTOM, OTHER KEYS OPERATE NORMALLY)

						S
No.	Door lock operation (remote keyless en- try)	Door lock operation (request switch of front/rear/back door) or trunk/back door open operation (opener switch of trunk/back door pan- el)	Engine started with push-button ignition switch operation (In- telligent Key is within the detection area of inside key antenna)	Engine started with push-button ignition switch operation (reg- istered Intelligent Key placed next to push- button ignition switch)	Symptom	
1	NG	ОК	OK	ОК	DLK-265	
2	NG	NG	No crank, No start	ОК	DLK-272	
3	NG	NG	No crank, No start	No crank, No start	DLK-270	
4	ОК	ОК	No crank, No start	No crank, No start	<u>SEC-135</u>	
5	ОК	NG	No crank, No start	ОК	<u>SEC-136</u>	
6	Poor range	ОК	OK	OK	DLK-274	

Ρ

J

# **ENGINE CAN NOT START**

# Description

INFOID:000000013334825

[WITH INTELLIGENT KEY SYSTEM]

Engine does not start when push-button ignition switch is pressed.

SYMPTOM TABLE (BOTH INTELLIGENT KEYS HAVE THE SAME SYMPTOMS)

Door lock operation (remote keyless entry)	Door lock operation (request	Engine started with push-but-	Engine started with push-but-
	switch of front/rear/back door)	ton ignition switch operation	ton ignition switch operation
	or trunk/back door open oper-	(registered Intelligent Key is	(registered Intelligent Key
	ation (opener switch of trunk/	within the detection area of in-	placed next to push-button ig-
	back door panel)	side key antenna)	nition switch)
ОК	ОК	No start	No start

CONDITIONS OF VEHICLE (OPERATING CONDITIONS) "ENGINE START BY I-KEY" setting in "Work support" mode of "INTELLIGENT KEY" of "BCM" is ON.

DIAGNOSIS PROCEDURE Refer to SEC-132, "Diagnosis Procedure".

# Diagnosis Procedure

INFOID:000000013334826

# 1.CHECK INTELLIGENT KEY SYSTEM SYMPTOM TABLE

Check Intelligent Key system symptom table. Refer to <u>DLK-257, "Diagnosis Procedure"</u>.

>> GO TO 2.

2.PERFORM SELF-DIAGNOSIS RESULT

Select "Self Diagnostic Result" mode of all systems, and check if DTC is detected.

>> Follow troubleshooting for each DTC.

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

# ENGINE DOES NOT START WHEN INTELLIGENT KEY IS INSIDE OF VE-HICLE

# Description

INFOID:000000013334827

А

В

D

Н

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

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

# SYMPTOM TABLE (BOTH INTELLIGENT KEYS HAVE THE SAME SYMPTOMS)

# CONDITIONS OF VEHICLE (OPERATING CONDITIONS)

- "ENGINE START BY I-KEY" setting in "Work support" mode of "INTELLIGENT KEY" of "BCM" is ON.
- One or more Intelligent Keys with a registered Intelligent Key ID are in the vehicle.

#### DIAGNOSIS PROCEDURE

Refer to SEC-133, "Diagnosis Procedure".

#### Diagnosis Procedure INFOID:000000013334828 **1.**CHECK INTELLIGENT KEY SYSTEM SYMPTOM TABLE Check Intelligent Key system symptom table. Refer to DLK-257, "Diagnosis Procedure". SEC >> GO TO 2. 2.PERFORM SELF-DIAGNOSIS RESULT Select "Self Diagnostic Result" mode of "BCM", and check if DTC is detected. Is DTC detected? YES >> Perform the trouble diagnosis for the detected DTC. M NO >> GO TO 3. 3.CHECK "ENGINE START BY I-KEY" SETTING IN "WORK SUPPORT" 1. Select "INTELLIGENT KEY" of "BCM" using CONSULT. Ν 2. Select "ENGINE START BY I-KEY" of "Work support" mode. Check "ENGINE START BY I-KEY" in "Work support". Is the inspection result normal? YES >> GO TO 4. >> Set "On" in "ENGINE START BY I-KEY". NO **4.**CHECK INSIDE KEY ANTENNA Ρ Use SIGNAL TECH II to check each inside key antenna. For the inspection method and how to use SIGNAL

TECH II, refer to "NISSAN/INFINITI SIGNAL TECH II USER GUIDE".

# Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace malfunctioning parts.

# ENGINE DOES NOT START WHEN INTELLIGENT KEY IS INSIDE OF VEHICLE

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

# 5.REPLACE BCM

- 1. Replace BCM.
- 2. Check operation after replacement.

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident.

# ENGINE DOES NOT START WHEN INTELLIGENT KEY IS INSIDE OF VEHICLE (ONE KEY)

< SYMPTOM DIAGNOSIS >

# [WITH INTELLIGENT KEY SYSTEM]

# ENGINE DOES NOT START WHEN INTELLIGENT KEY IS INSIDE OF VE-HICLE (ONE KEY)

# Description

INFOID:000000013334829

А

В

Engine does not start when push-button ignition switch is pressed. (One Intelligent Key has the symptom, other keys operate normally.)

SYMPTOM TABLE (ONE INTELLIGENT KEY HAS THE SYMPTOM, OTHER KEYS OPERATE NOR-CMALLY)

Door lock operation (remote keyless entry)	Door lock operation (request switch of front/rear/back door) or trunk/back door open oper- ation (opener switch of trunk/ back door panel)	Engine started with push-but- ton ignition switch operation (Intelligent Key is within the detection area of inside key antenna)	Engine started with push-but- ton ignition switch operation (registered Intelligent Key placed next to push-button ig- nition switch)
OK	ОК	No crank, No start	No crank, No start
DIAGNOSIS PROCEDUR Refer to <u>SEC-135, "Diagnos</u>			
Diagnosis Procedure			INFOID:000000013334830
1.CHECK INTELLIGENT K	EY SYSTEM SYMPTOM 1	ABLE	
Check Intelligent Key systen			
Refer to <u>DLK-257, "Diagnosi</u>	is Procedure".		
>> GO TO 2.			
2.REGISTER INTELLIGEN	TKEY		
<ol> <li>Register the Intelligent k</li> <li>Check operation after re</li> </ol>			
Is the inspection result norm	•		
YES >> Inspection End.			
NO >> GO TO 3. <b>3.</b> REPLACE INTELLIGENT	I KEV		
	Key and perform registratio	n again	
2. Check operation after re		in again.	
Is the inspection result norm	<u>al?</u>		
YES >> Inspection End. NO >> GO TO 4.			
<b>4.</b> REPLACE BCM			
1. Replace BCM.			
2. Check operation after re	•		
Is the inspection result norm YES >> Inspection End.	<u>al :</u>		
	ent incident. Refer to GI-42	, "Intermittent Incident".	

# DOOR DOES NOT LOCK/UNLOCK AND ENGINE DOES NOT START (REQ SW/ PUSH SW) (ONE KEY)

#### < SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

# DOOR DOES NOT LOCK/UNLOCK AND ENGINE DOES NOT START (REQ SW/PUSH SW) (ONE KEY)

# Description

INFOID:000000013334831

INFOID:000000013334832

Door does not lock/unlock with door request switch, and engine does not start when push-button ignition switch is pressed while carrying Intelligent Key. (One Intelligent Key has the symptom, other keys operate normally.)

SYMPTOM TABLE (ONE INTELLIGENT KEY HAS THE SYMPTOM, OTHER KEYS OPERATE NOR-MALLY)

Door lock operation (remote keyless entry)	Door lock operation (request	Engine started with push-but-	Engine started with push-but-
	switch of front/rear/back door)	ton ignition switch operation	ton ignition switch operation
	or trunk/back door open oper-	(Intelligent Key is within the	(registered Intelligent Key
	ation (opener switch of trunk/	detection area of inside key	placed next to push-button ig-
	back door panel)	antenna)	nition switch)
OK	NG	No crank, No start	OK

#### DIAGNOSIS PROCEDURE

Refer to SEC-136, "Diagnosis Procedure".

# Diagnosis Procedure

**1.**CHECK INTELLIGENT KEY SYSTEM SYMPTOM TABLE

Check Intelligent Key system symptom table. Refer to <u>DLK-257, "Diagnosis Procedure"</u>.

>> GO TO 2.

2. CHECK INTELLIGENT KEY LOW BATTERY WARNING

Check that the Intelligent Key low battery warning operates.

Is the Intelligent Key low battery warning operated?

YES >> Replace Intelligent Key battery. Refer to <u>DLK-339</u>, "Removal and Installation".

3.CHECK INTELLIGENT KEY BATTERY

Check the Intelligent Key battery.

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace Intelligent Key battery. Refer to <u>DLK-339</u>, "Removal and Installation".

**4.**REGISTER INTELLIGENT KEY

1. Register the Intelligent Key.

2. Check operation after replacement.

Is the inspection result normal?

YES >> Inspection End.

NO >> GO TO 5.

**5.**REPLACE INTELLIGENT KEY

- 1. Replace the Intelligent Key and perform registration again.
- 2. Check operation after replacement.

Is the inspection result normal?

YES >> Inspection End.

NO >> GO TO 6.

**6**.REPLACE BCM

# DOOR DOES NOT LOCK/UNLOCK AND ENGINE DOES NOT START (REQ SW/ PUSH SW) (ONE KEY)

	PUSH SW) (ONE KEY	()
< SYMPTOM DIAGNOSIS >		[WITH INTELLIGENT KEY SYSTEM]
1. Replace BCM. Refer to BC	S-79, "Removal and Installation".	
2. Check operation after repla		A
Is the inspection result normal?	-	
YES >> Inspection End. NO >> Check intermittent	incident. Refer to GI-42, "Intermittent	Incident". B
		<u>modent</u> .
		C
		Г
		L
		E
		F
		1
		G
		H
		I
		J
		91

L

Μ

Ν

Ο

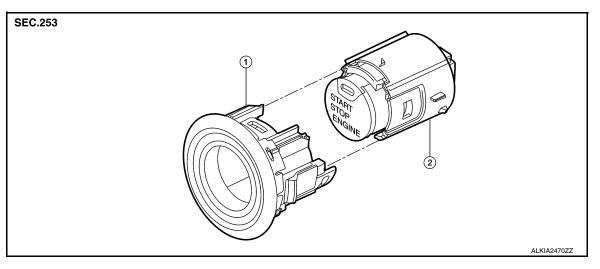
Ρ

# < REMOVAL AND INSTALLATION > REMOVAL AND INSTALLATION

# NATS ANTENNA AMP. Exploded View

INFOID:000000012876080

[WITH INTELLIGENT KEY SYSTEM]

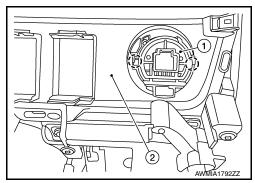


- 1. NATS antenna amp.
- 2. Push-button ignition switch

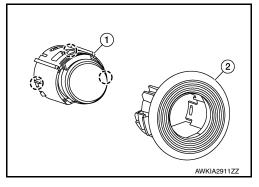
# Removal and Installation

#### REMOVAL

- 1. Remove the shift selector finisher. Refer to IP-19, "Exploded View".
- Release the pawl on each side of NATS antenna amp (1) using suitable tool and remove from the shift selector finisher (2).
   (): Pawl



Release the pawl on each side and remove the NATS antenna amp (2) from the push-button ignition switch (1).
 (<sup>-</sup>): Pawl



# INSTALLATION

Installation is in the reverse order of removal.

# **PUSH-BUTTON IGNITION SWITCH**

# < REMOVAL AND INSTALLATION >

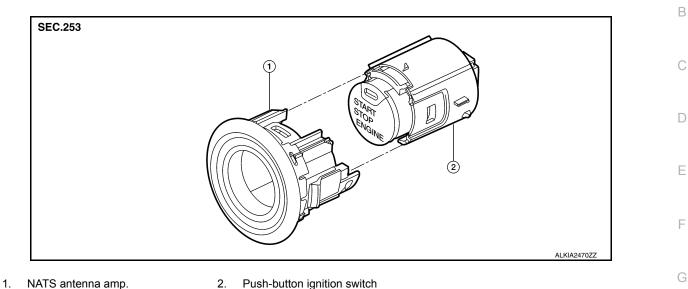
# PUSH-BUTTON IGNITION SWITCH

# Exploded View

INFOID:000000012876082

INEOID-000000012876083

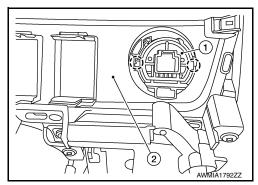
[WITH INTELLIGENT KEY SYSTEM]



# Removal and Installation

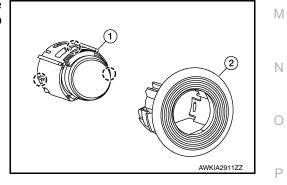
#### REMOVAL

- 1. Remove the shift selector finisher. Refer to IP-19, "Exploded View".
- Release the pawls on each side of NATS antenna amp (1) using suitable tool and remove from the shift selector finisher (2).
   (<sup>-</sup>): Pawl



 Release the pawl on each side using suitable tool and remove the push-button ignition switch (1) from the NATS antenna amp (2).

(\_): Pawl



INSTALLATION

Installation is in the reverse order of removal.

А

Η

SEC

L

# IMMOBILIZER CONTROL MODULE

# < REMOVAL AND INSTALLATION >

# [WITH INTELLIGENT KEY SYSTEM]

# IMMOBILIZER CONTROL MODULE

Removal and Installation

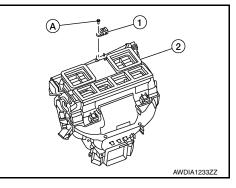
INFOID:000000012876084

#### Removal

The immobilizer control module is integrated into the body control module (BCM). For removal and installation, refer to <u>BCS-79, "Removal and Installation"</u>.

#### Removal (Canada only)

- 1. Remove instrument panel assembly. <u>IP-15, "INSTRUMENT PANEL ASSEMBLY : Removal and Installa-</u> tion".
- 2. Disconnect the harness connector from the dongle unit (1).
- 3. Remove screw (A) and dongle unit (1) from heating and cooling unit assembly(2).



INSTALLATION Installation is in the reverse order of removal.

# REMOTE KEYLESS ENTRY RECEIVER

# < REMOVAL AND INSTALLATION >

# [WITH INTELLIGENT KEY SYSTEM]

# REMOTE KEYLESS ENTRY RECEIVER

# Removal and Installation REMOVAL 1. Remove the glove box assembly. Refer to <u>IP-25, "Removal and Installation"</u>. 2. Remove the remote keyless entry receiver bolt. 3. Disconnect the harness connector from remote keyless entry receiver and remove. INSTALLATION Installation is in the reverse order of removal.

SEC

L

Μ

Ν

Ο

Ρ

J

А

В

С

D

Ε

F

Н

< REMOVAL AND INSTALLATION >

# HOOD SWITCH

# Removal and Installation

The hood switch is part of the hood lock assembly. For removal and installation, refer to <u>DLK-316</u>, "HOOD <u>LOCK</u> : <u>Removal and Installation</u>".