

SECTION **SEC** SECURITY CONTROL SYSTEM

CONTENTS

WITH INTELLIGENT KEY SYSTEM	INTELLIGENT KEY 28	F
PRECAUTION 4	INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY) 29	
PRECAUTIONS 4	THEFT ALM 32	G
Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER" 4	THEFT ALM : CONSULT Function (BCM - THEFT) 32	H
Precautions for Removing Battery Terminal 4	IMMU 33	
SYSTEM DESCRIPTION 5	IMMU : CONSULT Function (BCM - IMMU) 33	
COMPONENT PARTS 5	DIAGNOSIS SYSTEM (IPDM E/R) 35	I
Component Parts Location 5	CONSULT Function (IPDM E/R) 35	
CVT Shift Selector (Detention Switch) 7	ECU DIAGNOSIS INFORMATION 37	J
NATS Antenna Amp. 8	ECM, IPDM E/R, BCM 37	
SYSTEM 9	List of ECU Reference 37	
INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION 9	WIRING DIAGRAM 38	
INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION : System Description 9	SECURITY CONTROL SYSTEM 38	L
INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION : Circuit Diagram 12	Wiring Diagram 38	
NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS... 13	BASIC INSPECTION 53	M
NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS : System Description 14	DIAGNOSIS AND REPAIR WORK FLOW 53	
NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS : Circuit Diagram 17	Work Flow 53	
VEHICLE SECURITY SYSTEM 18	ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT 56	N
VEHICLE SECURITY SYSTEM : System Diagram 19	ECM 56	O
VEHICLE SECURITY SYSTEM : Circuit Diagram...23	ECM : Description 56	
DIAGNOSIS SYSTEM (BCM) 27	ECM : Work Procedure 56	
COMMON ITEM 27	BCM 56	P
COMMON ITEM : CONSULT Function (BCM - COMMON ITEM) 27	BCM : Description 56	
	BCM : Work Procedure 56	
	DTC/CIRCUIT DIAGNOSIS 58	
	P1610 LOCK MODE 58	
	Description 58	

SEC

DTC Logic	58	Component Inspection [CVT Shift Selector (De- tention Switch)]	83
Diagnosis Procedure	58		
P1611 ID DISCORD, IMMU-ECM	59	B2604 SHIFT POSITION	85
DTC Logic	59	DTC Logic	85
Diagnosis Procedure	59	Diagnosis Procedure	85
P1612 CHAIN OF ECM-IMMU	60	Component Inspection (Transmission Range Switch)	87
DTC Logic	60		
Diagnosis Procedure	60	B2605 SHIFT POSITION	88
B2192 ID DISCORD, IMMU-ECM	61	DTC Logic	88
DTC Logic	61	Diagnosis Procedure	88
Diagnosis Procedure	61		
B2193 CHAIN OF ECM-IMMU	62	B2608 STARTER RELAY	91
DTC Logic	62	DTC Logic	91
Diagnosis Procedure	62	Diagnosis Procedure	91
B2195 ANTI-SCANNING	63	B260F ENGINE STATUS	93
DTC Logic	63	Description	93
Diagnosis Procedure	63	DTC Logic	93
		Diagnosis Procedure	93
B2196 DONGLE UNIT	64	B261A PUSH-BUTTON IGNITION SWITCH	94
Description	64	DTC Logic	94
DTC Logic	64	Diagnosis Procedure	94
Diagnosis Procedure	64		
B2198 NATS ANTENNA AMP.	66	B26F3 STARTER CONTROL RELAY	96
DTC Logic	66	DTC Logic	96
Diagnosis Procedure	66	Diagnosis Procedure	96
B2555 STOP LAMP	69	B26F4 STARTER CONTROL RELAY	97
DTC Logic	69	DTC Logic	97
Diagnosis Procedure	69	Diagnosis Procedure	97
Component Inspection (Stop Lamp Switch)	71	B26F7 BCM	98
Component Inspection (Stop Lamp Relay)	71	DTC Logic	98
		Diagnosis Procedure	98
B2556 PUSH-BUTTON IGNITION SWITCH	72	B26F8 BCM	99
DTC Logic	72	DTC Logic	99
Diagnosis Procedure	72	Diagnosis Procedure	99
Component Inspection	73	B26F9 CRANKING REQUEST CIRCUIT	100
B2557 VEHICLE SPEED	74	DTC Logic	100
DTC Logic	74	Diagnosis Procedure	100
Diagnosis Procedure	74		
B2601 SHIFT POSITION	75	B26FA CRANKING REQUEST CIRCUIT	102
DTC Logic	75	DTC Logic	102
Diagnosis Procedure	75	Diagnosis Procedure	102
B2602 SHIFT POSITION	77	B26FC KEY REGISTRATION	104
DTC Logic	77	DTC Logic	104
Diagnosis Procedure	77	Diagnosis Procedure	104
Component Inspection	79	B209F CRANKING REQUEST CIRCUIT	105
B2603 SHIFT POSITION	80	DTC Logic	105
DTC Logic	80	Diagnosis Procedure	105
Diagnosis Procedure	80	B20A0 CRANKING REQUEST CIRCUIT	107
Component Inspection (Transmission Range Switch)	83	DTC Logic	107
		Diagnosis Procedure	107

B210B STARTER CONTROL RELAY	109	Description	124	
DTC Logic	109	Diagnosis Procedure	124	A
B210C STARTER CONTROL RELAY	110	SECURITY INDICATOR LAMP DOES NOT		
DTC Logic	110	TURN ON OR BLINK	125	B
Diagnosis Procedure	110	Description	125	
B210D STARTER RELAY	112	Diagnosis Procedure	125	
DTC Logic	112	VEHICLE SECURITY SYSTEM CANNOT BE		C
Diagnosis Procedure	112	SET	126	
B210E STARTER RELAY	114	INTELLIGENT KEY	126	D
DTC Logic	114	INTELLIGENT KEY : Description	126	
Diagnosis Procedure	114	INTELLIGENT KEY : Diagnosis Procedure	126	
B210F SHIFT POSITION/CLUTCH INTER- LOCK SWITCH	116	DOOR REQUEST SWITCH	126	E
DTC Logic	116	DOOR REQUEST SWITCH : Description	126	
Diagnosis Procedure	116	DOOR REQUEST SWITCH : Diagnosis Proce- dure	126	F
B2110 SHIFT POSITION/CLUTCH INTER- LOCK SWITCH	118	DOOR KEY CYLINDER	127	
DTC Logic	118	DOOR KEY CYLINDER : Description	127	G
Diagnosis Procedure	118	DOOR KEY CYLINDER : Diagnosis Procedure ...	127	
HEADLAMP FUNCTION	120	DOOR LOCK AND UNLOCK SWITCH	127	H
Component Function Check	120	DOOR LOCK AND UNLOCK SWITCH : Descrip- tion	127	
Diagnosis Procedure	120	DOOR LOCK AND UNLOCK SWITCH : Diagnosis Procedure	127	I
HORN FUNCTION	121	VEHICLE SECURITY ALARM DOES NOT		
Component Function Check	121	ACTIVATE	128	J
Diagnosis Procedure	121	Description	128	
SECURITY INDICATOR LAMP	122	Diagnosis Procedure	128	
Component Function Check	122	REMOVAL AND INSTALLATION	129	
Diagnosis Procedure	122	NATS ANTENNA AMP.	129	
SYMPTOM DIAGNOSIS	124	Removal and Installation	129	
ENGINE DOES NOT START WHEN INTELLI- GENT KEY IS INSIDE OF VEHICLE	124	PUSH-BUTTON IGNITION SWITCH	130	L
		Removal and Installation	130	
				M
				N
				O
				P

PRECAUTION

PRECAUTIONS

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

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

WARNING:

Always observe the following items for preventing accidental activation.

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see "SRS AIR BAG".
- Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

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

WARNING:

Always observe the following items for preventing accidental activation.

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

Precautions for Removing Battery Terminal

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- When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.

NOTE:

ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.

- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.

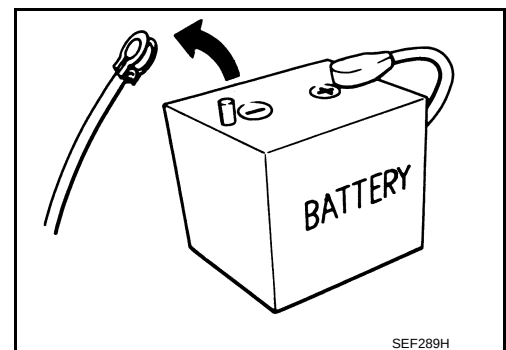
NOTE:

If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.

- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.

NOTE:

The removal of 12V battery may cause a DTC detection error.

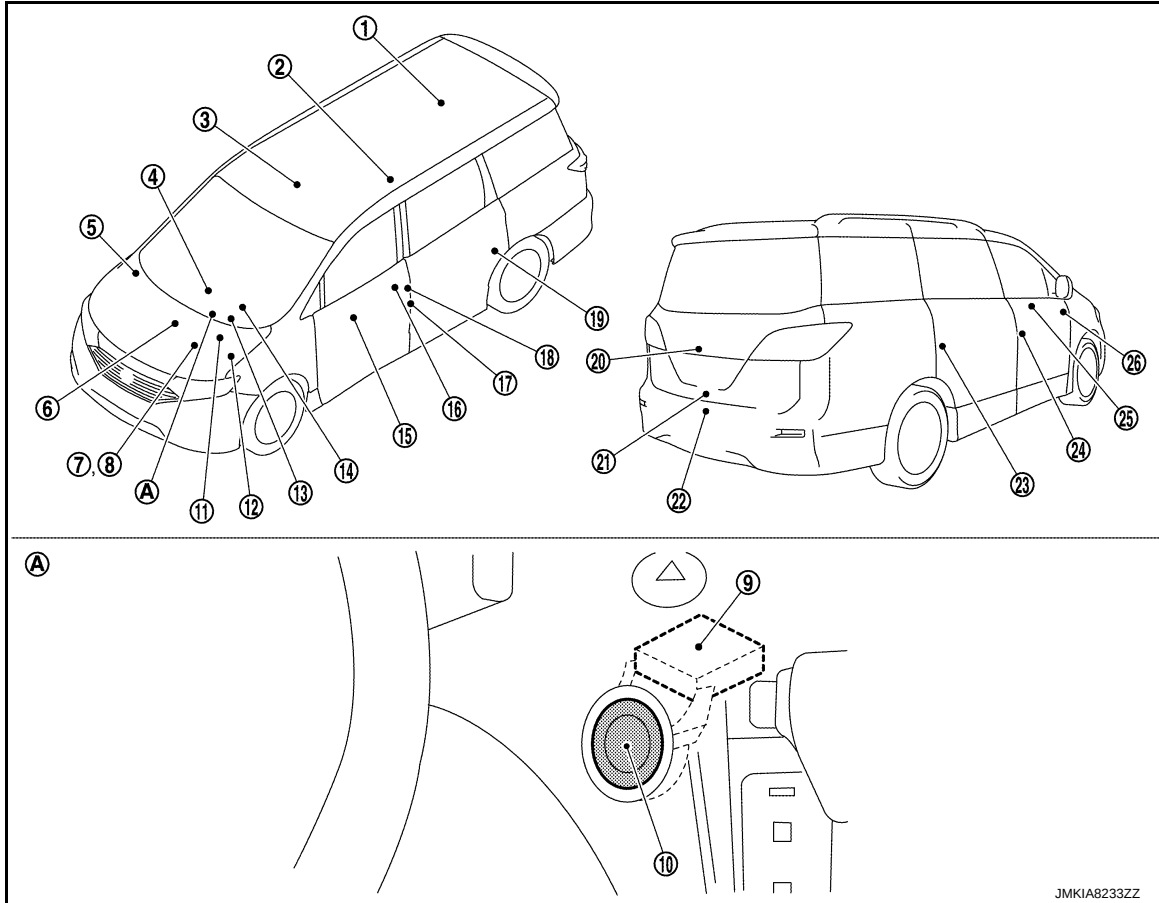


SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

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A. Behind push-button ignition switch

No.	Component	Function
1	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 BCM. Refer to DLK-18, "DOOR LOCK SYSTEM : Component Parts Location" for detailed installation location.
2	Remote keyless entry receiver	Remote keyless entry receiver receives each button operation signal and electronic key ID signal from Intelligent Key, and then transmits the signal to BCM. Refer to DLK-18, "DOOR LOCK SYSTEM : Component Parts Location" for detailed installation location.
3	Inside key antenna (Console)	Inside key antenna (Console) detects whether Intelligent Key is inside the vehicle or not, and then transmits the signal to BCM. Refer to DLK-18, "DOOR LOCK SYSTEM : Component Parts Location" for detailed installation location.
4	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 BCM. Refer to DLK-18, "DOOR LOCK SYSTEM : Component Parts Location" for detailed installation location.

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

No.	Component	Function
5	ABS actuator and electric unit (control unit)	ABS actuator and electric unit (control unit) transmits the vehicle speed signal to BCM via CAN communication. BCM also receives the vehicle speed signal from combination meter via CAN communication. BCM compares both signals to detect the vehicle speed. Refer to BRC-9, "Component Parts Location" for detailed installation location.
6	Stop lamp relay	Stop lamp relay is used to send the stop lamp switch signal to BCM. Refer to BRC-9, "Component Parts Location" for detailed installation location.
7	TCM	TCM receives the shift position signal from transmission range switch, and then transmits the P/N position signal to BCM via CAN communication. BCM confirms the selector lever position with the following 5 signals. • P position signal from CVT shift selector (detention switch) • P/N position signal from transmission range switch • P position signal from IPDM E/R (CAN) • P/N position signal from IPDM E/R (CAN) • P/N position signal from TCM (CAN) IPDM E/R confirms the selector lever position with the following 3 signals. • P position signal from CVT shift selector (detention switch) • P/N position signal from transmission range switch • P/N position signal from BCM (CAN) Refer to TM-11, "CVT CONTROL SYSTEM : Component Parts Location" for detailed installation location.
8	ECM	ECM controls the engine. When ignition switch is turned ON, BCM starts communication with ECM and performs the ID verification between BCM and ECM. If the verification result is OK, the engine can start. If the verification result is NG, the engine can not start. Refer to EC-16, "ENGINE CONTROL SYSTEM : Component Parts Location" for detailed installation location.
9	NATS antenna amp.	Refer to SEC-8, "NATS Antenna Amp." .
10	Push-button ignition switch	Push-button ignition switch has push switch inside which detects that push-button ignition switch is pressed, and then transmits ON/OFF signal to BCM. BCM changes the ignition switch position with the operation of push-button ignition switch. BCM maintains the ignition switch position status while push-button ignition switch is not operated.
11	Stop lamp switch	Stop lamp switch detects that brake pedal is depressed, and then transmits ON/OFF signal to BCM. Refer to BRC-9, "Component Parts Location" for detailed installation location.
12	IPDM E/R	Starter control relay and starter relay are integrated in IPDM E/R and used for the engine starting function. Starter relay is controlled by BCM, and starter control relay is controlled by IPDM E/R while communicating with BCM. IPDM E/R sends the starter control relay and starter relay status signal to BCM. Refer to PCS-4, "IPDM E/R : Component Parts Location" for detailed installation location.
13	BCM	BCM controls INTELLIGENT KEY SYSTEM (ENGINE START FUNCTION), NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS [NVIS (NATS)] and VEHICLE SECURITY SYSTEM. BCM performs the ID verification between BCM and Intelligent Key when the Intelligent Key is carried into the detection area of inside key antenna, and push-button ignition switch is pressed. If the ID verification result is OK, ignition switch operation is available. Then, when the ignition switch is turned ON, BCM performs ID verification between BCM and ECM. If the ID verification result is OK, ECM can start engine. Refer to BCS-4, "BODY CONTROL SYSTEM : Component Parts Location" for detailed installation location.
14	Combination meter	Combination meter transmits the vehicle speed signal to BCM via CAN communication. BCM also receives the vehicle speed signal from ABS actuator and electric unit (control unit) via CAN communication. BCM compares both signals to detect the vehicle speed. Security indicator lamp is located on combination meter. Security indicator lamp blinks when ignition switch is in any position other than ON to warn that NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS [NVIS (NATS)] is on board. Refer to MWI-7, "METER SYSTEM : Combination Meter" .

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

No.	Component	Function
15	Power window main 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 PWC-8, "Power Window Main Switch" (front window anti-pinch) or PWC-72, "Power Window Main Switch" (driver side window anti-pinch).
16	Front door outside handle assembly LH	Outside key antenna and door request switch are integrated into front door outside handle assembly. - Outside key antenna detects whether Intelligent Key is within the detection area or not, and then transmits signal to BCM. - Front door request switch transmits door lock/unlock request signal to BCM. Refer to DLK-27, "Front Door Outside Handle Assembly (Outside Key Antenna)" .
17	Front door switch (Driver side)	Door switch detects door open/close condition and then transmits ON/OFF signal to BCM. Refer to DLK-28, "Front Door Switch" .
18	Front door lock assembly (Driver side)	Door key cylinder switch is integrated into front door lock assembly (driver side). Door key cylinder switch detects door LOCK/UNLOCK operation using mechanical key, and then transmits the operation signal to BCM. Refer to DLK-28, "Front Door Lock Assembly (Driver Side)" .
19	Sliding door switch LH	Door switch detects door open/close condition and then transmits ON/OFF signal to BCM. Refer to DLK-31, "Sliding Door Switch" .
20	Back door opener switch assembly	Back door opener switch and back door request switch are integrated into back door opener switch assembly. - Back door opener switch transmits back door opening operation signal to BCM. - Back door request switch transmits door lock/unlock request signal to BCM. Refer to DLK-29, "Back Door Opener Switch" .
21	Back door lock assembly	Back door switch is integrated into back door lock assembly. Back door switch detects back door open/close condition, and then transmits ON/OFF signal to BCM. Refer to DLK-29, "Back Door Lock Assembly (Without Automatic Back Door System)" or DLK-30, "Back Door Lock Assembly (With Automatic Back Door System)" .
22	Outside key antenna (rear bumper)	Outside key antenna detects whether or not Intelligent Key is within the outside key antenna detection area. Refer to DLK-18, "DOOR LOCK SYSTEM : Component Parts Location" for detailed installation location.
23	Sliding door switch RH	Door switch detects door open/close condition and then transmits ON/OFF signal to BCM. Refer to DLK-31, "Sliding Door Switch" .
24	Front door switch (Passenger side)	Door switch detects door open/close condition and then transmits ON/OFF signal to BCM. Refer to DLK-28, "Front Door Switch" .
25	Front door outside handle assembly RH	Outside key antenna and door request switch are integrated into front door outside handle assembly. - Outside key antenna detects whether Intelligent Key is within the detection area or not, and then transmits signal to BCM. - Front door request switch transmits door lock/unlock request signal to BCM. Refer to DLK-27, "Front Door Outside Handle Assembly (Outside Key Antenna)" .
26	Door lock unlock switch	Door lock and unlock switch is integrated into front power window switch (Passenger side). Door lock and unlock switch transmits door lock/unlock operation signal to BCM. Refer to DLK-28, "Door Lock and Unlock Switch (Driver Side)" or DLK-28, "Door Lock and Unlock Switch (Passenger Side)" .

CVT Shift Selector (Detention Switch)

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Detention switch is integrated into CVT shift sector, and detects that selector lever is locked in the P position, then transmits ON/OFF signal to BCM and IPDM E/R.

BCM confirms the selector lever position with the following 5 signals.

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

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

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

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

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

NATS Antenna Amp.

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

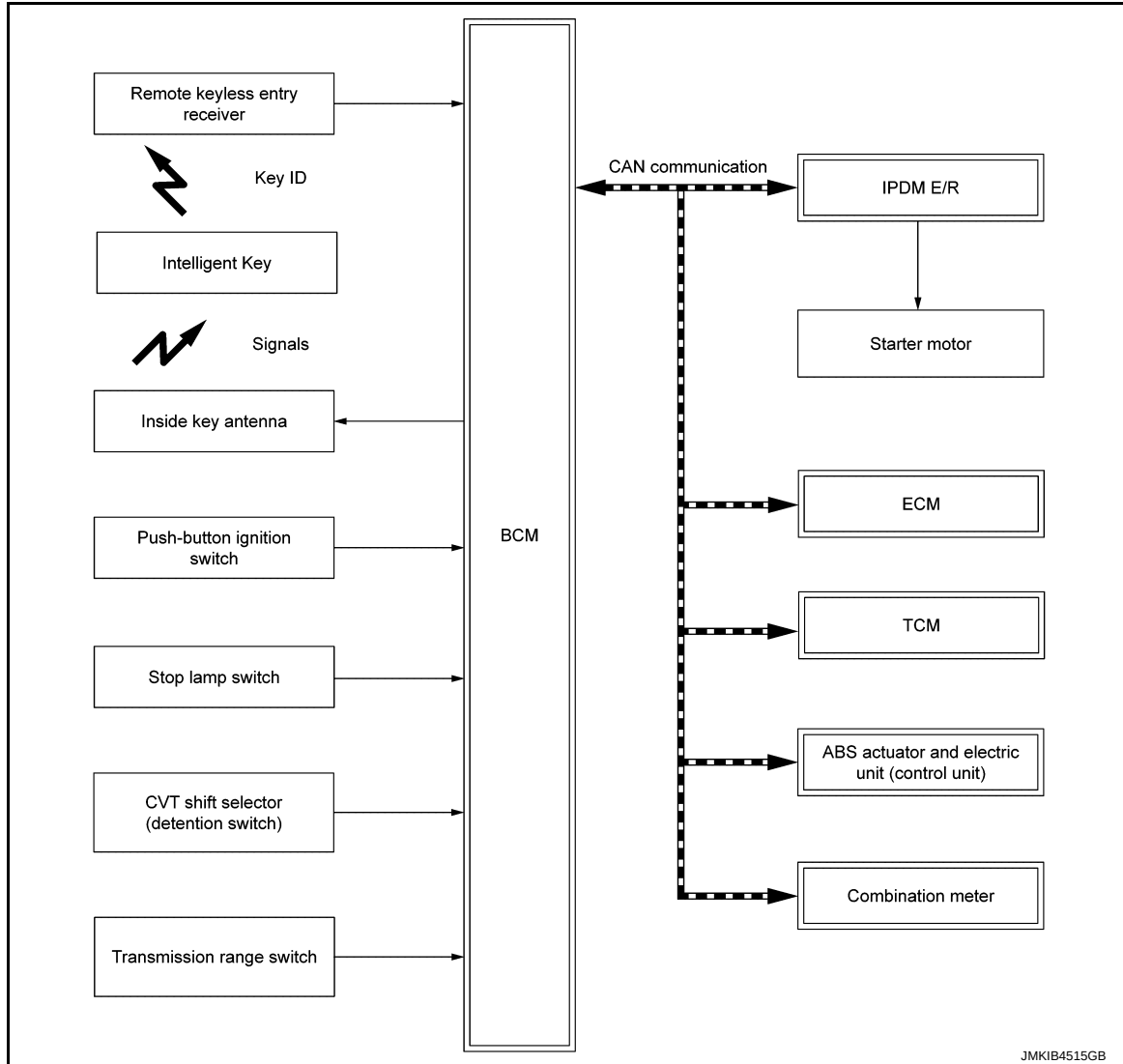
SYSTEM

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION : System Description

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SYSTEM DIAGRAM



INPUT/OUTPUT SIGNAL CHART

Input Signal Item

Transmit unit	Signal name		
ECM	CAN communication	ID verification signal Engine status signal	
IPDM E/R		Push-button ignition switch status signal Starter relay status signal Starter control relay signal Detention switch signal Interlock/PNP switch signal	
		Combination meter	Vehicle speed signal (Meter)
		ABS actuator and electric unit (control unit)	Vehicle speed signal (ABS)
		TCM	Shift position signal

SYSTEM

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Transmit unit	Signal name
Transmission range switch	P/N position signal
Remote keyless entry receiver	Key ID signal
Push-button ignition switch	Push-button ignition switch operation signal
Each door switch	Door open/close condition signal
Stop lamp switch	Brake pedal operation signal
CVT shift selector (detention switch)	P position signal

Output Signal Item

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

SYSTEM DESCRIPTION

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

NOTE:

The driver should carry the Intelligent Key at all times.

- Intelligent Key has 2 IDs [Intelligent Key ID and NVIS (NATS) ID]. It can perform the door lock/unlock operation and the push-button ignition switch operation when the registered Intelligent Key is carried.
- 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.

NOTE:

Refer to [DLK-36, "INTELLIGENT KEY SYSTEM : System Description"](#) for any functions other than engine start function of Intelligent Key system.

PRECAUTIONS FOR INTELLIGENT KEY SYSTEM

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

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

OPERATION WHEN INTELLIGENT KEY IS CARRIED

- When the push-button ignition switch is pressed, the BCM activates the inside key antenna and transmits the request signal to the Intelligent Key.
- The Intelligent Key receives the request signal and transmits the Intelligent Key ID signal to the BCM.
- BCM receives the Intelligent Key ID signal via remote keyless entry receiver and verifies it with the registered ID.
- BCM turns ACC relay ON and transmits the ignition power supply ON signal to IPDM E/R.
- IPDM E/R turns the ignition relay ON and starts the ignition power supply.
- IPDM E/R turns the starter control relay ON for engine starting in advance.
- BCM detects the selector lever position and brake pedal operation condition.
- 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.
- 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 on the combination meter illuminates. At that time, the engine cannot be started.

SYSTEM

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

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 relay. (If engine start is unsuccessful, cranking stops automatically within 5 seconds.)

CAUTION:

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

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

OPERATION RANGE

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

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

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

IGNITION SWITCH POSITION CHANGE TABLE BY PUSH-BUTTON IGNITION SWITCH OPERATION

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

NOTE:

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

CVT models

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

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

Power supply position	Condition		Push-button ignition switch operation frequency
	Selector lever	Brake pedal operation condition	
OFF → ACC	—	Not depressed	1
OFF → ACC → ON	—	Not depressed	2
OFF → ACC → ON → OFF	—	Not depressed	3
OFF → START ACC → START ON → START	P or N position	Depressed	1
Engine is running → OFF	—	—	1

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

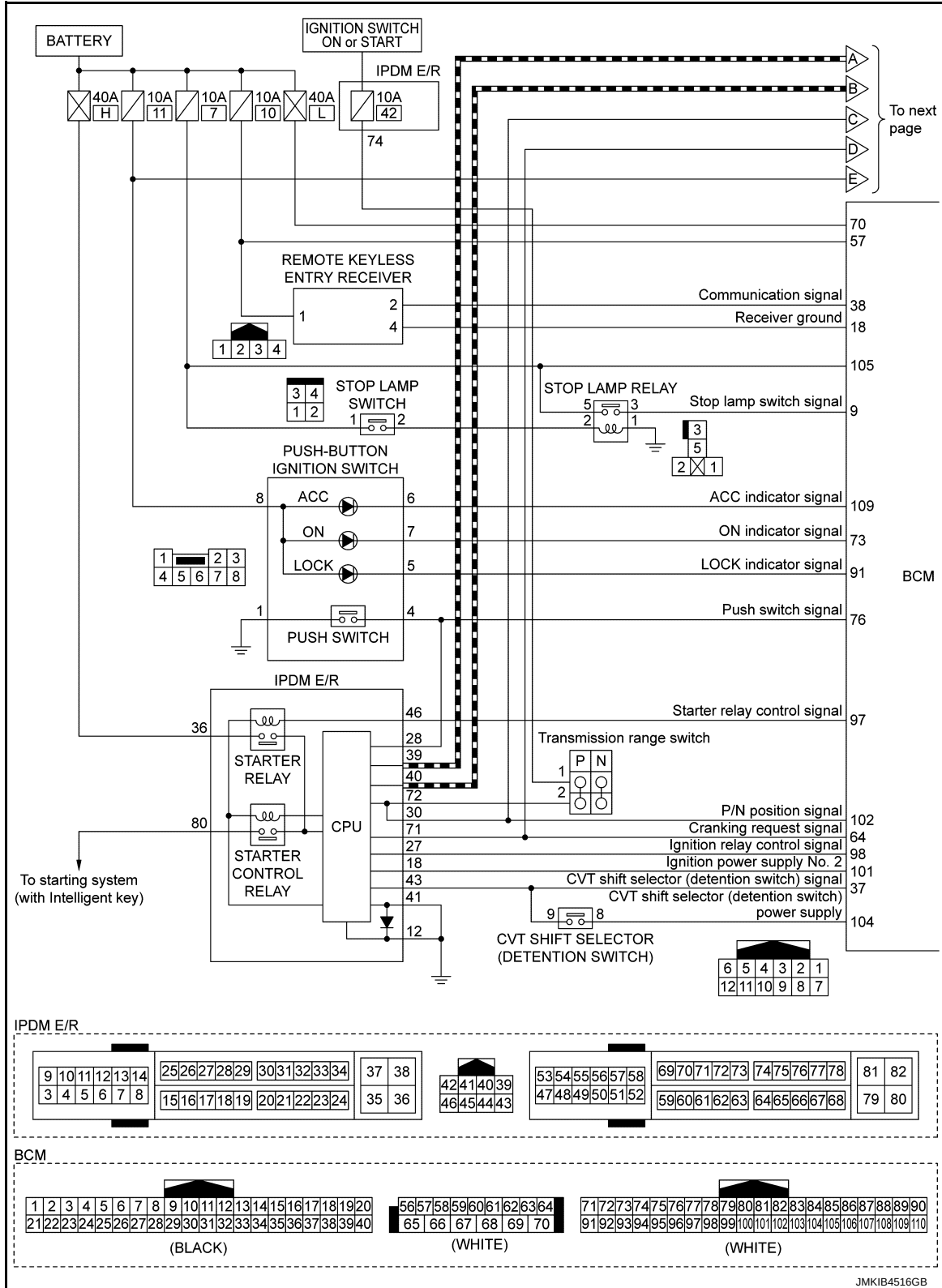
Power supply position	Condition		Push-button ignition switch operation frequency
	Selector lever	Brake pedal operation condition	
Engine is running → ACC	—	—	Emergency stop operation
Engine stall return operation while driving	N position	Not depressed	1

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.

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION : Circuit Diagram

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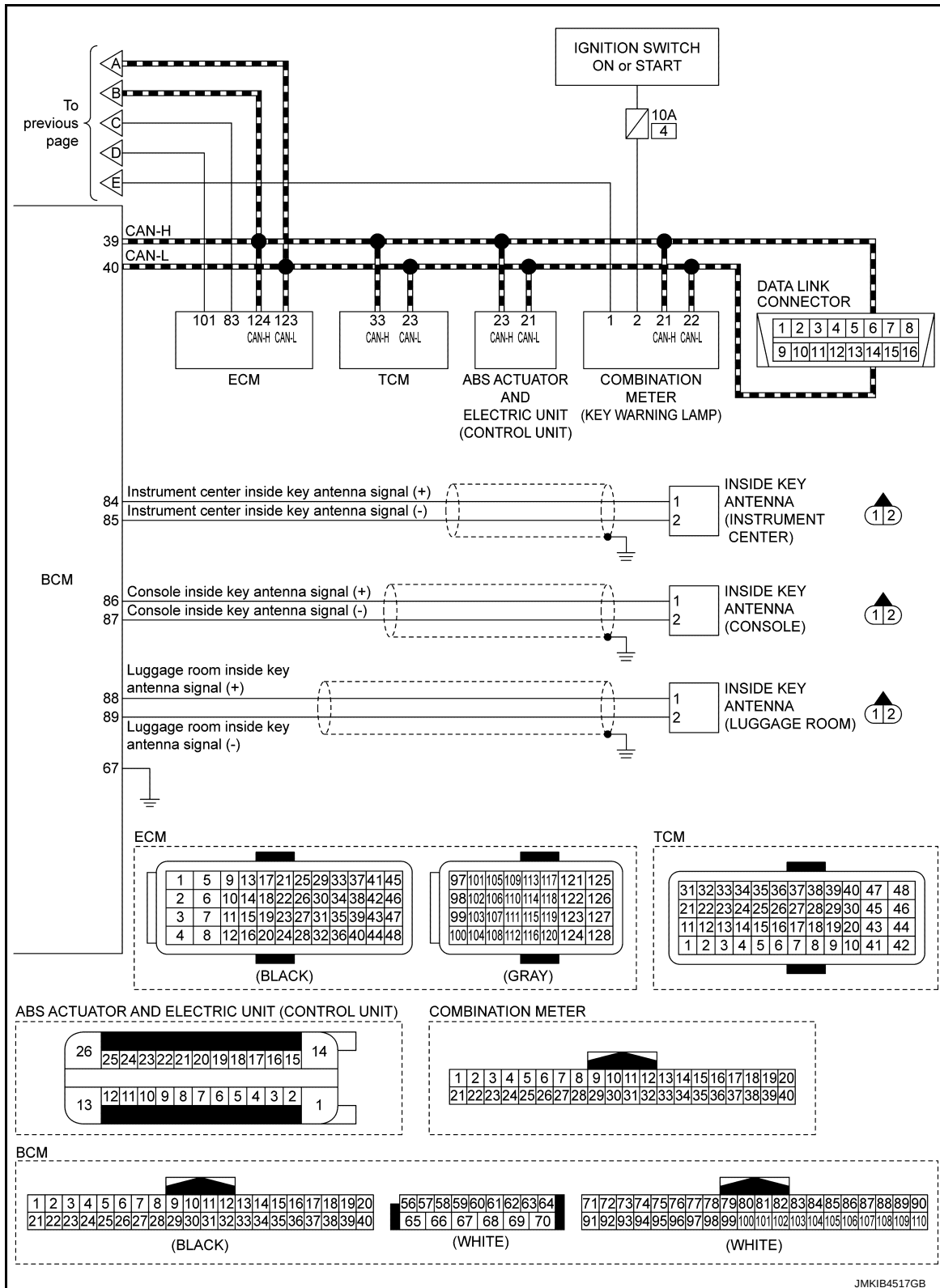


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SYSTEM

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]



NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

SYSTEM

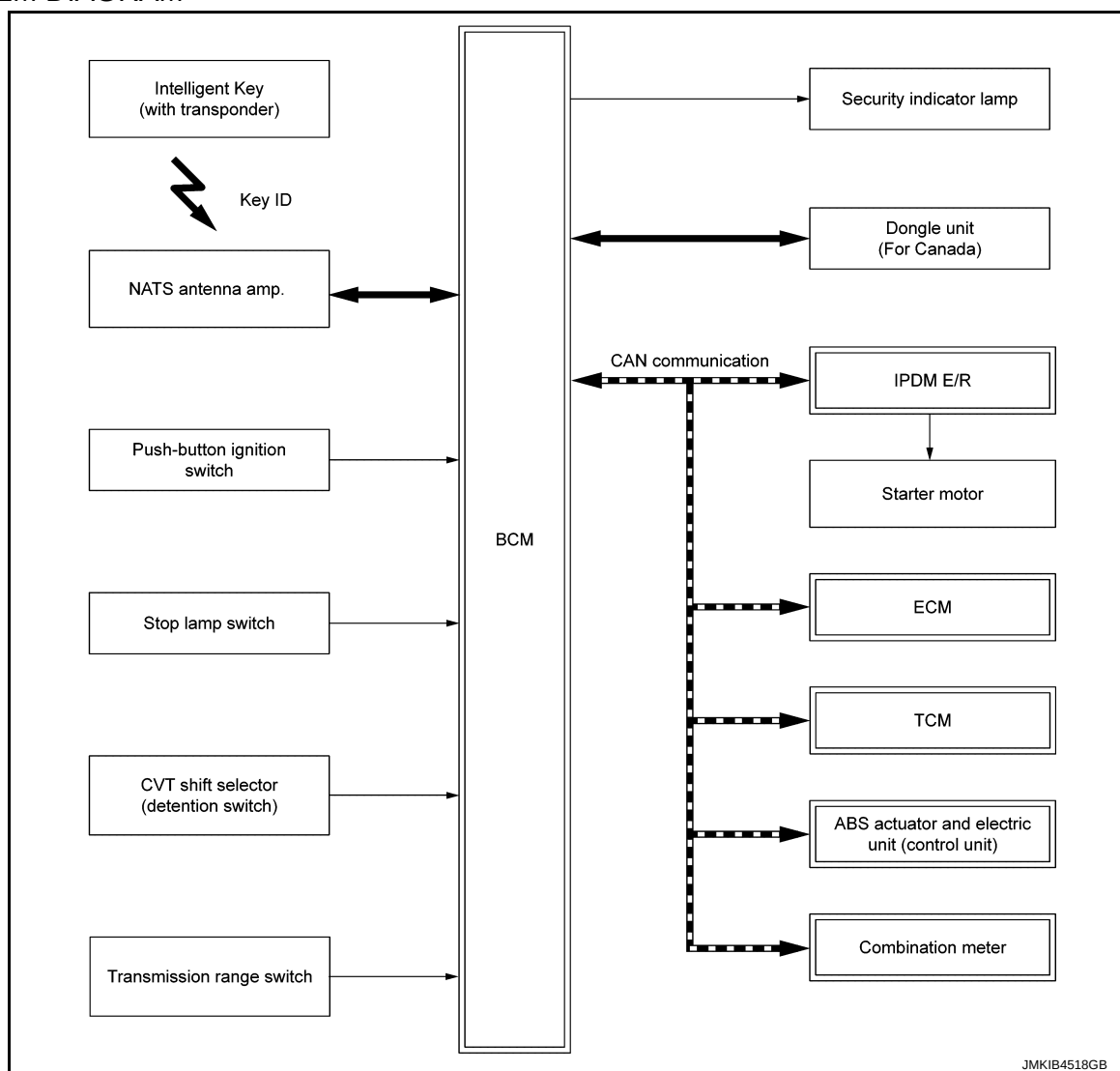
< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS : System Description

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SYSTEM DIAGRAM



INPUT/OUTPUT SIGNAL CHART

Input Signal Item

Transmit unit	Signal name	
ECM	CAN communication	ID verification signal Engine status signal
IPDM E/R		Push-button ignition switch status signal Starter relay status signal Starter control relay signal Detention witch signal Interlock/PNP switch signal
Combination meter		Vehicle speed signal (Meter)
ABS actuator and electric unit (control unit)		Vehicle speed signal (ABS)
TCM		Shift position signal
Transmission range switch	P/N position signal	
NATS antenna amp.	Key ID signal	
Push-button ignition switch	Push-button ignition switch operation signal	

SYSTEM

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Transmit unit	Signal name
Each door switch	Door open/close condition signal
Stop lamp switch	Brake pedal operation signal
CVT shift selector (detention switch)	P position signal

Output Signal Item

Reception unit	Signal name
ECM	CAN communication ID verification signal
Combination meter	Security indicator lamp signal
Inside key antenna	Key ID request signal

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 while brake pedal is depressed. If the verification result is OK, the engine start operation can be performed by the push-button ignition switch operation.
- Locate the security indicator lamp and always blinks it when the ignition switch is in any position except ON to warn that the vehicle is equipped with Nissan Anti-Theft System (NATS).
- Up to 4 Intelligent Keys can be registered (including the standard ignition key) upon request from the owner.
- When replacing ECM, BCM or Intelligent Key, the specified procedure (Initialization and registration) using CONSULT is required.
- Possible symptom of NATS malfunction is "Engine can not start". This symptom also occurs because of other than NATS malfunction, so start the trouble diagnosis according to [SEC-53, "Work Flow"](#).
- If ECM other than genuine part is installed, the engine cannot be started.
For ECM replacement procedure, refer to [SEC-56, "ECM : Work Procedure"](#).

PRECAUTIONS FOR KEY REGISTRATION

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

SECURITY INDICATOR LAMP

- Security indicator lamp warns that the vehicle is equipped with NATS.
- Security indicator lamp always blinks when the ignition switch is in any position other than ON.

NOTE:

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

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

1. When brake pedal is depressed while selector lever is in the P position, BCM activates NATS antenna amp. that is located behind push-button ignition switch.
2. When Intelligent Key (transponder built-in) backside is contacted to push-button ignition switch, BCM starts NVIS (NATS) ID verification between BCM and Intelligent Key (transponder built-in) via NATS antenna amp.
3. When 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. IPDM E/R turns the starter control relay ON for engine starting in advance.
7. BCM detects that the selector lever position and brake pedal operation condition.
8. BCM transmits starter request signal to IPDM E/R and turns the starter relay in IPDM E/R ON if BCM judges that the engine start condition* is satisfied.

SYSTEM

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

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

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

IGNITION SWITCH POSITION CHANGE TABLE BY PUSH-BUTTON IGNITION SWITCH OPERATION

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

NOTE:

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

CVT models

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

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

Power supply position	Condition		Push-button ignition switch operation frequency
	Selector lever	Brake pedal operation condition	
OFF → ACC	—	Not depressed	1
OFF → ACC → ON	—	Not depressed	2
OFF → ACC → ON → OFF	—	Not depressed	3
OFF → START ACC → START ON → START	P or N position	Depressed	1
Engine is running → OFF	—	—	1

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

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

Emergency stop operation

- Press and hold the push-button ignition switch for 2 seconds or more.
- Press the push-button ignition switch 3 times or more within 1.5 seconds.

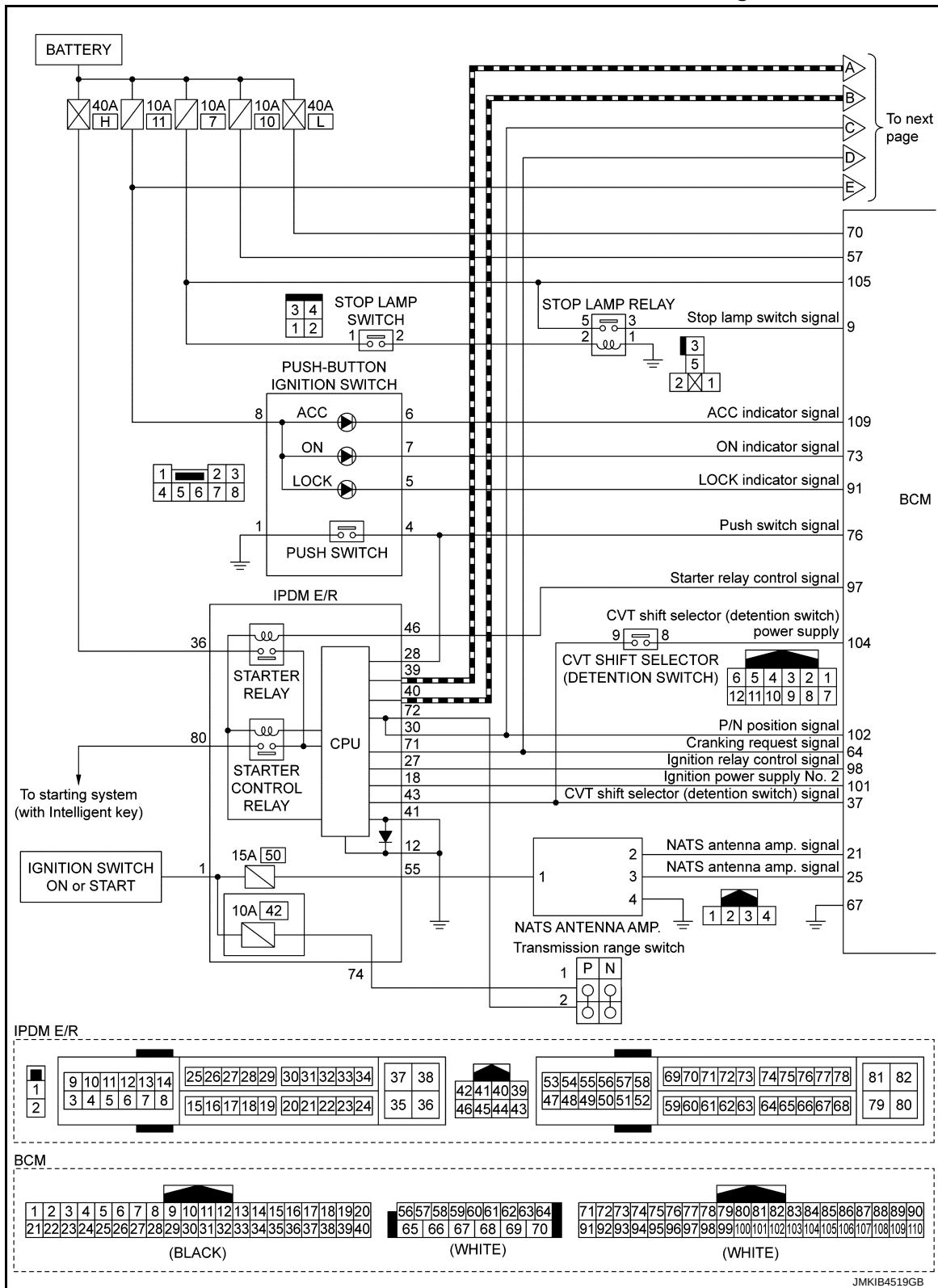
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[WITH INTELLIGENT KEY SYSTEM]

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS : Circuit Diagram

INFOID:000000011323352

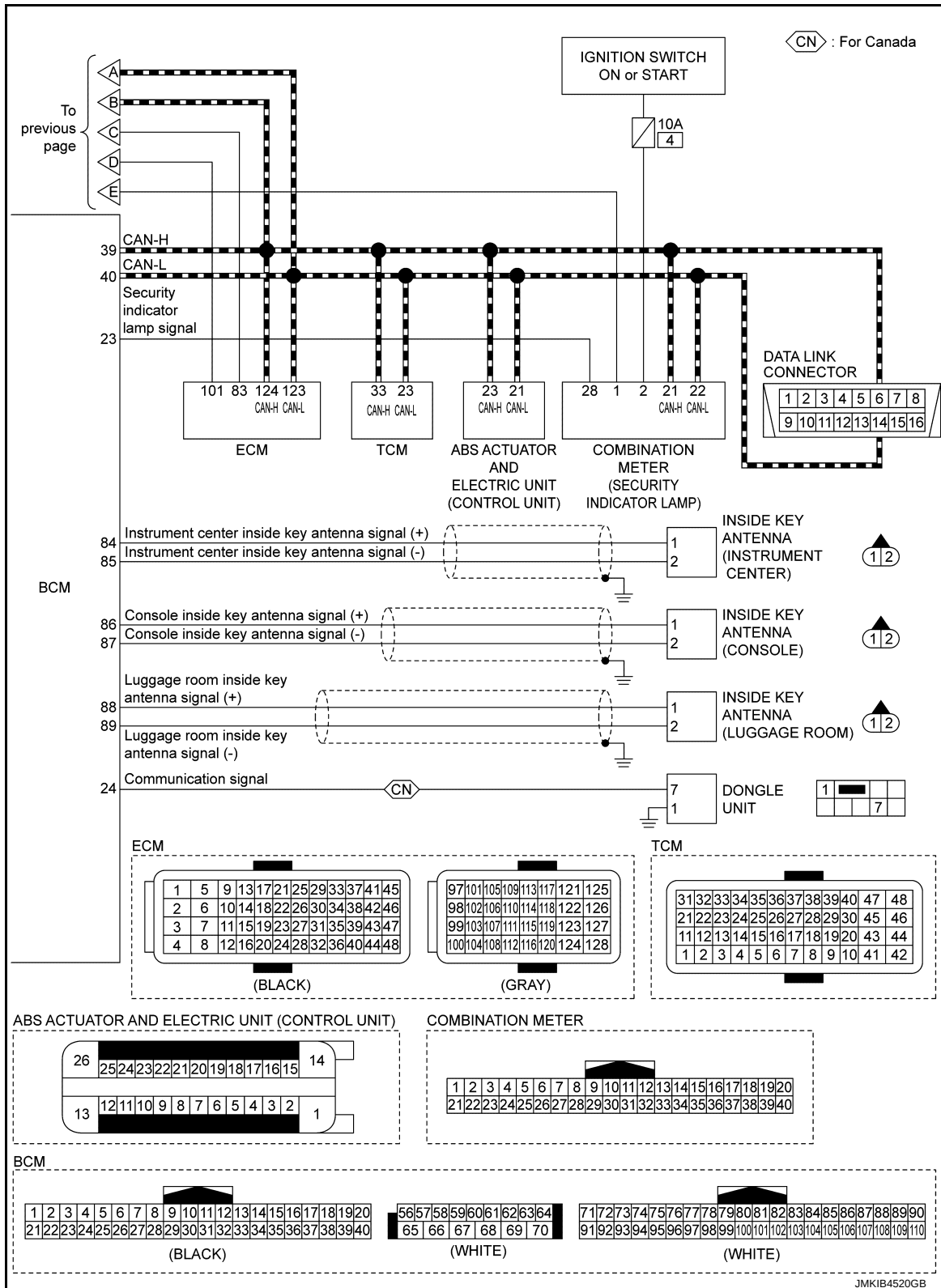


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SYSTEM

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[WITH INTELLIGENT KEY SYSTEM]

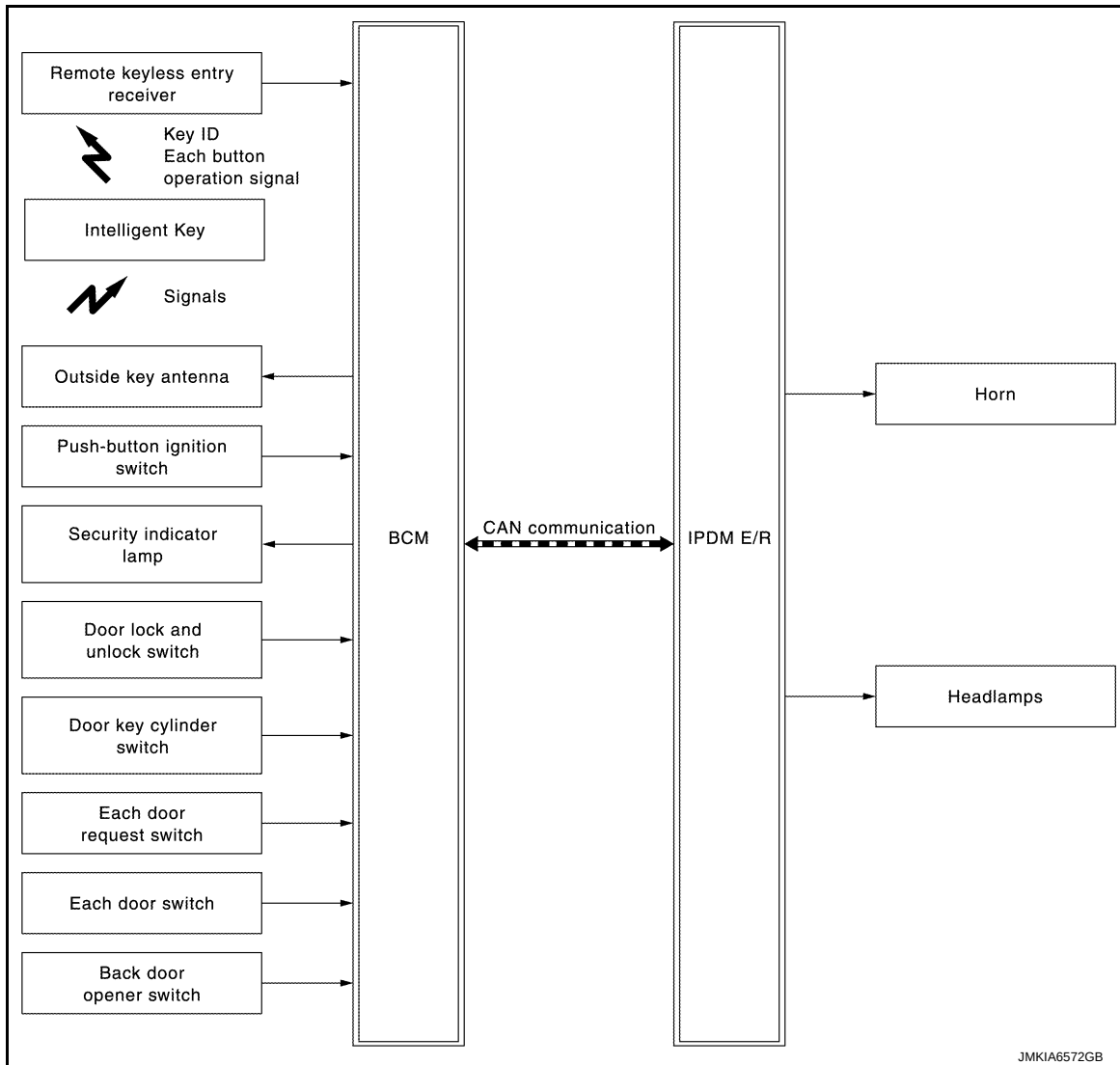


VEHICLE SECURITY SYSTEM

VEHICLE SECURITY SYSTEM : System Diagram

INFOID:0000000011323353

SYSTEM DIAGRAM



INPUT/OUTPUT SIGNAL CHART

Input Signal Item

Transmit unit	Signal name	
IPDM E/R	CAN communication	Ignition switch status signal
Remote keyless entry receiver	Key ID signal Intelligent Key button operation signal	
Push-button ignition switch	Push-button ignition switch operation signal	
Each door switch	Door open/close condition signal	
Each door request switch	Door lock/unlock request signal	
Door key cylinder switch	Door key cylinder lock/unlock switch signal	
Back door opener switch	Back door opener operation signal	
Door lock and unlock switch	Door lock/unlock switch operation signal	

Output Signal Item

SYSTEM

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Reception unit	Signal name	
IPDM E/R	CAN communication	Theft warning horn request signal High beam request signal
Combination meter	Security indicator lamp signal	
Outside key antenna	Key ID request signal	

SYSTEM DESCRIPTION

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

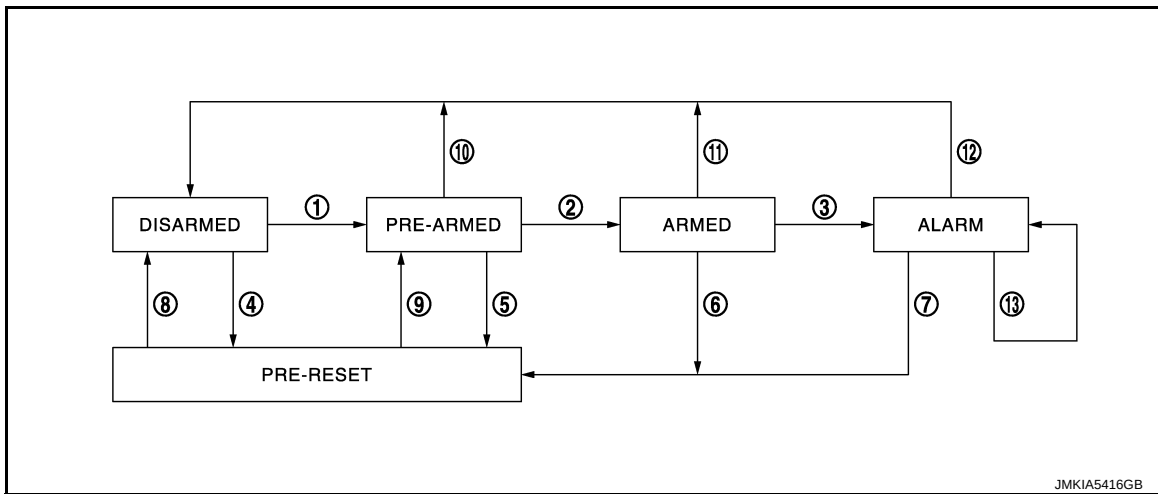
The priority of the functions are as per the following.

Priority	Function
1	Theft warning alarm
2	Panic alarm

THEFT WARNING ALARM

- The theft warning alarm function activates horn and headlamps intermittently when BCM detects that any door is opened by unauthorized means, while the system is in the ARMED state.
- Security indicator lamp on combination meter always blinks when ignition switch is 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 are satisfied.	A	B
			- Ignition switch: OFF - All doors: Closed	All doors are locked by: - LOCK button of Intelligent Key - Door request switch - Door lock and unlock switch - Door key cylinder LOCK switch
2	PRE-ARMED to ARMED	When all of the following conditions are satisfied for 30 seconds.	- Ignition switch: OFF - All doors: Locked	
3	ARMED to ALARM	When condition A and condition B are satisfied.	A	B
			Intelligent Key function: Not used	Any door: Open

SYSTEM

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

No.	System state	Switching condition	
4	DISARMED to PRE-RESET	No conditions.	
5	PRE-ARMED to PRE-RESET		
6	ARMED to PRE-RESET		
7	ALARM to PRE-RESET		
8	PRE-RESET to DISARMED		
9	PRE-RESET to PRE-ARMED		
10	PRE-ARMED to DISARMED	When one of the following condition is satisfied.	- Ignition switch: ACC/ON - UNLOCK button of Intelligent Key: ON - BACK DOOR OPEN button of Intelligent Key: ON - Door request switch: ON - UNLOCK switch of door lock and unlock switch: ON - Door key cylinder UNLOCK switch: ON - Back door opener switch: ON - Any door: Open
11	ARMED to DISARMED	When one of the following condition is satisfied.	- Ignition switch: ACC/ON - UNLOCK button of Intelligent Key: ON - BACK DOOR OPEN button of Intelligent Key: ON - Door request switch: ON - Door key cylinder UNLOCK switch: ON - Back door opener switch: ON
12	ALARM to DISARMED		
13	RE-ALARM	When the following condition is satisfied after the ALARM operation is finished.	Any door: Open

NOTE:

- To lock/unlock all doors by operating remote controller button of Intelligent Key or door request switch, Intelligent Key must be within the detection area of outside key antenna. For details, refer to [DLK-40, "DOOR LOCK FUNCTION : System Description"](#).
- To open back door by operating back door opener switch, Intelligent Key must be within the detection area of outside key antenna. For details, refer to [DLK-42, "BACK DOOR OPEN FUNCTION : System Description"](#).

DISARMED Phase

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

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

PRE-ARMED Phase

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

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

ARMED Phase

The vehicle security system is set, and BCM monitors all necessary inputs. If any door is opened without using Intelligent Key function, 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.

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

SYSTEM

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

NOTE:

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

REALARM Phase

When ALARM phase is maintained for 50 seconds without any cancel operation, the system status 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 REALARM operation is carried out a maximum of 2 times.

PRE-RESET Phase

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

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

PANIC ALARM

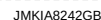
- The panic alarm function activates horns and headlamps intermittently when the owner presses the PANIC ALARM button of Intelligent Key outside the vehicle while the ignition switch is OFF.
- When BCM receives panic alarm signal from Intelligent Key, BCM transmits "Theft Warning Horn Request" signal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

[WITH INTELLIGENT KEY SYSTEM]

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VEHICLE SECURITY SYSTEM : Circuit Diagram

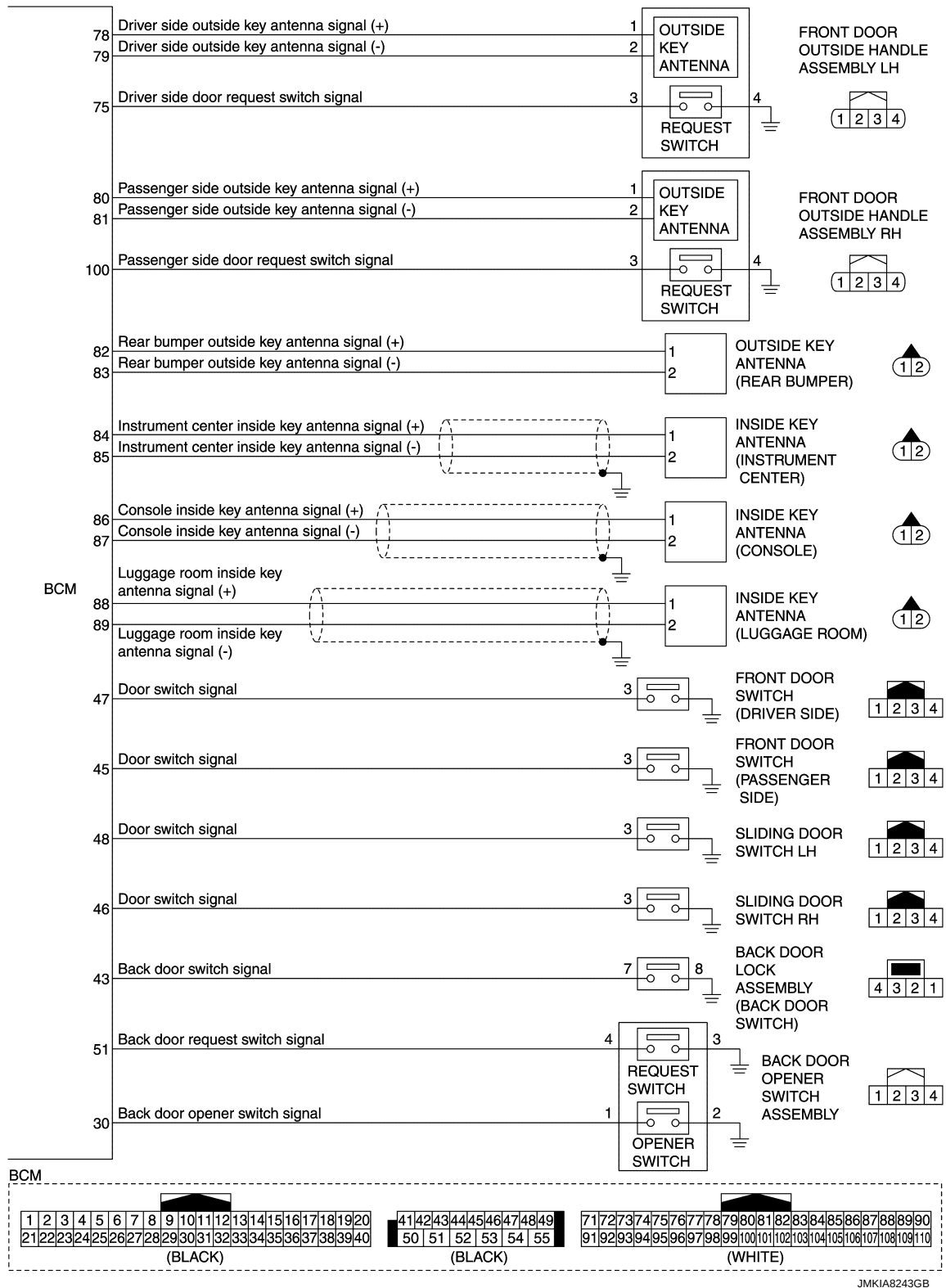
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SYSTEM

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

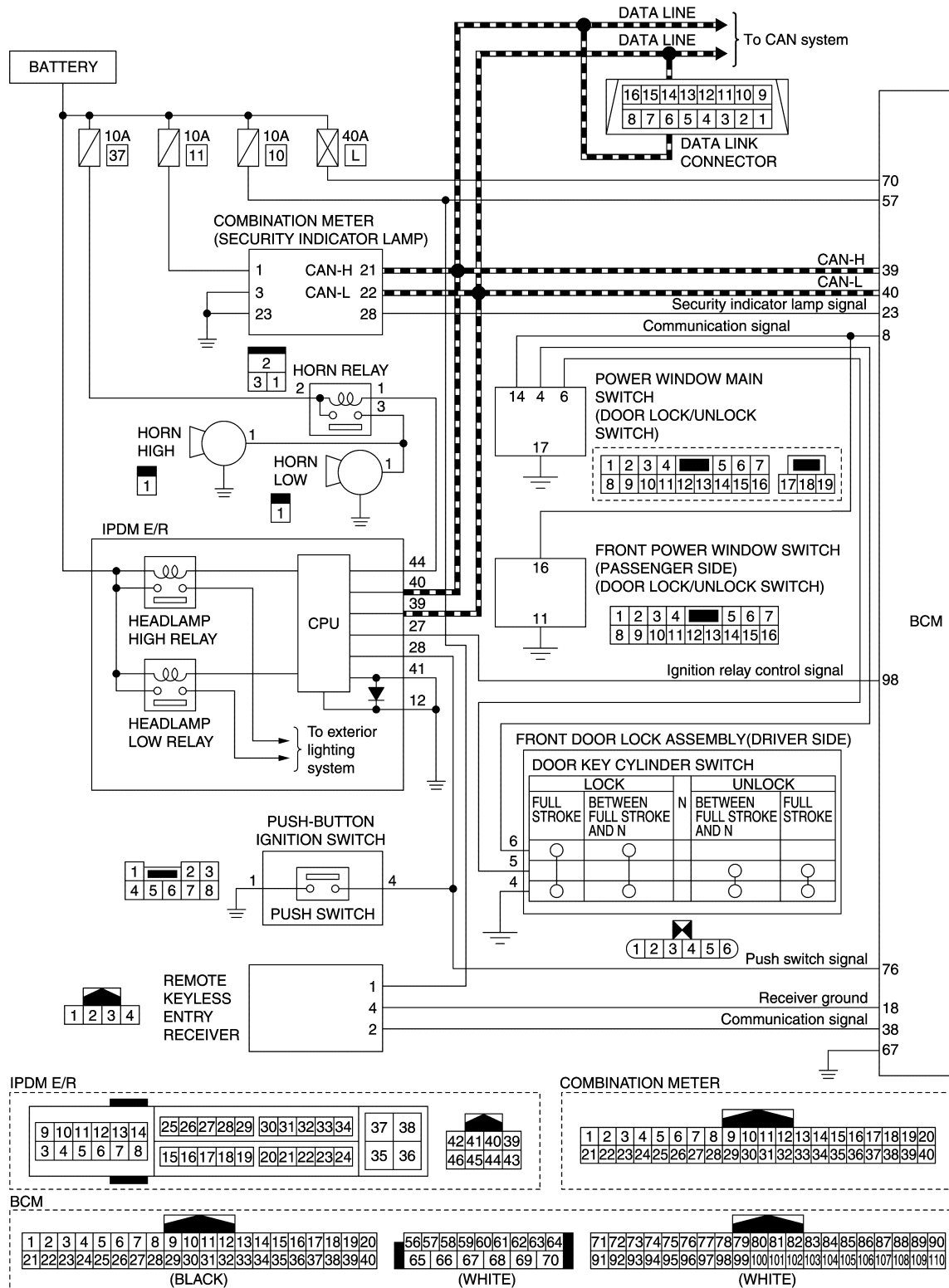


SYSTEM

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

MODELS WITH AUTOMATIC SLIDE DOOR



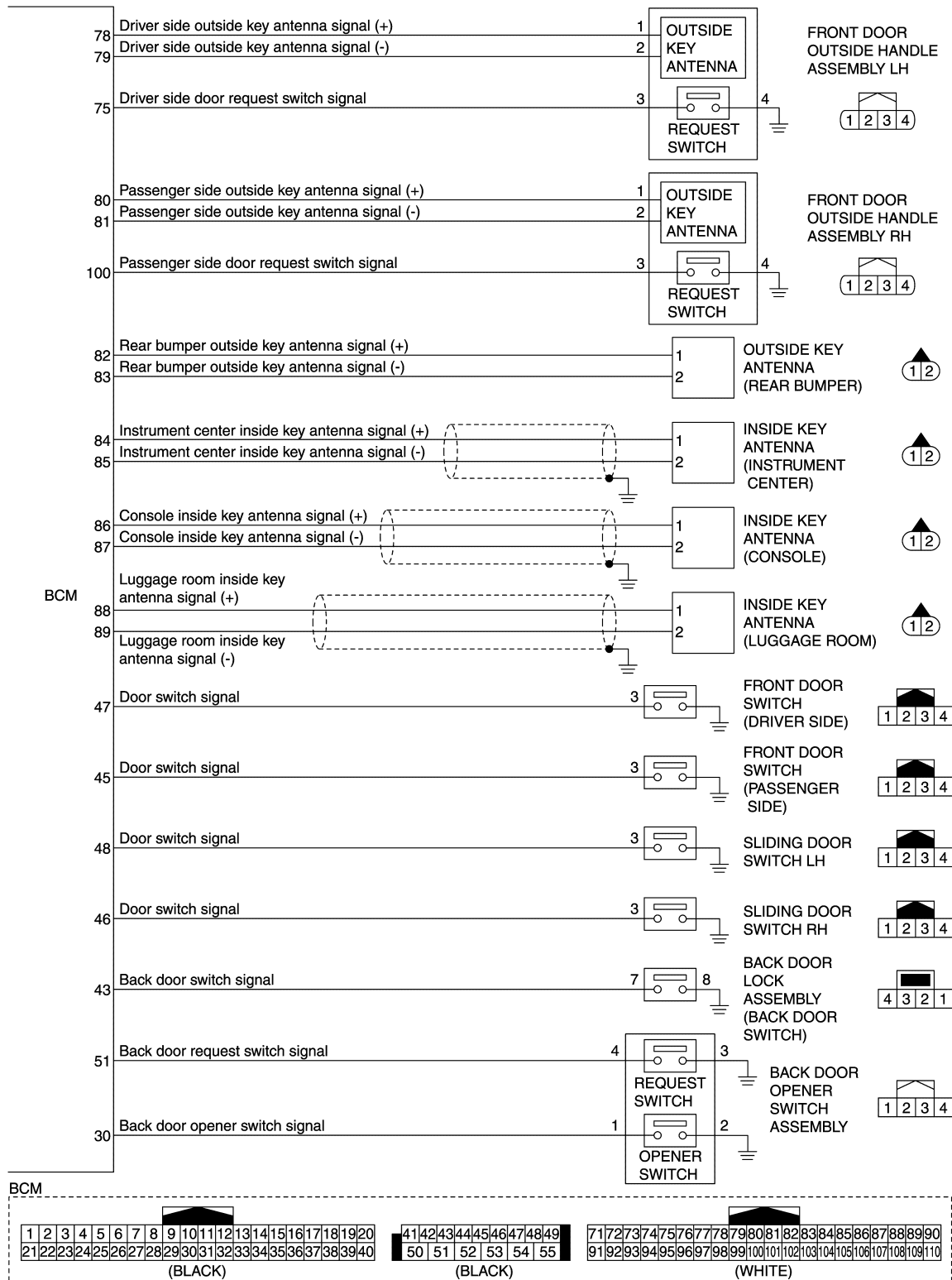
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SYSTEM

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[WITH INTELLIGENT KEY SYSTEM]



JMKIA8243GB

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000011562208

APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
Work Support	Changes the setting for each system function.
Self Diagnostic Result	Displays the diagnosis results judged by BCM.
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM.
Data Monitor	The BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Ecu Identification	The BCM part number is displayed.
Configuration	- Read and save the vehicle specification. - Write the vehicle specification when replacing BCM.

SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

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

×: Applicable item

System	Sub system selection item	Diagnosis mode		
		Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp control system	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
Air conditioning control system	AIR CONDITONER		×	×*
- Intelligent Key system - Engine start system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
NVIS	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	×	×	×

NOTE:

*: For models with automatic air conditioning control system, this diagnosis mode is not used.

FREEZE FRAME DATA (FFD)

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

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

CONSULT screen item	Indication/Unit	Description	
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected	
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected	
Vehicle Condition	SLEEP>LOCK	Power position status of the moment a particular DTC is detected*	While turning BCM status from low power consumption mode to normal mode [Power supply position is OFF (LOCK)]
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode [Power supply position is OFF (OFF)]
	LOCK>ACC		While turning power supply position from OFF (LOCK) to ACC
	ACC>ON		While turning power supply position from ACC to ON
	RUN>ACC		While turning power supply position from RUN to ACC (Except emergency stop operation)
	CRANK>RUN		While turning power supply position from CRANK to RUN
	RUN>URGENT		While turning power supply position from RUN to ACC (Emergency stop operation)
	ACC>OFF		While turning power supply position from ACC to OFF (OFF)
	OFF>LOCK		While turning power supply position from OFF (OFF) to OFF (LOCK)
	OFF>ACC		While turning power supply position from OFF (OFF) to ACC
	ON>CRANK		While turning power supply position from ON to CRANK
	OFF>SLEEP		While turning BCM status from normal mode [Power supply position is OFF (OFF)] to low power consumption mode
	LOCK>SLEEP		While turning BCM status from normal mode [Power supply position is OFF (LOCK)] to low power consumption mode
	LOCK		Power supply position is OFF (LOCK)
	OFF		Power supply position is OFF (OFF)
	ACC		Power supply position is ACC
	ON		Power supply position is ON
	ENGINE RUN		Power supply position is RUN
	CRANKING		Power supply position is CRANK
IGN Counter	0 - 39	The number of times that ignition switch is turned ON after DTC is detected • The number is 0 when a malfunction is detected now. • The number increases like 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. • The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.	

NOTE:

*: Refer to the following for details of the power supply position.

- OFF (OFF, LOCK): Ignition switch OFF
- ACC: Ignition switch ACC
- IGN: Ignition switch ON with engine stopped
- RUN: Ignition switch ON with engine running
- CRANK: At engine cranking

Power supply position shifts to "OFF (LOCK)" from "OFF (OFF)", when ignition switch is in the OFF position, shift position is in the P position, and any of the following conditions are met.

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

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

INTELLIGENT KEY

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY)

INFOID:000000011562209

WORK SUPPORT

Monitor item	Description
INSIDE ANT DIAGNOSIS	This function allows inside key antenna self-diagnosis
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch mode can be changed to operation in this mode - On: Operate - Off: Non-operation
ENGINE START BY I-KEY	Engine start function mode can be changed to operation with this mode - On: Operate - Off: Non-operation
TRUNK/GLASS HATCH OPEN	NOTE: This item is displayed, but cannot be used
PANIC ALARM SET	Panic alarm button pressing time on Intelligent Key button can be selected from the following with this mode - MODE 1: 0.5 sec - MODE 2: Non-operation - MODE 3: 1.5 sec
TRUNK OPEN DELAY	NOTE: This item is displayed, but cannot be used
LO- BATT OF KEY FOB WARN	Intelligent Key low battery warning mode can be changed to operation with this mode - On: Operate - Off: Non-operation
ANTI KEY LOCK IN FUNCTI	Key reminder function mode can be changed to operation with this mode - On: Operate - Off: Non-operation
HAZARD ANSWER BACK	Hazard reminder function mode by door request switch and Intelligent Key button can be selected from the following with this mode - Lock Only: Door lock operation only - Unlock Only: Door unlock operation only - Lock/Unlock: Lock and unlock operation - Off: Non-operation
ANS BACK I-KEY LOCK	Buzzer reminder function (lock operation) mode by door request switch can be selected from the following with this mode - Horn Chirp: Sound horn - Buzzer: Sound Intelligent Key warning buzzer - Off: Non-operation
ANS BACK I-KEY UNLOCK	Buzzer reminder function (unlock operation) mode by door request switch can be changed to operation with this mode - On: Operate - Off: Non-operation
SHORT CRANKING OUTPUT	Starter motor can operate during the times below 70 msec 100 msec 200 msec
CONFIRM KEY FOB ID	It can be checked whether Intelligent Key ID code is registered or not in this mode
AUTO LOCK SET	Auto door lock operation time can be changed in this mode - MODE 1: OFF - MODE 2: 30 sec - MODE 3: 1 minute - MODE 4: 2 minutes - MODE 5: 3 minutes - MODE 6: 4 minutes - MODE 7: 5 minutes

SEC

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Monitor item	Description
HORN WITH KEYLESS LOCK	Horn reminder function mode by Intelligent Key button can be selected from the following with this mode - On: Operate - Off: Non-operation
PW DOWN SET	Unlock button pressing time on Intelligent Key button can be selected from the following with this mode - MODE 1: 3 sec - MODE 2: Non-operation - MODE 3: 5 sec

SELF-DIAG RESULT

Refer to [BCS-63. "DTC Index"](#).

DATA MONITOR

NOTE:

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

Monitor Item	Condition
REQ SW -DR	Indicates [On/Off] condition of door request switch (driver side)
REQ SW -AS	Indicates [On/Off] condition of door request switch (passenger side)
REQ SW -BD/TR	Indicates [On/Off] condition of back door request switch
PUSH SW	Indicates [On/Off] condition of push-button ignition switch
CLUTCH SW	NOTE: This item is displayed, but cannot be monitored
BRAKE SW 1	Indicates [On/Off]* condition of stop lamp switch power supply
BRAKE SW 2	Indicates [On/Off] condition of stop lamp switch
DETE/CANCL SW	Indicates [On/Off] condition of P position
SFT PN/N SW	Indicates [On/Off] condition of P or N position
S/L -LOCK	NOTE: This item is displayed, but cannot be monitored
S/L -UNLOCK	NOTE: This item is displayed, but cannot be monitored
S/L RELAY -F/B	NOTE: This item is displayed, but cannot be monitored
UNLK SEN -DR	Indicates [On/Off] condition of driver door UNLOCK status
PUSH SW -IPDM	Indicates [On/Off] condition of push-button ignition switch
IGN RLY1 -F/B	Indicates [On/Off] condition of ignition relay 1
DETE SW -IPDM	Indicates [On/Off] condition of P position
SFT PN -IPDM	Indicates [On/Off] condition of P or N position
SFT P -MET	Indicates [On/Off] condition of P position
SFT N -MET	Indicates [On/Off] condition of N position
ENGINE STATE	Indicates [Stop/Stall/Crank/Run] condition of engine states
S/L LOCK-IPDM	NOTE: This item is displayed, but cannot be monitored
S/L UNLK-IPDM	NOTE: This item is displayed, but cannot be monitored
S/L RELAY-REQ	NOTE: This item is displayed, but cannot be monitored
VEH SPEED 1	Display the vehicle speed signal received from combination meter by numerical value [km/h]
VEH SPEED 2	Display the vehicle speed signal received from ABS or VDC or TCM by numerical value [km/h]
DOOR STAT-DR	Indicates [LOCK/READY/UNLK] condition of unlock sensor

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Monitor Item	Condition
DOOR STAT-AS	Indicates [LOCK/READY/UNLK] condition of passenger side door status
ID OK FLAG	Indicates [Set/Reset] condition of key ID
PRMT ENG STRT	Indicates [Set/Reset] condition of engine start possibility
PRMT RKE STRT	NOTE: This item is displayed, but cannot be monitored
TRNK/HAT MNTR	NOTE: This item is displayed, but cannot be monitored
RKE-LOCK	Indicates [On/Off] condition of LOCK signal from Intelligent Key
RKE-UNLOCK	Indicates [On/Off] condition of UNLOCK signal from Intelligent Key
RKE-TR/BD	NOTE: This item is displayed, but cannot be monitored
RKE-PANIC	Indicates [On/Off] condition of PANIC button of Intelligent Key
RKE-MODE CHG	Indicates [On/Off] condition of MODE CHANGE signal from Intelligent Key
RKE OPE COUN1	When remote keyless entry receiver receives the signal transmitted while operating on Intelligent Key, the numerical value start changing
RKE OPE COUN2	NOTE: This item is displayed, but cannot be monitored

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

ACTIVE TEST

Test item	Description
BATTERY SAVER	This test is able to check interior room lamp operation • On: Operate • Off: Non-operation
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation • On: Operate • Off: Non-operation
INSIDE BUZZER	This test is able to check warning chime in combination meter operation • Take Out: Take away warning chime sounds when CONSULT screen is touched • Key: Key warning chime sounds when CONSULT screen is touched • Knob: OFF position warning chime sounds when CONSULT screen is touched • Off: Non-operation
INDICATOR	This test is able to check warning lamp operation • KEY ON: "KEY" Warning lamp illuminates when CONSULT screen is touched • KEY IND: "KEY" Warning lamp blinks when CONSULT screen is touched • Off: Non-operation
INT LAMP	This test is able to check interior room lamp operation • On: Operate • Off: Non-operation
LCD	This test is able to check meter display information • Engine start information displays when "BP N" on CONSULT screen is touched • Engine start information displays when "BP I" on CONSULT screen is touched • Key ID warning displays when "ID NG" on CONSULT screen is touched • ROTAT: This item is displayed, but cannot be used. • P position warning displays when "SFT P" on CONSULT screen is touched • INSRT: This item is displayed, but cannot be monitored • BATT: This item is displayed, but cannot be monitored • Take away through window warning displays when "NO KY" on CONSULT screen is touched • Take away warning display when "OUTKEY" on CONSULT screen is touched • OFF position warning display when "LK WN" on CONSULT screen is touched
FLASHER	This test is able to check hazard warning lamp operation • LH: LH side hazard warning lamps operate • RH: RH side hazard warning lamps operate • Off: Non-operation

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Test item	Description
P RANGE	This test is able to check CVT shift selector power supply - On: Operate - Off: Non-operation
ENGINE SW ILLUMI	This test is able to check push-button ignition switch illumination operation - On: Operate - Off: Non-operation
LOCK INDICATOR	This test is able to check LOCK indicator (push-button ignition switch) operation - On: Operate - Off: Non-operation
ACC INDICATOR	This test is able to check ACC indicator (push-button ignition switch) operation - On: Operate - Off: Non-operation
IGNITION ON IND	This test is able to check ON indicator (push-button ignition switch) operation - On: Operate - Off: Non-operation
HORN	This test is able to check horn operation - On: Operate - Off: Non-operation
TRUNK/BACK DOOR	NOTE: This item is displayed, but cannot be used
POWER SLIDE DOOR	This test is able to check automatic sliding door operation - RR PSD ON: Auto open/close operate - RL PSD ON: Auto open/close operate

THEFT ALM

THEFT ALM : CONSULT Function (BCM - THEFT)

INFOID:000000011323357

WORK SUPPORT

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

DATA MONITOR

NOTE:

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

Monitored Item	Description
REQ SW -DR	Indicates [ON/OFF] condition of door request switch (driver side).
REQ SW -AS	Indicates [ON/OFF] condition of door request switch (passenger side).
REQ SW -RR	NOTE: This is displayed even when it is not equipped.
REQ SW -RL	NOTE: This is displayed even when it is not equipped.
REQ SW -BD/TR	Indicates [ON/OFF] condition of back door request switch.
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch
UNLK SEN -DR	Indicates [ON/OFF] condition of driver door UNLOCK status.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch (driver side).
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch (passenger side).
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Monitored Item	Description
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
DOOR SW-BK	Indicates [ON/OFF] condition of back door switch.
CDL LOCK SW	Indicates [ON/OFF] condition of lock signal from door lock/unlock switch.
CDL UNLOCK SW	Indicates [ON/OFF] condition of unlock signal from door lock/unlock switch.
KEY CYL LK-SW	Indicates [ON/OFF] condition of lock signal from door key cylinder.
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from door key cylinder.
TR/BD OPEN SW	Indicates [ON/OFF] condition of back door opener switch.
TRNK/HAT MNTR	NOTE: This is displayed even when it is not equipped.
RKE-LOCK	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.
RKE-UNLOCK	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.
RKE-TR/BD	NOTE: This is displayed even when it is not equipped.

ACTIVE TEST

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

IMMU

IMMU : CONSULT Function (BCM - IMMU)

INFOID:0000000011323358

WORK SUPPORT

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

DATA MONITOR

NOTE:

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

Monitor item	Content
CONFIRM ID ALL	Indicates [YET] at all time. Switches to [DONE] when a registered Intelligent Key backside is contacted to push-button ignition switch.
CONFIRM ID4	
CONFIRM ID3	
CONFIRM ID2	
CONFIRM ID1	
NOT REGISTERED	Indicates [ID OK] when key ID that is registered is received or is not yet received. Indicates [ID NG] when key ID that is not registered is received.

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Monitor item	Content
TP 4	Indicates the number of IDs that are registered.
TP 3	
TP 2	
TP 1	
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch.

ACTIVE TEST

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

DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

DIAGNOSIS SYSTEM (IPDM E/R)

CONSULT Function (IPDM E/R)

INFOID:0000000011562210

APPLICATION ITEM

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

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

SELF DIAGNOSTIC RESULT

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

DATA MONITOR

NOTE:

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

Monitor Item [Unit]	MAIN SIG- NALS	Description
MOTOR FAN REQ [1/2/3/4]	×	Displays the value of the cooling fan speed signal received from ECM via CAN communication.
AC COMP REQ [Off/On]	×	Displays the status of the A/C compressor request signal received from ECM via CAN communication.
TAIL&CLR REQ [Off/On]	×	Displays the status of the position light request signal received from BCM via CAN communication.
HL LO REQ [Off/On]	×	Displays the status of the low beam request signal received from BCM via CAN communication.
HL HI REQ [Off/On]	×	Displays the status of the high beam request signal received from BCM via CAN communication.
FR FOG REQ [Off/On]	×	Displays the status of the front fog light request signal received from BCM via CAN communication.
FR WIP REQ [Stop/1LOW/Low/Hi]	×	Displays the status of the front wiper request signal received from BCM via CAN communication.
WIP AUTO STOP [STOP P/ACT P]	×	Displays the status of the front wiper stop position signal judged by IPDM E/R.
WIP PROT [Off/BLOCK]	×	Displays the status of the front wiper fail-safe operation judged by IPDM E/R.
IGN RLY1 -REQ [Off/On]		Displays the status of the ignition switch ON signal received from BCM via CAN communication.
IGN RLY [Off/On]	×	Displays the status of the ignition relay judged by IPDM E/R.
PUSH SW [Off/On]		Displays the status of the push-button ignition switch judged by IPDM E/R.
INTER/NP SW [Off/On]		Displays the status of the shift position judged by IPDM E/R.
ST RLY CONT [Off/On]		Displays the status of the starter relay status signal received from BCM via CAN communication.
IHBT RLY -REQ [Off/On]		Displays the status of the starter control relay signal received from BCM via CAN communication.

DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

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

ACTIVE TEST

Test item

Test item	Operation	Description
CORNERING LAMP	Off	NOTE: The item is indicated, but cannot be tested.
	LH	
	RH	
HORN	On	Operates horn relay for 20 ms.
FRONT WIPER	Off	OFF
	Lo	Operates the front wiper relay.
	Hi	Operates the front wiper relay and front wiper high relay.
MOTOR FAN	1	OFF
	2	Operates the cooling fan relay-1.
	3	Operates the cooling fan relay-2.
	4	Operates the cooling fan relay-2 and cooling fan relay-3.
HEAD LAMP WASHER	On	NOTE: The item is indicated, but cannot be tested.
EXTERNAL LAMPS	Off	OFF
	TAIL	Operates the tail lamp relay and the daytime running light relay.
	Lo	Operates the headlamp low relay.
	Hi	Operates the headlamp low relay and ON/OFF the headlamp high relay at 1 second intervals.
	Fog	Operates the front fog lamp relay.

ECU DIAGNOSIS INFORMATION

ECM, IPDM E/R, BCM

List of ECU Reference

INFOID:0000000011323360

ECU		Reference
ECM	Reference Value	EC-83, "Reference Value"
	Fail-safe	EC-99, "Fail-safe"
	DTC Inspection Priority Chart	EC-101, "DTC Inspection Priority Chart"
	DTC Index	EC-103, "DTC Index"
IPDM E/R	Reference Value	PCS-16, "Reference Value"
	Fail-safe	PCS-23, "Fail-safe"
	DTC Index	PCS-24, "DTC Index"
BCM	Reference Value	BCS-40, "Reference Value"
	Fail-safe	BCS-62, "Fail-safe"
	DTC Inspection Priority Chart	BCS-62, "DTC Inspection Priority Chart"
	DTC Index	BCS-63, "DTC Index"

A

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SECURITY CONTROL SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

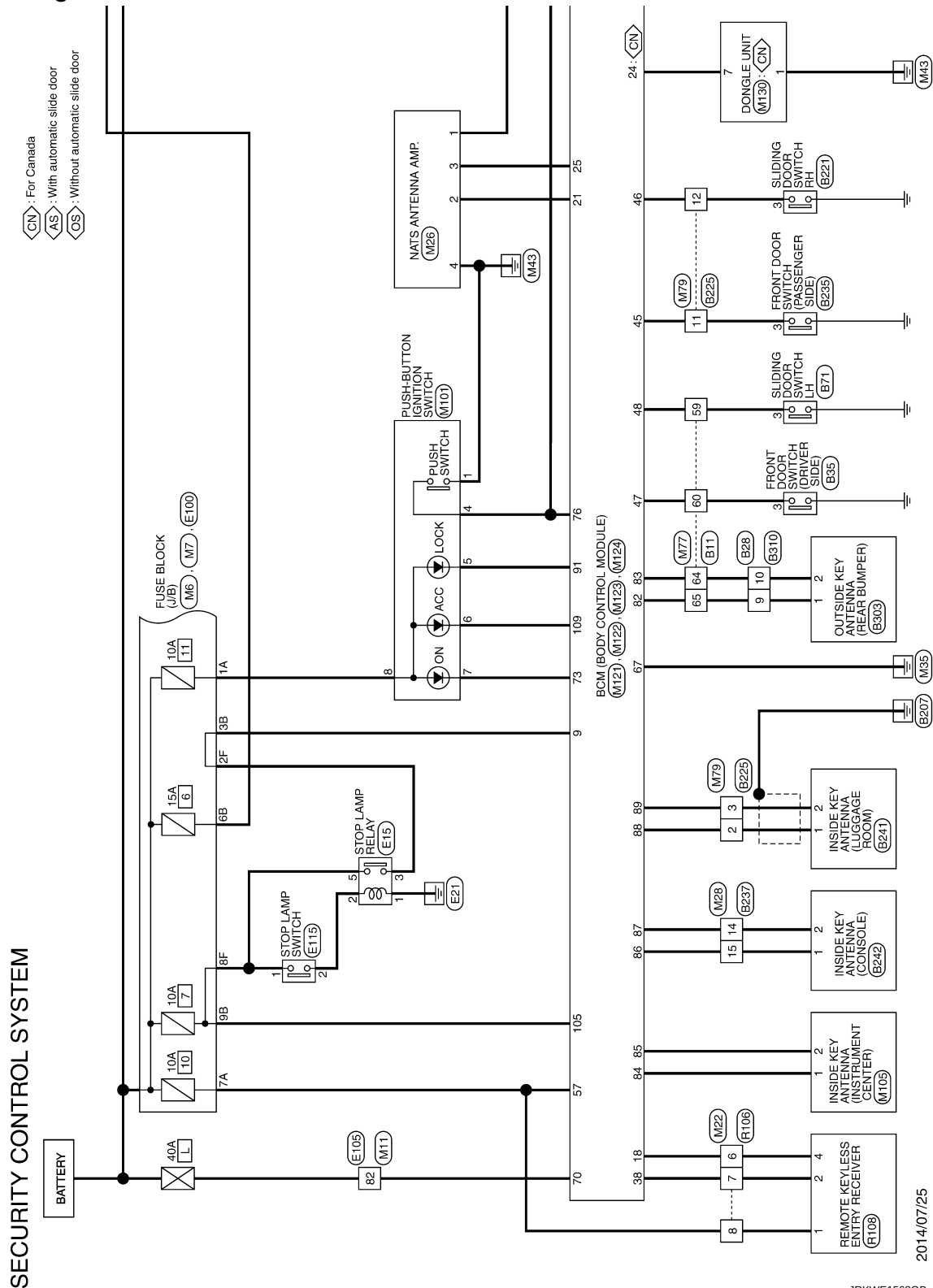
< WIRING DIAGRAM >

WIRING DIAGRAM

SECURITY CONTROL SYSTEM

Wiring Diagram

INFOID:0000000011323361



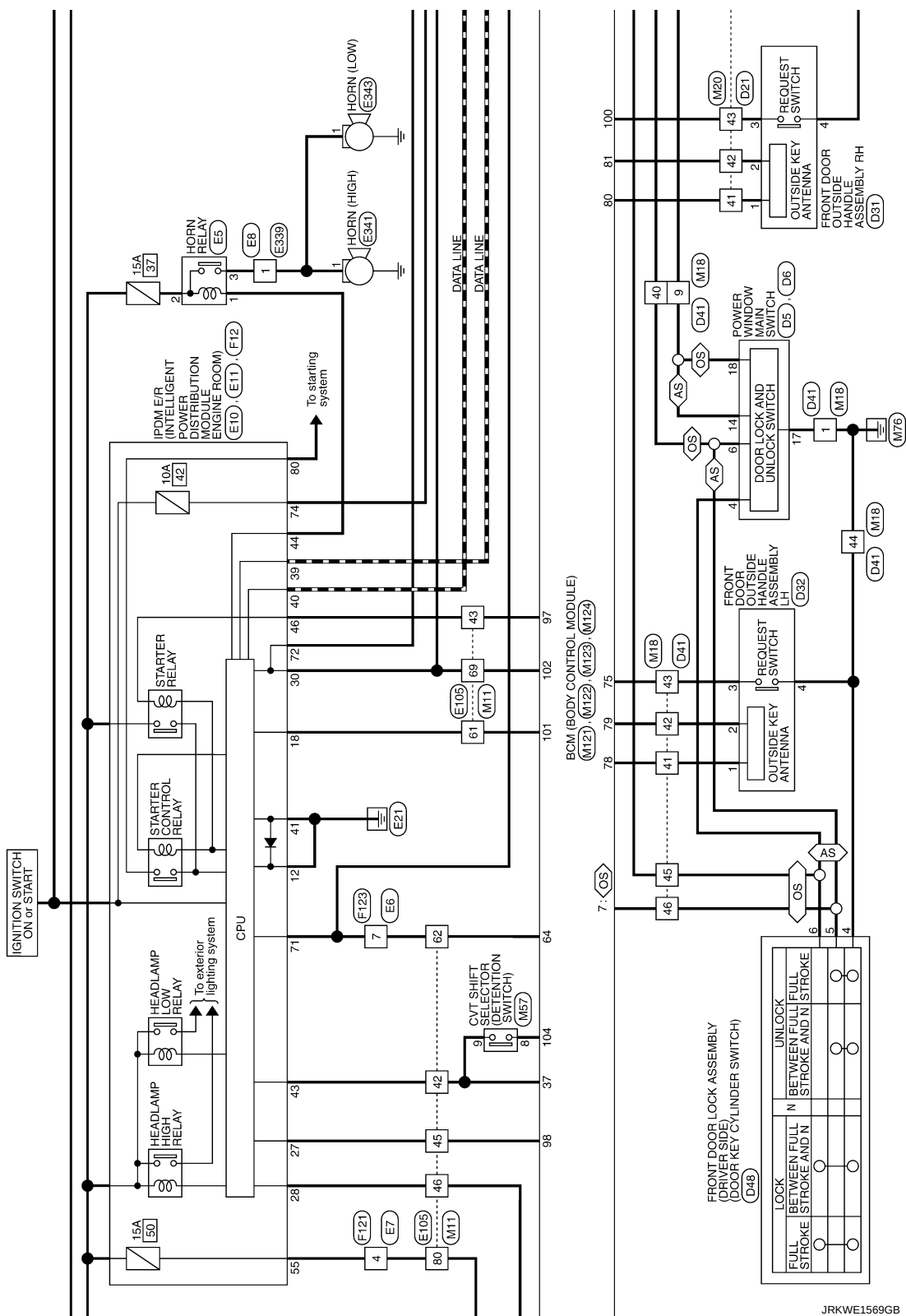
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SECURITY CONTROL SYSTEM

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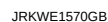
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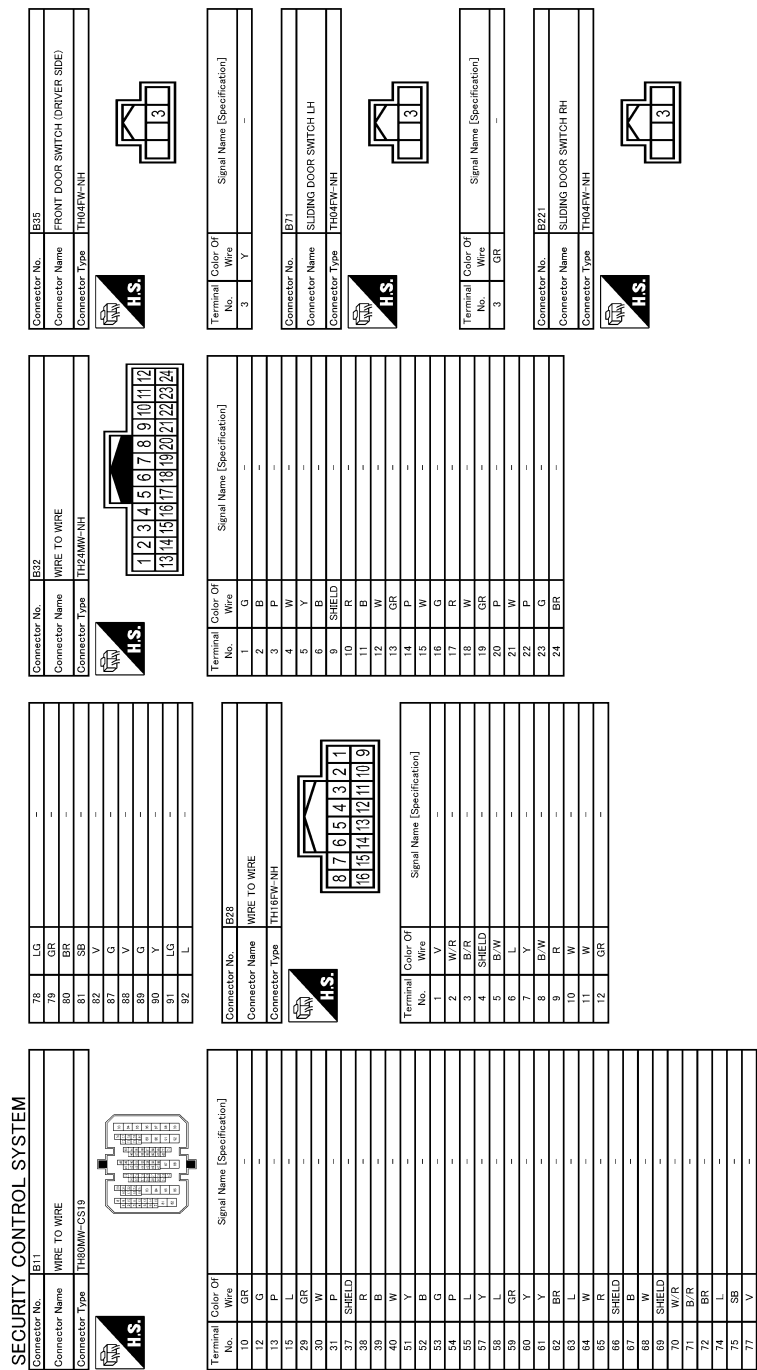
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SECURITY CONTROL SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >



SECURITY CONTROL SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

SECURITY CONTROL SYSTEM

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

Connector No.	B225
Connector Name	WIRE TO WIRE
Connector Type	TH1BMW-NH



1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16

Terminal No.	Color Of Wire	Signal Name [Specification]
2	W	-
3	B	-
4	P	-
5	G	-
9	L	-
10	P	-
11	SB	-
12	GR	-
13	R	-
14	G	-
15	L	-
16	Y	-

Connector No.	B235
Connector Name	FRONT DOOR SWITCH (PASSENGER SIDE)
Connector Type	TH04FW-NH



3

Terminal No.	Color Of Wire	Signal Name [Specification]
3	SB	-

Connector No.	B237
Connector Name	WIRE TO WIRE
Connector Type	NS1BMGY-CS



1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16					

Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	W	-
3	G	-
4	GR	-
5	LG	- [With manual A/G]
6	P	- [With auto A/G]
7	Y	-
8	G	-
9	SB	-
10	O	-
11	LG	-
12	P	-
14	R	-
15	W	-
16	G	-

Connector No.	B241
Connector Name	INSIDE KEY ANTENNA (LUGGAGE ROOM)
Connector Type	RK02FL



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

Connector No.	B242
Connector Name	INSIDE KEY ANTENNA (CONSOLE)
Connector Type	RK02FL



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

Connector No.	B303
Connector Name	OUTSIDE KEY ANTENNA (REAR BUMPER)
Connector Type	RK02FL



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

Connector No.	B310
Connector Name	WIRE TO WIRE
Connector Type	TH1BMW-NH



1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16

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

Connector No.	D5
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS1BEV-CS



1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16

Terminal No.	Color Of Wire	Signal Name [Specification]
2	P	-
3	BP	-
4	G	-
5	SB	-
6	GR	-
7	V	-
8	L	-

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SECURITY CONTROL SYSTEM

< WIRING DIAGRAM >

[WITH INTELLIGENT KEY SYSTEM]

SECURITY CONTROL SYSTEM

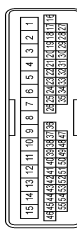
9	W	-
10	GR	-
11	Y	-
12	LG	-
13	GR	-
14	R	-
15	G	-
16	L	-

Connector No.	D08
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	INS5PW-CS



Terminal No.	Color	Wire	Signal Name [Specification]
17	B	-	-
18	G	-	-
19	Y	-	-

Connector No.	D21
Connector Name	WIRE TO WIRE
Connector Type	TH40PW-CS15



Terminal No.	Color	Wire	Signal Name [Specification]
8	B	-	-
9	BR	-	-
10	LG	-	- [With manual A/G]
11	LG	-	- [With auto A/G]
12	BR	-	-

14	B	-	- [Without BOSE system]
15	R	-	- [With BOSE system]
16	L	-	- [Without BOSE system]
17	W	-	- [With BOSE system]
18	P	-	-
19	GR	-	-
20	R	-	-
21	W	-	-
22	B	-	-
23	W	-	-
24	SHIELD	-	-
25	Y	-	-
26	L	-	-
27	P	-	-
28	GR	-	-
29	G	-	-
30	W	-	-
31	LG	-	-
32	B	-	-
33	GR	-	-
34	W	-	-
35	G	-	-
36	R	-	-
37	G	-	-
38	W	-	-
39	LG	-	-
40	SHIELD	-	-
41	B	-	-
42	GR	-	-
43	R	-	-
44	G	-	-
45	W	-	-
46	GR	-	-
47	R	-	-
48	W	-	-
49	LG	-	-
50	GR	-	-
51	R	-	-
52	G	-	-
53	SHIELD	-	-
54	B	-	-
55	W	-	-

Connector No.	D31
Connector Name	FRONT DOOR OUTSIDE HANDLE ASSEMBLY RH
Connector Type	RH04MB



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

Connector No.	D32
Connector Name	FRONT DOOR OUTSIDE HANDLE ASSEMBLY LH
Connector Type	RH04MB



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

Connector No.	D41
Connector Name	WIRE TO WIRE
Connector Type	TH40PW-CS15



Terminal No.	Color	Wire	Signal Name [Specification]
1	B	-	-
2	V	-	-
3	SB	-	-
4	Y	-	-
5	BR	-	-
6	L	-	-
7	Y	-	-
8	GR	-	-
9	G	-	- [With manual A/G]
10	Y	-	- [With auto A/G]
11	BR	-	-
12	LG	-	-
13	W	-	-
14	B	-	-
15	L	-	- [Without BOSE system]

15	W	-	- [With BOSE system]
16	G	-	-
17	R	-	-
18	G	-	-
19	P	-	-
20	W	-	-
21	GR	-	-
22	P	-	-
23	R	-	-
24	B	-	-
25	W	-	-
26	SHIELD	-	-
27	R	-	-
28	P	-	-
29	GR	-	-
30	R	-	-
31	W	-	-
32	G	-	-
33	P	-	-
34	W	-	-
35	G	-	-
36	P	-	-
37	G	-	-
38	W	-	-
39	LG	-	-
40	GR	-	-
41	GR	-	-
42	G	-	-
43	R	-	-
44	B	-	-
45	G	-	- [Without around view monitor]
46	GR	-	- [With around view monitor]
47	GR	-	-
48	B	-	-
49	R	-	-
50	G	-	- [Without automatic drive positioner]
51	W	-	- [With automatic drive positioner]
52	P	-	- [Without automatic drive positioner]
53	R	-	- [With automatic drive positioner]
54	SHIELD	-	- [Without automatic drive positioner]
55	W	-	-

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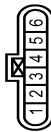
SECURITY CONTROL SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

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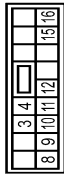
SECURITY CONTROL SYSTEM

Connector No.	D48
Connector Name	FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE)
Connector Type	E06FGY-RS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	BR	-
3	W	-
4	B	-
5	GR	-
6	G	-

Connector No.	D55
Connector Name	FRONT POWER WINDOW SWITCH (PASSENGER SIDE)
Connector Type	NS12FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
3	GR	-
4	G	-
8	L	-
9	LG	-
10	V	-
11	B	-
12	P	-
15	R	-
16	W	-

Connector No.	D56
Connector Name	FRONT POWER WINDOW SWITCH (PASSENGER SIDE)
Connector Type	NS12FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	G	-
3	B	-
6	LG	-
7	L	-
8	V	-
11	LG	-
12	BR	-

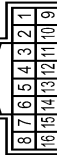
Connector No.	D152
Connector Name	WIRE TO WIRE
Connector Type	TH124FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	SB	-
2	B	-
3	P	-
4	V	-
6	LG	-
8	SHIELD	-
10	W	-
11	R	-
12	B	-
13	R	-
14	G	-

15	P	-
16	O	-
17	L	-
18	GR	-
19	BR	-
20	O	-
21	LG	-
22	V	-
23	W	-
24	V	-

Connector No.	D159
Connector Name	WIRE TO WIRE
Connector Type	TH16FW-NH



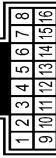
Terminal No.	Color Of Wire	Signal Name [Specification]
1	SB	-
2	B	-
3	V	-
4	L	-
5	Y	-
9	R	-
10	P	-
11	O	-
12	L	-
13	GR	-
14	O	-
15	LG	-
16	V	-

Connector No.	D186
Connector Name	BACK DOOR OPENER SWITCH ASSEMBLY
Connector Type	TH04MW-NH



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

Connector No.	D188
Connector Name	WIRE TO WIRE
Connector Type	TH18MW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	B	-
3	Y	-
4	P	-
5	BR	-
9	R	-
10	P	-
11	R	-
12	W	-
13	G	-
14	GR	-
15	R	-
16	V	-
16	W	-

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SECURITY CONTROL SYSTEM

< WIRING DIAGRAM >

[WITH INTELLIGENT KEY SYSTEM]

SECURITY CONTROL SYSTEM

Connector No.	D190
Connector Name	BACK DOOR LOCK ASSEMBLY
Connector Type	NSDBPW-CS



1	2	3	4	5	6	7	8
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Connector No.	E6
Connector Name	WIRE TO WIRE
Connector Type	TK18MG7-TV



1	2	3	4	5	6	7		
8	9	10	11	12	13	14	15	16

Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	-
2	R	-
3	B	-
4	W	-
5	W	-
6	G	-
7	P	-
8	B	-

Connector No.	E5
Connector Name	HORN RELAY
Connector Type	24381.7990A



2	3	1
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Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	SB	-
3	P	-

Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	G	-
3	Y	-
4	V	-
5	GR	-
6	V	-
7	G	-
8	P	-
9	R	-
10	W	-
11	G	-
12	BR	-
13	SB	-
14	B	-
15	W	-
16	R	-

Connector No.	E7
Connector Name	WIRE TO WIRE
Connector Type	NS10MW-CS



1	2	3	4		
5	6	7	8	9	10

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

9	B
8	B
10	B

Connector No.	E8
Connector Name	WIRE TO WIRE
Connector Type	NS12MBR-CS



1	2	3	4	5		
6	7	8	9	10	11	12

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

Connector No.	E10
Connector Name	POWER IN INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM
Connector Type	TH20FW-CS12-M4-1V



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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Terminal No.	Color Of Wire	Signal Name [Specification]
1	YS	-
2	YS	-
3	YS	-
4	YS	-
5	YS	-
6	G	-
7	BR	-
8	BR	-
9	BR	-
10	P	-
11	P	-
12	B	-
13	G	-
14	L	-
15	L	-
16	R	-
17	R	-
18	P	-
19	V	-
20	W	-
21	O	-
22	SB	-
23	GR	-
24	G	-
25	GR	-
26	GR	-
27	BR	-
28	G	-
29	LG	-
30	LG	-
31	O	-
32	P	-
33	P	-
34	P	-
35	P	-
36	G	-
37	G	-
38	GR	-

Connector No.	E11
Connector Name	POWER IN INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM
Connector Type	TH20FW-NH



42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

Terminal No.	Color Of Wire	Signal Name [Specification]
39	P	-
40	P	-
41	B	-
42	SB	-
43	LG	-
44	W	-
45	Y	-
46	O	-

JRKWE1575GB

SECURITY CONTROL SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

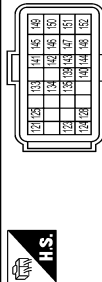
SECURITY CONTROL SYSTEM

Connector No.	E15
Connector Name	STOP LAMP RELAY
Connector Type	MS02F-M2-LC



Terminal No.	Color	Wire	Signal Name [Specification]
1	B	Y	ECM GROUND
2	B	Y	SENSOR GROUND
3	B	Y	ECM GROUND
4	B	Y	ECM GROUND
5	B	Y	ECM GROUND

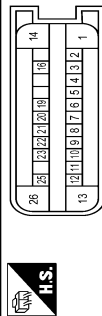
Connector No.	E19
Connector Name	ECM
Connector Type	IR24FB-R28-L-LH



Terminal No.	Color	Wire	Signal Name [Specification]
121	LG	P	EVAP CONTROL SYSTEM PRESSURE SENSOR
122	P	P	CAN COMMUNICATION LINE (CAN-L)
123	L	L	CAN COMMUNICATION LINE (CAN-H)
124	W	W	SENSOR POWER SUPPLY
125	Y	Y	FUEL TANK TEMPERATURE SENSOR
126	BR	BR	IGNITION SWITCH
127	Y	Y	ASCD STEERING SWITCH
128	BR	BR	SENSOR GROUND
129	BR	BR	SENSOR GROUND
130	BR	BR	SENSOR GROUND
131	BR	BR	SENSOR GROUND
132	BR	BR	SENSOR GROUND
133	BR	BR	SENSOR GROUND
134	BR	BR	SENSOR GROUND
135	BR	BR	SENSOR GROUND
136	BR	BR	SENSOR GROUND
137	BR	BR	SENSOR GROUND
138	BR	BR	SENSOR GROUND
139	BR	BR	SENSOR GROUND
140	BR	BR	SENSOR GROUND
141	BR	BR	SENSOR GROUND
142	GR	GR	EVAP CANISTER VENT CONTROL VALVE
143	O	O	ACCELERATOR PEDAL POSITION SENSOR 2
144	G	G	SENSOR GROUND
145	L	L	POWER SUPPLY FOR ECM
146	P	P	SENSOR POWER SUPPLY

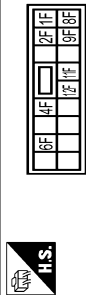
147	B	Y	ECM GROUND
148	B	Y	SENSOR GROUND
149	B	Y	ECM GROUND
150	B	Y	ECM GROUND
151	B	Y	ECM GROUND
152	B	Y	ECM GROUND

Connector No.	E38
Connector Name	AMP ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type	AE222FB-AJ2F-LH



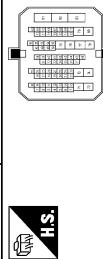
Terminal No.	Color	Wire	Signal Name [Specification]
1	R	R	VALVE BATTERY
2	Y	Y	RR LH WHEEL SENSOR SIGNAL
3	L	L	RR LH WHEEL SENSOR POWER SUPPLY
4	G	G	G SENSOR POWER SUPPLY
5	B	B	FR RH WHEEL SENSOR SIGNAL
6	W	W	FR RH WHEEL SENSOR POWER SUPPLY
7	V	V	FR RH WHEEL SENSOR SIGNAL
8	LG	LG	FR LH WHEEL SENSOR SIGNAL
9	L	L	FR LH WHEEL SENSOR POWER SUPPLY
10	B	B	G SENSOR GND
11	V	V	RR RH WHEEL SENSOR POWER SUPPLY
12	P	P	RR RH WHEEL SENSCE SIGNAL
13	B	B	GROUND
14	G	G	MOTOR BATTERY
15	SB	SB	STOP LAMP SWITCH SIGNAL
16	Y	Y	G SENSOR SIGNAL (+)
17	GR	GR	IGN
18	P	P	CAN-L
19	BR	BR	VDC OFF SWITCH SIGNAL
20	BR	BR	CAN-H
21	BR	BR	G SENSOR SIGNAL (+)
22	BR	BR	GROUND
23	BR	BR	GROUND
24	BR	BR	GROUND
25	BR	BR	GROUND
26	BR	BR	GROUND

Connector No.	E100
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FW-CS



Terminal No.	Color	Wire	Signal Name [Specification]
1	Y	Y	Signal Name [Specification]
2	Y	Y	Signal Name [Specification]
3	Y	Y	Signal Name [Specification]
4	Y	Y	Signal Name [Specification]
5	Y	Y	Signal Name [Specification]
6	Y	Y	Signal Name [Specification]
7	Y	Y	Signal Name [Specification]
8	Y	Y	Signal Name [Specification]
9	Y	Y	Signal Name [Specification]
10	Y	Y	Signal Name [Specification]
11	Y	Y	Signal Name [Specification]
12	Y	Y	Signal Name [Specification]
13	Y	Y	Signal Name [Specification]
14	Y	Y	Signal Name [Specification]
15	Y	Y	Signal Name [Specification]
16	Y	Y	Signal Name [Specification]
17	Y	Y	Signal Name [Specification]
18	Y	Y	Signal Name [Specification]
19	Y	Y	Signal Name [Specification]
20	Y	Y	Signal Name [Specification]
21	Y	Y	Signal Name [Specification]
22	Y	Y	Signal Name [Specification]
23	Y	Y	Signal Name [Specification]
24	Y	Y	Signal Name [Specification]
25	Y	Y	Signal Name [Specification]
26	Y	Y	Signal Name [Specification]
27	Y	Y	Signal Name [Specification]
28	Y	Y	Signal Name [Specification]
29	Y	Y	Signal Name [Specification]
30	Y	Y	Signal Name [Specification]
31	Y	Y	Signal Name [Specification]
32	Y	Y	Signal Name [Specification]
33	Y	Y	Signal Name [Specification]
34	Y	Y	Signal Name [Specification]
35	Y	Y	Signal Name [Specification]
36	Y	Y	Signal Name [Specification]
37	Y	Y	Signal Name [Specification]
38	Y	Y	Signal Name [Specification]
39	Y	Y	Signal Name [Specification]
40	Y	Y	Signal Name [Specification]
41	Y	Y	Signal Name [Specification]
42	Y	Y	Signal Name [Specification]
43	Y	Y	Signal Name [Specification]
44	Y	Y	Signal Name [Specification]
45	Y	Y	Signal Name [Specification]
46	Y	Y	Signal Name [Specification]
47	Y	Y	Signal Name [Specification]
48	Y	Y	Signal Name [Specification]
49	Y	Y	Signal Name [Specification]
50	Y	Y	Signal Name [Specification]
51	Y	Y	Signal Name [Specification]
52	Y	Y	Signal Name [Specification]
53	Y	Y	Signal Name [Specification]
54	Y	Y	Signal Name [Specification]
55	Y	Y	Signal Name [Specification]
56	Y	Y	Signal Name [Specification]
57	Y	Y	Signal Name [Specification]
58	Y	Y	Signal Name [Specification]
59	Y	Y	Signal Name [Specification]
60	Y	Y	Signal Name [Specification]
61	Y	Y	Signal Name [Specification]
62	Y	Y	Signal Name [Specification]
63	Y	Y	Signal Name [Specification]
64	Y	Y	Signal Name [Specification]
65	Y	Y	Signal Name [Specification]
66	Y	Y	Signal Name [Specification]
67	Y	Y	Signal Name [Specification]
68	Y	Y	Signal Name [Specification]
69	Y	Y	Signal Name [Specification]
70	Y	Y	Signal Name [Specification]
71	Y	Y	Signal Name [Specification]
72	Y	Y	Signal Name [Specification]
73	Y	Y	Signal Name [Specification]
74	Y	Y	Signal Name [Specification]
75	Y	Y	Signal Name [Specification]
76	Y	Y	Signal Name [Specification]
77	Y	Y	Signal Name [Specification]
78	Y	Y	Signal Name [Specification]
79	Y	Y	Signal Name [Specification]
80	Y	Y	Signal Name [Specification]
81	Y	Y	Signal Name [Specification]
82	Y	Y	Signal Name [Specification]
83	Y	Y	Signal Name [Specification]

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH70MM-CS10-M3



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

SECURITY CONTROL SYSTEM

< WIRING DIAGRAM >

[WITH INTELLIGENT KEY SYSTEM]

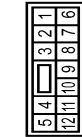
SECURITY CONTROL SYSTEM

Connector No.	E115
Connector Name	STOP LAMP SWITCH
Connector Type	M04FW-LC



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

Connector No.	E339
Connector Name	WIRE TO WIRE
Connector Type	NS12PER-CS



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

Connector No.	E341
Connector Name	HORN (HGH)
Connector Type	P01FB-A



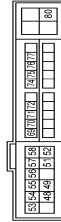
Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-

Connector No.	E343
Connector Name	HORN (LOW)
Connector Type	P01FB-A



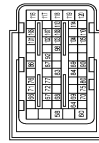
Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-

Connector No.	F12
Connector Name	INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM
Connector Type	TH20FW-CS12-M4



Terminal No.	Color Of Wire	Signal Name [Specification]
48	W	-
49	R/B	-
51	LG	-
52	Y/G	-
53	R/W	-
54	G/W	-
55	W/L	-
56	R/Y	-
57	O	-
58	Y	-
59	W/B	-
70	O	-
71	R/B	-
72	R	-
74	LG	-
75	LG	-
76	GR	-
77	B	-
80	B	-

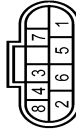
Connector No.	F15
Connector Name	ECM
Connector Type	MA55SPB-MEB10-LH



Terminal No.	Color Of Wire	Signal Name [Specification]
58	P/B	E-CVTC#1
60	W	E-CVTC#2
64	G/B	SENSOR GROUND
66	L	A/F SENSOR 1 (BANK 1)
67	P	A/F SENSOR 1 (BANK 1)
68	P	BATTERY TEMPERATURE SENSOR
69	GR	BATTERY CURRENT SENSOR
70	GR	SHIELD
71	W	THROTTLE POSITION SENSOR 1
72	R	THROTTLE POSITION SENSOR 2
75	B	SENSOR GROUND
76	LG	A/F SENSOR 1 (BANK 2)
77	V	A/F SENSOR 1 (BANK 2)

Terminal No.	Color Of Wire	Signal Name [Specification]
80	GR	SHIELD
81	W	IGNITION SIGNAL
82	W/R	CAMSHAFT POSITION SENSOR (BANK 1)
86	W/B	ECM RELAY (SELF SHUT-OFF)
87	R/Y	SENSOR POWER SUPPLY
89	BR/W	CAMSHAFT POSITION SENSOR (BANK 2)
90	B/R	SENSOR GROUND
92	G/W	SENSOR POWER SUPPLY
98	G	SENSOR POWER SUPPLY
101	P	STARTER MOTOR RELAY CUT OFF SIGNAL
102	GR/B	VIA CONTROL SOLENOID VALVE 2
103	L/B	IGNITION SIGNAL No. 3
104	GR/R	IGNITION SIGNAL No. 8
105	B	ECM GROUND
106	G/R	IGNITION SIGNAL No. 2
107	P	ECM GROUND
108	Y	VIA CONTROL SOLENOID VALVE 1
109	Y	ECM GROUND
113	Y/R	IGNITION SIGNAL No. 1
114	W	IGNITION SIGNAL No. 4
116	W/L	POWER SUPPLY FOR ECM (BACK-UP)
117	R	INTAKE VALVE TIMING CONTROL SOLENOID VALVE (BANK 1)
118	V	INTAKE VALVE TIMING CONTROL SOLENOID VALVE (BANK 1)
119	Y	INTAKE VALVE TIMING CONTROL SOLENOID VALVE (BANK 2)
120	BR	INTAKE VALVE TIMING CONTROL SOLENOID VALVE (BANK 2)

Connector No.	F17
Connector Name	TRANSMISSION RANGE SWITCH
Connector Type	YD06GB-HS4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	-
2	R/B	-
3	BR/W	-
5	P/B	-
6	P/L	-
7	G/O	-
8	GR	-

JRKWE1577GB

SECURITY CONTROL SYSTEM

< WIRING DIAGRAM >

[WITH INTELLIGENT KEY SYSTEM]

SECURITY CONTROL SYSTEM

Connector No.	F23
Connector Name	TCM
Connector Type	RH40FB-R28-L-RH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	L RANGE SW
2	GO	D RANGE SW
3	P/L	N RANGE SW
4	P/B	R RANGE SW
5	BR/W	P RANGE SW
6	W/R	SENSOR GROUND
7	V	CVT FLUID TEMPERATURE SENSOR
8	W	G SENSOR
9	V/W	SECONDARY PRESSURE SENSOR
10	LG	PRIMARY PRESSURE SENSOR
11	P	CAN-L
12	BR	INPUT SPEED SENSOR
13	L/O	SENSOR POWER
14	R/Y	LINE PRESSURE SOLENOID VALVE
15	LG/R	OUTPUT SPEED SENSOR
16	LG	PRIMARY SPEED SENSOR
17	L/W	SELECT SOLENOID VALVE
18	V/R	TORQUE CONVERTER CLUTCH SOLENOID VALVE
19	W/B	SECONDARY PRESSURE SOLENOID VALVE
20	B/R	PRIMARY PRESSURE SOLENOID VALVE
21	B	GROUND
22	B	GROUND
23	LG	BATTERY POWER SUPPLY
24	LG	BATTERY POWER SUPPLY
25	Y	IGNITION POWER SUPPLY
26	Y	IGNITION POWER SUPPLY

Connector No.	F21
Connector Name	WIRE TO WIRE
Connector Type	NS10FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R/Y	-
2	W/L	-
3	R/W	-
4	B	-
5	B	-
6	B	-
7	B	-
8	B	-
9	B	-
10	B	-

Connector No.	F23
Connector Name	WIRE TO WIRE
Connector Type	TK16FY-IV



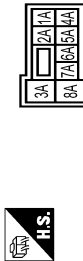
Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	W	-
3	G/R	-
4	P/B	-
5	R/B	-
6	L/R	-
7	P	-
8	P	-
9	W/R	-
10	Y/B	-
11	BR/W	-
12	BR	-

Terminal No.	13
Color Of Wire	G
Signal Name [Specification]	-
Terminal No.	14
Color Of Wire	B
Signal Name [Specification]	-
Terminal No.	15
Color Of Wire	L/O
Signal Name [Specification]	-
Terminal No.	16
Color Of Wire	R
Signal Name [Specification]	-



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	-
2	GR	-
3	GR	-
4	GR	-
5	L	-
6	L	-
7	R	-
8	G	-
9	SB	-
10	P	-
11	P	-
12	P	-
13	P	-
14	P	-
15	P	-
16	P	-

Connector No.	M6
Connector Name	FUSE BLOCK (J/B)
Connector Type	CS50FW-MZ



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

Terminal No.	6A
Color Of Wire	R
Signal Name [Specification]	-
Terminal No.	7A
Color Of Wire	GR
Signal Name [Specification]	-
Terminal No.	8A
Color Of Wire	L
Signal Name [Specification]	-

Connector No.	M7
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS10FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	-
2	W	-
3	W	-
4	BR	-
5	O	-
6	R/L	-
7	GR	-
8	GR	-
9	GR	-

Connector No.	M8
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FW-CS



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

SECURITY CONTROL SYSTEM

< WIRING DIAGRAM >

[WITH INTELLIGENT KEY SYSTEM]

SECURITY CONTROL SYSTEM

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS10-M3



Terminal No.	Color Of Wire	Signal Name [Specification]
1	SHIELD	-
2	W	-
3	B	-
4	R	-
6	G	-
7	R	-
8	G	-
9	B	-
10	R	-
11	W	-
12	L	-
13	G	-
14	L	-
15	P	-
16	P	-
17	P	-
18	R	-
19	LG	-
20	W	-
21	W	-
22	W	-
23	W	-
24	W	-
25	W	-
26	W	-
27	W	-
28	W	-
29	W	-
30	W	-
31	W	-
32	W	-
33	W	-
34	W	-
35	W	-
36	W	-
37	W	-
38	W	-
39	W	-
40	W	-
41	W	-
42	W	-
43	W	-
44	W	-
45	W	-
46	W	-
47	W	-
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50	W	-
51	W	-
52	W	-
53	W	-
54	W	-
55	W	-

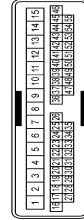
Connector No.	M18
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS15



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	-
2	R	-
3	W	-
4	Y	-
5	SB	-
6	LG	-
7	Y	-
8	Y	-
9	GR	-
10	X	-
11	V	-
12	G	-
13	G	-
14	B	-

Terminal No.	Color Of Wire	Signal Name [Specification]
14	R	- [With BOSE system]
15	Y	- [With BOSE system]
16	W	- [Without BOSE system]
17	BE	-
18	P	-
19	W	-
20	LG	-
21	P	-
22	G	-
23	R	-
24	B	-
25	W	-
26	SHIELD	-
27	Y	-
28	W	-
29	W	-
30	W	-
31	W	-
32	G	-
33	BE	-
34	P	-
35	W	-
36	LG	-
37	W	-
38	P	-
39	V	-
40	R	-
41	B	-
42	W	-
43	G	-
44	B	-
45	B	-
46	R	-
47	GR	-
48	GR	-
49	P	-
50	GR	-
51	W	-
52	GR	-
53	SHIELD	-
54	W	-
55	B	-

Connector No.	M20
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS15



Terminal No.	Color Of Wire	Signal Name [Specification]
7	B	-
8	Y	- [With manual A/C]
9	GR	- [With auto A/C]
10	V	- [With manual A/C]
11	SB	-
12	V	-
14	L	-
15	B	- [Without BOSE system]
16	LG	- [With BOSE system]
17	P	-
18	R	-
19	LG	-
20	B	-
21	B	-
22	B	-
23	W	-
24	SHIELD	-
25	B	-
26	W	-
36	LG	-
37	W	-
38	P	-
39	Y	-
40	B	-
41	GR	-
42	BE	-
43	R	-
44	Y	-
45	GR	-
50	W	-
51	B	-
52	GR	-
53	SHIELD	-
54	W	-

JRKWE1579GB

SECURITY CONTROL SYSTEM

< WIRING DIAGRAM >

[WITH INTELLIGENT KEY SYSTEM]

SECURITY CONTROL SYSTEM

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



Connector No.	Signal Name [Specification]
M22	WIRE TO WIRE
Connector Name	TH16FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	W	-
3	G	-
4	P	-
6	R	-
7	BE	-
8	Y	-
9	P	-
10	R	-
11	GR	-
12	GR	-
13	B	-
14	B	-
15	SHIELD	-
16	W	-

Connector No.	Signal Name [Specification]
M26	NATS ANTENNA AMP.
Connector Name	TH16FW-NH



1	2	3	4
---	---	---	---

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



Connector No.	Signal Name [Specification]
M28	WIRE TO WIRE
Connector Name	NS16FY-CS



7	6	5	4		3	2	1	
16	15	14	13	12	11	10	9	8

Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	G	-
3	BR	-
4	SB	-
5	R	-
6	G	-
7	G	-
8	L	-
9	R	-
10	W	-
11	G	-
12	V	-
14	BE	-
15	W	-
16	Y	-

Connector No.	Signal Name [Specification]
M34	COMBINATION METER
Connector Name	TH16FW-NH



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	BATTERY POWER SUPPLY (With automatic drive position)
2	G	IGNITION SIGNAL (Without automatic drive position)
3	Y	IGNITION SIGNAL (With automatic drive position)
4	B	GROUND
5	B	ILLUMINATION CONTROL SIGNAL (Without automatic drive position)
6	B/P	ILLUMINATION CONTROL SIGNAL (With automatic drive position)
7	G	TRIP RESET SWITCH SIGNAL (Without automatic drive position)
8	SB	TRIP RESET SWITCH SIGNAL (With automatic drive position)
9	P	METER CONTROL SWITCH GROUND
10	P	METER CONTROL SWITCH SIGNAL
11	G	ENTER SWITCH SIGNAL
12	BR	SELECT SWITCH SIGNAL (With automatic drive position)
13	R	SELECT SWITCH SIGNAL (Without automatic drive position)
14	G	ILLUMINATION CONTROL SIGNAL (Without automatic drive position)
15	G	ILLUMINATION CONTROL SIGNAL (With automatic drive position)
16	V	AIR BAG SIGNAL
17	BR	ENGINE COOLANT TEMPERATURE SIGNAL
18	L	AMBIENT SENSOR SIGNAL (Without automatic drive position)
19	LG	AMBIENT SENSOR SIGNAL (With automatic drive position)
20	R	A/C AUTO AMP. CONNECTION RECOGNITION SIGNAL
21	G	AMBIENT SENSOR GROUND (Without automatic drive position)
22	Y	AMBIENT SENSOR GROUND (With automatic drive position)
23	L	CAN-H
24	P	CAN-L
25	B	GROUND
26	BR	FUEL LEVEL SENSOR GROUND
27	W	ALTERNATOR SIGNAL (Without automatic drive position)
28	W	ALTERNATOR SIGNAL (With automatic drive position)
29	BE	PARKING BRAKE SWITCH SIGNAL
30	Y	BRAKE FLUID LEVEL SWITCH SIGNAL (Without automatic drive position)
31	Y	BRAKE FLUID LEVEL SWITCH SIGNAL (With automatic drive position)
32	V	SECURITY SIGNAL
33	G	WASHER LEVEL SWITCH SIGNAL



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
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Terminal No.	Color Of Wire	Signal Name [Specification]
31	SB	VEHICLE SPEED SIGNAL (9-PULSE)
32	P	OVERDRIVE CONTROL SWITCH SIGNAL
34	O	FUEL LEVEL SENSOR SIGNAL
35	BR	SEAT BELT SENSOR (Without automatic drive position)
35	P	SEAT BELT SENSOR (With automatic drive position)
36	BR	PASSENGER SEAT BELT WARNING SIGNAL



Connector No.	Signal Name [Specification]
M37	CVT SHIFT SELECTOR
Connector Name	TH12FW-NH



6	4	1	9	8	7
---	---	---	---	---	---

Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	-
4	B	-
6	W	-
7	B	-
8	BE	-
9	G	-

Connector No.	Signal Name [Specification]
M77	WIRE TO WIRE
Connector Name	TH16FW-CS19



Terminal No.	Color Of Wire	Signal Name [Specification]
10	P	-
12	BE	-
13	W	-
15	R	-
29	W	-
30	P	-

JRKWE1580GB

SECURITY CONTROL SYSTEM

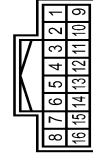
< WIRING DIAGRAM >

[WITH INTELLIGENT KEY SYSTEM]

SECURITY CONTROL SYSTEM

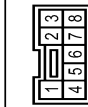
31	BE	-
32	SHIELD	-
33	W	- [Without sound view monitor] - [With sound view monitor]
34	B	- [Without sound view monitor] - [With sound view monitor]
35	W	-
36	R	-
37	L	-
38	B	-
39	BE	-
40	P	-
41	L	-
42	Y	-
43	L	-
44	BE	-
45	G	-
46	L	-
47	SB	-
48	BE	-
49	R	-
50	G	-
51	SHIELD	-
52	B	-
53	W	-
54	SHIELD	-
55	W	-
56	G	-
57	GR	-
58	W	-
59	G	-
60	GR	-
61	W	-
62	GR	-
63	W	-
64	R	-
65	G	-
66	SHIELD	-
67	B	-
68	W	-
69	SHIELD	-
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71	W	-
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74	W	-
75	G	-
76	W	-
77	R	-
78	W	-
79	W	-
80	G	-
81	L	-
82	W	-
83	V	-
84	LG	-
85	GR	-
86	R	-
87	Y	- [With automatic drive positioner] - [Without automatic drive positioner]
88	LG	-
89	BR	-

Connector No.	M79
Connector Name	WIRE TO WIRE
Connector Type	TH16FW-NH



Terminal No.	Color	Wire	Signal Name [Specification]
1	GR	-	-
2	GR	-	-
3	GR	-	-
4	GR	-	-
5	BR	-	-
6	BR	-	-
7	BR	-	-
8	BR	-	-
9	L	-	-
10	P	-	-
11	W	-	-
12	R	-	-
13	BE	-	-
14	W	-	-
15	G	-	-
16	P	-	-

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



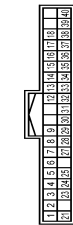
Terminal No.	Color	Wire	Signal Name [Specification]
1	B	-	-
2	B	-	-
3	P	-	-
4	V	-	-
5	W	-	-
6	R	-	-
7	G	-	-
8	W	-	-

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



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

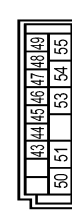
Connector No.	M121
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



Terminal No.	Color	Wire	Signal Name [Specification]
1	W	-	REAR WINDOW DEF RELAY CONT
2	R	-	COMBI SW INPUT 5
3	G	-	COMBI SW INPUT 4
4	BE	-	COMBI SW INPUT 3
5	G	-	COMBI SW INPUT 2
6	W	-	COMBI SW INPUT 1
7	W	-	KEY CYL UNLOCK SW
8	GR	-	PW SW COMM (With auto A/C)
9	Y	-	KEY CYL LOCK SW (With manual A/C)
10	GR	-	STOP LAMP SW 1
11	GR	-	DOOR LK & UNLK SW LOCK
12	GR	-	DOOR LK & UNLK SW UNLOCK
13	Y	-	OPTICAL SENS LOCK
14	W	-	REAR WINDOW DEF SW
15	Y	-	DIMMER
16	Y	-	SENS PWR SPLY
17	O	-	RECEIV/SENS GND
18	R	-	NATS ANT AMP
19	GR	-	-

23	W	SECURITY IND CONT
24	B	SECURITY IND CONT
25	B	MASS ANT AMP
26	O	A/C ON
27	O	A/C ON
28	BR	BLOWER FAN ON
29	P	HAZARD SW
30	L	BK DOOR OPNR SW
31	G	DR DOOR UNLK SENS
32	R	COMBI SW OUTPUT 5
33	W	COMBI SW OUTPUT 4
34	P	COMBI SW OUTPUT 3
35	GR	COMBI SW OUTPUT 2
36	R	COMBI SW OUTPUT 1
37	G	DETENT SW
38	BE	RECEIVER COMM
39	BE	RECEIVER COMM
40	P	GATE

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FEA09FB-FH46-SA



Terminal No.	Color	Wire	Signal Name [Specification]
43	P	-	BK DOOR SW
44	GR	-	REAR WIPER STOP POSITION
45	W	-	PASS DOOR SW
46	R	-	SL DOOR RH SW
47	G	-	DR DOOR LH SW
48	BE	-	SL DOOR LH SW
49	B	-	LUGGAGE LAMP CONT
50	V	-	SELECT UNLK RELAY CONT
51	G	-	BACK DOOR REG SW
52	BR	-	BK DOOR OPEN
53	GR	-	REAR DOOR UNLK CONT
54	R	-	SL DOOR LH UNLK CONT

JRKWE1581GB

SECURITY CONTROL SYSTEM

< WIRING DIAGRAM >

[WITH INTELLIGENT KEY SYSTEM]

SECURITY CONTROL SYSTEM

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FEA09FW-FH4G-SA



56	57	58	59	60	61	62	63	64
65	66	67	68	69	70			

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[WITH INTELLIGENT KEY SYSTEM]

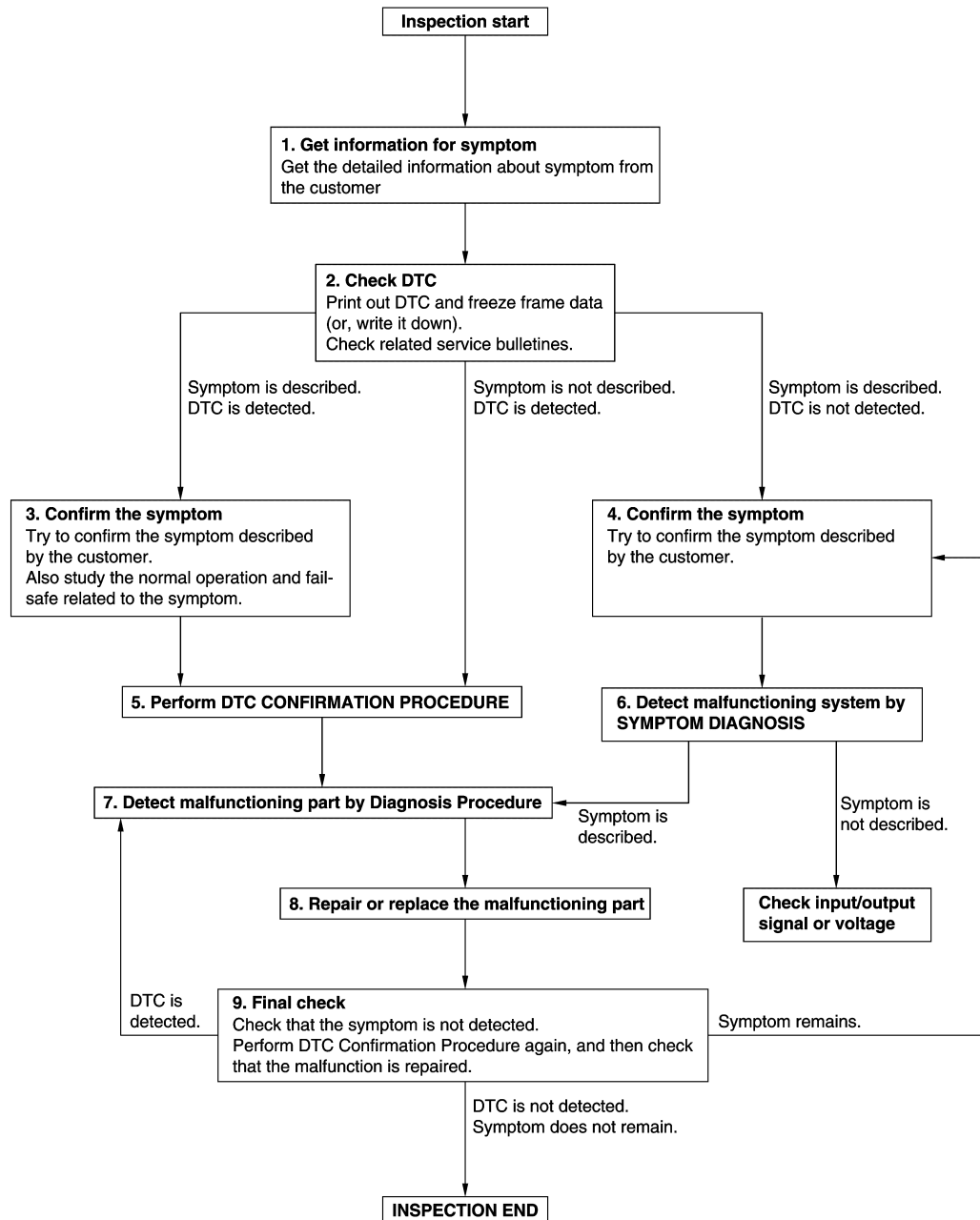
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000011323362

OVERALL SEQUENCE



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DETAILED FLOW

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[WITH INTELLIGENT KEY SYSTEM]

1.GET INFORMATION FOR SYMPTOM

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

>> GO TO 2.

2.CHECK DTC

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

Are any symptoms described and any DTC detected?

Symptom is described, DTC is detected>>GO TO 3.

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

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

3.CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.

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

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

>> GO TO 5.

4.CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.

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

>> GO TO 6.

5.PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC CONFIRMATION PROCEDURE for the detected DTC, and then check that DTC is detected again. At this time, always connect CONSULT to the vehicle, and check self diagnostic results in real time.

If two or more DTCs are detected, refer to [BCS-62, "DTC Inspection Priority Chart"](#) (BCM), and determine trouble diagnosis order.

NOTE:

- Freeze frame data is useful if the DTC is not detected.
- Perform Component Function Check if DTC CONFIRMATION PROCEDURE is not included on Service Manual. This simplified check procedure is an effective alternative though DTC cannot be detected during this check.
If the result of Component Function Check is NG, it is the same as the detection of DTC by DTC CONFIRMATION PROCEDURE.

Is DTC detected?

YES >> GO TO 7.

NO >> Check according to [GI-42, "Intermittent Incident"](#).

6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM DIAGNOSIS

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

Is the symptom described?

YES >> GO TO 7.

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

7.DETECT MALFUNCTIONING PART BY DIAGNOSIS PROCEDURE

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[WITH INTELLIGENT KEY SYSTEM]

Inspect according to Diagnosis Procedure of the system.

Is malfunctioning part detected?

YES >> GO TO 8.

NO >> Check according to [GI-42. "Intermittent Incident"](#).

8. REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 9.

9. FINAL CHECK

When DTC is detected in step 2, perform DTC CONFIRMATION PROCEDURE again, and then check that the malfunction is repaired securely.

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

Is DTC detected and does symptom remain?

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

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

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

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ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

< BASIC INSPECTION >

[WITH INTELLIGENT KEY SYSTEM]

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ECM

ECM : Description

INFOID:0000000011323363

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

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

(In this step, initialization procedure using CONSULT is not necessary)

NOTE:

- When registering new Key IDs or replacing the ECM that is not brand new, the initialization of BCM using CONSULT is necessary.
- If multiple keys are attached to the key holder, separate them before beginning work.
- Distinguish keys with unregistered key IDs from those with registered IDs.

ECM : Work Procedure

INFOID:0000000011323364

1.PERFORM ECM RECOMMUNICATING FUNCTION

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

>> GO TO 2.

2.PERFORM ADDITIONAL SERVICE WHEN REPLACING ECM

Perform [EC-142. "Work Procedure"](#).

>> END

BCM

BCM : Description

INFOID:0000000011323365

BEFORE REPLACEMENT

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

NOTE:

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

AFTER REPLACEMENT

CAUTION:

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

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

NOTE:

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

BCM : Work Procedure

INFOID:0000000011323366

1.SAVING VEHICLE SPECIFICATION

 CONSULT Configuration

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

< BASIC INSPECTION >

[WITH INTELLIGENT KEY SYSTEM]

Perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to [BCS-84, "CONFIGURATION \(BCM\) : Description"](#).

NOTE:

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

>> GO TO 2.

2. REPLACE BCM

Replace BCM. Refer to [BCS-98, "Removal and Installation"](#).

>> GO TO 3.

3. WRITING VEHICLE SPECIFICATION

CONSULT Configuration

Perform "WRITE CONFIGURATION - Config file" or "WRITE CONFIGURATION - Manual selection" to write vehicle specification. Refer to [BCS-84, "CONFIGURATION \(BCM\) : Work Procedure"](#).

>> GO TO 4.

4. INITIALIZE BCM (NATS) (IF EQUIPPED)

Perform BCM initialization. (NATS)

>> WORK END

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SEC

DTC/CIRCUIT DIAGNOSIS

P1610 LOCK MODE

Description

INFOID:0000000011323367

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

DTC Logic

INFOID:0000000011323368

DTC DETECTION LOGIC

NOTE:

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

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000011323369

1.CHECK ENGINE START FUNCTION

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

>> INSPECTION END

P1611 ID DISCORD, IMMU-ECM

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

P1611 ID DISCORD, IMMU-ECM

DTC Logic

INFOID:0000000011323370

DTC DETECTION LOGIC

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

- YES >> Go to [SEC-59, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011323371

1.PERFORM INITIALIZATION

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

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

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

2.CHECK SELF DIAGNOSTIC RESULT

1. Select "Self Diagnostic Result" mode of "ENGINE" using CONSULT.
2. Erase DTC.
3. Perform DTC CONFIRMATION PROCEDURE for DTC P1611. Refer to [SEC-59, "DTC Logic"](#).

Is DTC detected?

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

3.REPLACE BCM

1. Replace BCM. Refer to [BCS-98, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

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

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

4.REPLACE ECM

Replace ECM.
Refer to [EC-512, "Removal and Installation"](#).

>> INSPECTION END

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SEC

P1612 CHAIN OF ECM-IMMU

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

P1612 CHAIN OF ECM-IMMU

DTC Logic

INFOID:00000001132372

DTC DETECTION LOGIC

NOTE:

- If DTC P1612 is displayed with DTC U1000 (for BCM), first perform the trouble diagnosis for DTC U1000. Refer to [BCS-87, "DTC Logic"](#).
- If DTC P1612 is displayed with DTC U1010 (for BCM), first perform the trouble diagnosis for DTC U1010. Refer to [BCS-88, "DTC Logic"](#).

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

- YES >> Go to [SEC-60, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:00000001132373

1.REPLACE BCM

1. Replace BCM. Refer to [BCS-98, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

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

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

2.REPLACE ECM

Replace ECM.
Refer to [EC-512, "Removal and Installation"](#).

>> INSPECTION END

B2192 ID DISCORD, IMMU-ECM

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B2192 ID DISCORD, IMMU-ECM

DTC Logic

INFOID:0000000011323374

DTC DETECTION LOGIC

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to [SEC-61, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011323375

1.PERFORM INITIALIZATION

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

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

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

2.CHECK SELF DIAGNOSTIC RESULT

1. Select "Self Diagnostic Result" mode of "BCM" using CONSULT.
2. Erase DTC.
3. Perform DTC CONFIRMATION PROCEDURE for DTC B2192. Refer to [SEC-61, "DTC Logic"](#).

Is DTC detected?

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

3.REPLACE BCM

1. Replace BCM. Refer to [BCS-98, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

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

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

4.REPLACE ECM

Replace ECM.
Refer to [EC-512, "Removal and Installation"](#).

>> INSPECTION END

B2193 CHAIN OF ECM-IMMU

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B2193 CHAIN OF ECM-IMMU

DTC Logic

INFOID:0000000011323376

DTC DETECTION LOGIC

NOTE:

- If DTC B2193 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-87, "DTC Logic"](#).
- If DTC B2193 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-88, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2193	CHAIN OF BCM-ECM	Inactive communication between BCM and ECM	• Harness or connectors (The CAN communication line is open or shorted.) • BCM • ECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

- YES >> Go to [SEC-62, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011323377

1.REPLACE BCM

1. Replace BCM. Refer to [BCS-98, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

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

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

2.REPLACE ECM

Replace ECM.

Refer to [EC-512, "Removal and Installation"](#).

>> INSPECTION END

B2195 ANTI-SCANNING

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B2195 ANTI-SCANNING

DTC Logic

INFOID:0000000011323378

DTC DETECTION LOGIC

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000011323379

1.CHECK SELF DIAGNOSTIC RESULT 1

1. Select "Self Diagnostic Result" mode of "BCM" using CONSULT.
2. Erase DTC.
3. Perform DTC CONFIRMATION PROCEDURE for DTC B2195. Refer to [SEC-63, "DTC Logic"](#).

Is DTC detected?

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

2.CHECK EQUIPMENT OF THE VEHICLE

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

Is unspecified accessory part related to engine start installed?

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

3.CHECK SELF DIAGNOSTIC RESULT 2

1. Obtain the customers approval to remove unspecified accessory part related to engine start, and then remove it.
2. Select "Self Diagnostic Result" of "BCM" using CONSULT.
3. Erase DTC.
4. Perform DTC CONFIRMATION PROCEDURE for DTC B2195. Refer to [SEC-63, "DTC Logic"](#).

Is DTC detected?

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

4.REPLACE BCM

1. Replace BCM. Refer to [BCS-98, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

B2196 DONGLE UNIT

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B2196 DONGLE UNIT

Description

INFOID:0000000011323380

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

DTC Logic

INFOID:0000000011323381

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2196	DONGLE NG	The ID verification results between BCM and dongle unit is NG.	• Harness or connectors (Dongle unit circuit is open or shorted.) • Dongle unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is the DTC detected?

YES >> Refer to [SEC-64. "Diagnosis Procedure"](#).

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011323382

1.PERFORM INITIALIZATION

1. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.
2. Start the engine.

Does the engine start?

YES >> INSPECTION END

NO >> GO TO 2.

2.CHECK DONGLE UNIT CIRCUIT

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

BCM		Dongle unit		Continuity
Connector	Terminal	Connector	Terminal	
M121	24	M130	7	Existed

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M121	24		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK DONGLE UNIT GROUND CIRCUIT

Check continuity between dongle unit harness connector and ground.

B2196 DONGLE UNIT

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Dongle unit		Ground	Continuity
Connector	Terminal		
M130	1		Existed

Is the inspection result normal?

YES >> Replace dongle unit.

NO >> Repair or replace harness.

A

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B2198 NATS ANTENNA AMP.

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B2198 NATS ANTENNA AMP.

DTC Logic

INFOID:0000000011323383

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2198	NATS ANTENNA AMP	Inactive communication between NATS antenna amp. and BCM is detected when BCM enters in the low power consumption mode (BCM sleep condition)	• Harness or connectors (NATS antenna amp. circuit is open or shorted.) • NATS antenna amp. • IPDM E/R • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000011323384

1.CHECK FUSE

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

Signal name	Fuse No.
Battery power supply	50 (15 A)

Is the inspection result normal?

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

2.CHECK NATS ANTENNA AMP. POWER SUPPLY

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

(+)		(-)	Voltage (V)
NATS antenna amp.			
Connector	Terminal		
M26	1	Ground	6 - 16

Is the inspection result normal?

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

3.CHECK NATS ANTENNA AMP. POWER SUPPLY CIRCUIT

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

IPDM E/R		NATS antenna amp.		Continuity
Connector	Terminal	Connector	Terminal	
F12	55	M26	1	Existed

B2198 NATS ANTENNA AMP.

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-36, "Removal and Installation"](#).

NO >> Repair or replace harness.

4. CHECK NATS ANTENNA AMP. GROUND CIRCUIT

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

NATS antenna amp.		Ground	Continuity
Connector	Terminal		
M26	4		Existed

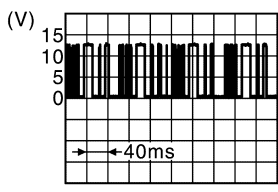
Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

5. CHECK NATS ANTENNA AMP. COMMUNICATION SIGNAL 1

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

(+) NATS antenna amp.		(-)	Condition		Voltage (V)
Connector	Terminal				
M26	2	Ground	Intelligent Key: Intelligent Key battery is removed	Brake pedal: Depressed NOTE: Waveform varies each time when brake pedal is depressed	
				Brake pedal: Released	9 - 16

Is the inspection result normal?

YES >> GO TO 7.

NO >> GO TO 6.

6. CHECK NATS ANTENNA AMP. OUTPUT SIGNAL CIRCUIT 1

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

NATS antenna amp.		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M26	2	M121	21	Existed

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

NATS antenna amp.		Ground	Continuity
Connector	Terminal		
M26	2		Not existed

Is the inspection result normal?

YES >> GO TO 9.

NO >> Repair or replace harness.

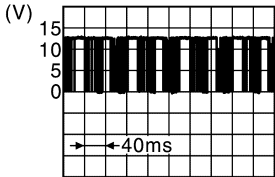
7. CHECK NATS ANTENNA AMP. COMMUNICATION SIGNAL 2

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

B2198 NATS ANTENNA AMP.

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

(+) NATS antenna amp.		(-)	Condition		Voltage (V)
Connector	Terminal				
M26	3	Ground	Intelligent Key: Intelligent Key battery is removed	Brake pedal: Depressed NOTE: Waveform varies each time when brake pedal is depressed	
				Brake pedal: Released	9 - 16

Is the inspection result normal?

YES >> Replace NATS antenna amp. Refer to [SEC-129, "Removal and Installation"](#).

NO >> GO TO 8.

8. CHECK NATS ANTENNA AMP. OUTPUT SIGNAL CIRCUIT 2

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

NATS antenna amp.		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M26	3	M121	25	Existed

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

NATS antenna amp.		Ground	Continuity
Connector	Terminal		
M26	3		Not existed

Is the inspection result normal?

YES >> GO TO 9.

NO >> Repair or replace harness.

9. REPLACE BCM

1. Replace BCM. Refer to [BCS-98, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

B2555 STOP LAMP

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B2555 STOP LAMP

DTC Logic

INFOID:0000000011323385

DTC DETECTION LOGIC

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to [SEC-69, "Diagnosis Procedure"](#).

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011323386

1.CHECK STOP LAMP SWITCH INPUT SIGNAL 1

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

(+)		(-)	Voltage (V) (Approx.)
BCM			
Connector	Terminal		
M124	105	Ground	9 - 16

Is the inspection normal?

YES >> GO TO 2.

NO-1 >> Check 10 A fuse [No. 7, located in the fuse block (J/B)].

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

2.CHECK STOP LAMP SWITCH INPUT SIGNAL 2

Check voltage between BCM harness connector and ground.

(+)		(-)	Condition		Voltage (V) (Approx.)
BCM					
Connector	Terminal				
M121	9	Ground	Brake pedal	Depressed	9 - 16
				Not depressed	0

Is the inspecting result normal?

YES >> GO TO 3.

NO >> GO TO 4.

3.REPLACE BCM

1. Replace BCM. Refer to [BCS-98, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

B2555 STOP LAMP

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

>> INSPECTION END

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.

(+)		(−)	Voltage (V) (Approx.)
Stop lamp switch			
Connector	Terminal		
E115	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 RELAY POWER SUPPLY CIRCUIT

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

(+)		(-)	Voltage (V) (Approx.)
Stop lamp relay			
Connector	Terminal		
E15	5	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 6.

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

6. CHECK STOP LAMP SWITCH CIRCUIT

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

Stop lamp switch		Stop lamp relay		Continuity
Connector	Terminal	Connector	Terminal	
E115	2	E15	2	Existed

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

Stop lamp relay		Ground	Continuity
Connector	Terminal		
E15	1		Existed

3. Check continuity between stop lamp relay harness connector and BCM harness connector.

Stop lamp relay		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E15	3	M121	9	Existed

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness.

7. CHECK STOP LAMP SWITCH

Refer to [SEC-71. "Component Inspection \(Stop Lamp Switch\)".](#)

Is the inspection result normal?

YES >> GO TO 8.

NO >> Replace stop lamp switch. Refer to [BR-20. "Removal and Installation".](#)

B2555 STOP LAMP

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

8.CHECK STOP LAMP RELAY

Refer to [SEC-71, "Component Inspection \(Stop Lamp Relay\)"](#).

Is the inspection result normal?

YES >> GO TO 9.

NO >> Replace stop lamp relay.

9.CHECK INTERMITTENT INCIDENT

Refer to [GI-42, "Intermittent Incident"](#).

>> INSPECTION END

Component Inspection (Stop Lamp Switch)

INFOID:0000000011323387

1.CHECK STOP LAMP SWITCH

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

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

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace stop lamp switch. Refer to [BR-20, "Removal and Installation"](#).

Component Inspection (Stop Lamp Relay)

INFOID:0000000011323388

1.CHECK STOP LAMP RELAY

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

Stop lamp relay		Condition	Continuity
Terminal			
3	5	12 V direct current supply between terminals 1 and 2	Existed
		No current supply	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace stop lamp relay.

B2556 PUSH-BUTTON IGNITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B2556 PUSH-BUTTON IGNITION SWITCH

DTC Logic

INFOID:0000000011323389

DTC DETECTION LOGIC

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press push-button ignition switch under the following condition.
 - Brake pedal: Not depressed
2. Release push-button ignition switch and wait 100 seconds or more.
3. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

Is DTC detected?

YES >> Go to [SEC-72, "Diagnosis Procedure"](#).

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011323390

1.CHECK PUSH-BUTTON IGNITION SWITCH INPUT SIGNAL

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

(+)		(-)	Voltage (V) (Approx.)
Push-button ignition switch			
Connector	Terminal		
M101	4	Ground	9 - 16

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

2.CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT

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

Push-button ignition switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M101	4	M124	76	Existed

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

Push-button ignition switch		Ground	Continuity
Connector	Terminal		
M101	4		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

B2556 PUSH-BUTTON IGNITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

3.REPLACE BCM

1. Replace BCM. Refer to [BCS-98, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

4.CHECK PUSH-BUTTON IGNITION SWITCH GROUND CIRCUIT

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

Push-button ignition switch		Ground	Continuity
Connector	Terminal		
M101	1		Existed

Is the inspection result normal?

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

5.CHECK PUSH-BUTTON IGNITION SWITCH

Refer to [SEC-73, "Component Inspection"](#).

Is the inspection result normal?

- YES >> GO TO 6.
NO >> Replace push-button ignition switch. Refer to [SEC-130, "Removal and Installation"](#).

6.CHECK INTERMITTENT INCIDENT

Refer to [GI-42, "Intermittent Incident"](#).

>> INSPECTION END

Component Inspection

INFOID:0000000011323391

1.CHECK PUSH-BUTTON IGNITION SWITCH

1. Turn ignition switch OFF.
2. Disconnect push-button ignition switch connector.
3. Check continuity between push-button ignition switch terminals.

Push-button ignition switch		Condition		Continuity
Terminal				
1	4	Push-button ignition switch	Pressed	Existed
			Not pressed	Not existed

Is the inspection result normal?

- YES >> INSPECTION END
NO >> Replace push-button ignition switch. Refer to [SEC-130, "Removal and Installation"](#).

B2557 VEHICLE SPEED

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B2557 VEHICLE SPEED

DTC Logic

INFOID:0000000011323392

DTC DETECTION LOGIC

NOTE:

- If DTC B2557 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-87, "DTC Logic"](#).
- If DTC B2557 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-88, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible causes
B2557	VEHICLE SPEED	BCM detects one of the following conditions for 10 seconds continuously. • 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. • 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.	• Harness or connectors (The CAN communication line is open or shorted.) • Combination meter • ABS actuator and electric unit (control unit)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

- YES >> Go to [SEC-74, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011323393

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

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

Is DTC detected?

- YES >> Perform the trouble diagnosis related to the detected DTC. Refer to [BRC-38, "DTC Index"](#).
NO >> GO TO 2.

2.CHECK DTC OF "COMBINATION METER"

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

Is DTC detected?

- YES >> Perform the trouble diagnosis related to the detected DTC. Refer to [MWI-48, "DTC Index"](#).
NO >> GO TO 3.

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-42, "Intermittent Incident"](#).

>> INSPECTION END

B2601 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B2601 SHIFT POSITION

DTC Logic

INFOID:0000000011323394

DTC DETECTION LOGIC

NOTE:

- If DTC B2601 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-87, "DTC Logic"](#).
- If DTC B2601 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-88, "DTC Logic"](#).

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000011323395

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

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

CVT shift selector (detention switch)		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M57	9	E11	43	Existed

Is the inspection result normal?

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

2.CHECK CVT SHIFT SELECTOR CIRCUIT (BCM)

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

CVT shift selector (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M57	9	M121	37	Existed

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

B2601 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

CVT shift selector (detention switch)		Ground	Continuity
Connector	Terminal		
M57	9		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.REPLACE BCM

1. Replace BCM. Refer to [BCS-98, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.
3. Perform DTC CONFIRMATION PROCEDURE for DTC B2601. Refer to [SEC-75, "DTC Logic"](#).

Is DTC B2601 detected again?

YES >> Replace IPDM E/R. Refer to [PCS-36, "Removal and Installation"](#).

NO >> INSPECTION END

B2602 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B2602 SHIFT POSITION

DTC Logic

INFOID:0000000011323396

DTC DETECTION LOGIC

NOTE:

- If DTC B2602 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-87, "DTC Logic"](#).
- If DTC B2602 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-88, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2602	SHIFT POSITION	BCM detects the following status for 10 seconds. • Selector lever is in the P position • Vehicle speed is 4 km/h (2.5 MPH) or more • Ignition switch is in the ON position	• Harness or connectors (CAN communication line is open or shorted.) • Harness or connectors [CVT shift selector (detention switch) circuit is open or shorted.] • CVT shift selector (detention switch) • Combination meter • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000011323397

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

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

Is DTC detected?

- YES >> Perform the trouble diagnosis related to the detected DTC. Refer to [BRC-38, "DTC Index"](#).
NO >> GO TO 2.

2.CHECK DTC OF COMBINATION METER

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

Is DTC detected?

- YES >> Perform the trouble diagnosis related to the detected DTC. Refer to [MWI-48, "DTC Index"](#).
NO >> GO TO 3.

3.CHECK CVT SHIFT SELECTOR POWER SUPPLY

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

(+)CVT shift selector (detention switch)		(-)	Voltage (V) (Approx.)
Connector	Terminal		
M57	8	Ground	9 - 16

Is the inspection result normal?

- YES >> GO TO 6.

B2602 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

NO >> GO TO 4.

4.CHECK CVT SHIFT SELECTOR POWER SUPPLY CIRCUIT

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

CVT shift selector (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M57	8	M124	104	Existed

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

CVT shift selector (detention switch)		Ground	Continuity
Connector	Terminal		
M57	8		Not existed

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

5.REPLACE BCM

1. Replace BCM. Refer to [BCS-98, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

6.CHECK CVT SHIFT SELECTOR CIRCUIT

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

CVT shift selector (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M57	9	M121	37	Existed

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

CVT shift selector (detention switch)		Ground	Continuity
Connector	Terminal		
M57	9		Not existed

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness.

7.CHECK CVT SHIFT SELECTOR (DETENTION SWITCH)

Refer to [SEC-79, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 8.

NO >> Replace CVT shift selector. Refer to [TM-185, "Removal and Installation"](#).

8.CHECK INTERMITTENT INCIDENT

Refer to [GI-42, "Intermittent Incident"](#).

>> INSPECTION END

B2602 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Component Inspection

INFOID:0000000011323398

1.CHECK CVT SHIFT SELECTOR (DETENTION SWITCH)

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

CVT shift selector (detention switch)		Condition		Continuity
Terminal				
8	9	Selector lever: P position	Selector button: Released	Not existed
			Selector button: Pressed	Existed
		Selector lever: Except P position		

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace CVT shift selector. Refer to [TM-185, "Removal and Installation"](#).

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SEC

B2603 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B2603 SHIFT POSITION

DTC Logic

INFOID:0000000011323399

DTC DETECTION LOGIC

NOTE:

- If DTC B2603 is displayed with DTC B2601, first perform the trouble diagnosis for DTC B2601. Refer to [SEC-75, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible causes
B2603	SHIFT POSI STATUS	BCM detects the following status when ignition switch is in the ON position. • P/N position signal from transmission range switch: approx. 0 V (Other than P/N position) • CVT shift selector (detention switch) signal: approx. 0 V (P position)	• Harness or connector [CVT shift selector (detention switch) circuit is open or shorted.] • Harness or connectors (Transmission range switch circuit is open or shorted.) • CVT shift selector (detention switch) • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

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

Is DTC detected?

- YES >> Go to [SEC-80, "Diagnosis Procedure"](#).
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE 2

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000011323400

1.INSPECTION START

Perform inspection in accordance with procedure that confirms DTC.

Which procedure confirms DTC?

- DTC confirmation procedure 1>>GO TO 2.
DTC confirmation procedure 2>>GO TO 9.

2.CHECK FUSE

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

Signal name	Fuse No.
Ignition power supply	42 (10A)

Is the inspection result normal?

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

3.CHECK TRANSMISSION RANGE SWITCH POWER SUPPLY

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

B2603 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

(+)		(-)	Voltage
Transmission range switch			
Connector	Terminal		
F17	1	Ground	6 - 16 V

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4.CHECK TRANSMISSION RANGE SWITCH POWER SUPPLY CIRCUIT

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

Transmission range switch		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
F17	1	F12	74	Existed

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

Transmission range switch		Ground	Continuity
Connector	Terminal		
F17	1		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-36, "Removal and Installation"](#).

NO >> Repair or replace harness.

5.CHECK BCM INPUT SIGNAL

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

(+)		(-)	Condition		Voltage (V) (Approx.)
BCM					
Connector	Terminal				
M124	102	Ground	Selector lever	P or N position	9 - 16
				Other than above	0 - 1.5

Is the inspection result normal?

YES >> GO TO 8.

NO >> GO TO 6.

6.CHECK BCM INPUT SIGNAL CIRCUIT

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

Transmission range switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
F17	2	M124	102	Existed

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

B2603 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Transmission range switch		Ground	Continuity
Connector	Terminal		
F17	2		Not existed

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness.

7.CHECK TRANSMISSION RANGE SWITCH

Refer to [SEC-83, "Component Inspection \(Transmission Range Switch\)"](#).

Is the inspection result normal?

YES >> GO TO 14.

NO >> Replace transmission assembly. Refer to [TM-213, "Removal and Installation"](#).

8.REPLACE BCM

1. Replace BCM. Refer to [BCS-98, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

9.CHECK CVT SHIFT SELECTOR POWER SUPPLY

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

(+) (CVT shift selector (detention switch))		(-) (Ground)	Voltage (V) (Approx.)
Connector	Terminal		
M57	8		9 - 16

Is the inspection result normal?

YES >> GO TO 12.

NO >> GO TO 10.

10.CHECK CVT SHIFT SELECTOR POWER SUPPLY CIRCUIT

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

CVT shift selector (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M57	8	M124	104	Existed

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

CVT shift selector (detention switch)		Ground	Continuity
Connector	Terminal		
M57	8		Not existed

Is the inspection result normal?

YES >> GO TO 11.

NO >> Repair or replace harness.

11.REPLACE BCM

1. Replace BCM. Refer to [BCS-98, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

B2603 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

>> INSPECTION END

12.CHECK CVT SHIFT SELECTOR CIRCUIT

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

CVT shift selector (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M57	9	M121	37	Existed

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

CVT shift selector (detention switch)		Ground	Continuity
Connector	Terminal		
M57	9		Not existed

Is the inspection result normal?

YES >> GO TO 13.

NO >> Repair or replace harness.

13.CHECK CVT SHIFT SELECTOR (DETENTION SWITCH)

Refer to [SEC-83, "Component Inspection \[CVT Shift Selector \(Detention Switch\)\]"](#).

Is the inspection result normal?

YES >> GO TO 14.

NO >> Replace CVT shift selector. Refer to [TM-185, "Removal and Installation"](#).

14.CHECK INTERMITTENT INCIDENT

Refer to [GI-42, "Intermittent Incident"](#).

>> INSPECTION END

Component Inspection (Transmission Range Switch)

INFOID:0000000011564204

1.CHECK TRANSMISSION RANGE SWITCH

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

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

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace transmission assembly. Refer to [TM-213, "Removal and Installation"](#).

Component Inspection [CVT Shift Selector (Detention Switch)]

INFOID:0000000011323401

1.CHECK CVT SHIFT SELECTOR (DETENTION SWITCH)

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

B2603 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

CVT shift selector (detention switch)		Condition		Continuity
Terminal				
8	9	Selector lever: P position	Selector button: Released	Not existed
			Selector button: Pressed	Existed
		Selector lever: Except P position		

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace CVT shift selector. Refer to [TM-185. "Removal and Installation"](#).

B2604 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B2604 SHIFT POSITION

DTC Logic

INFOID:0000000011323402

DTC DETECTION LOGIC

NOTE:

- If DTC B2604 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-87, "DTC Logic"](#).
- If DTC B2604 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-88, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2604	PNP/CLUTCH SW	The following states are detected for 5 seconds while ignition switch is ON. • P/N position signal is sent from transmission range switch but shift position signal input (CAN) from TCM is other than P and N • P/N position signal is not sent from transmission range switch but shift position signal input (CAN) from TCM is P or N	• Harness or connectors (CAN communication line is open or shorted.) • Harness or connectors (transmission range switch circuit is open or shorted.) • Transmission range switch • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000011323403

1.CHECK DTC OF TCM

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

Is DTC detected?

- YES >> Perform the trouble diagnosis related to the detected DTC. Refer to [TM-58, "DTC Index"](#).
NO >> GO TO 2.

2.CHECK FUSE

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

Signal name	Fuse No.
Ignition power supply	42 (10A)

Is the inspection result normal?

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

3.CHECK TRANSMISSION RANGE SWITCH POWER SUPPLY

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

B2604 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

(+)		(-)	Voltage
Transmission range switch			
Connector	Terminal		
F17	1	Ground	6 - 16 V

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4.CHECK TRANSMISSION RANGE SWITCH POWER SUPPLY CIRCUIT

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

Transmission range switch		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
F17	1	F12	74	Existed

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

Transmission range switch		Ground	Continuity
Connector	Terminal		
F17	1		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-36, "Removal and Installation"](#).

NO >> Repair or replace harness.

5.CHECK BCM INPUT SIGNAL

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

(+)		(-)	Condition		Voltage (V) (Approx.)
BCM					
Connector	Terminal				
M124	102	Ground	Selector lever	P or N position	9 - 16
				Other than above	0 - 1.5

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 7.

6.REPLACE BCM

1. Replace BCM. Refer to [BCS-98, "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.

B2604 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Transmission range switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
F17	2	M124	102	Existed

5. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M124	102		Not existed

Is the inspection result normal?

- YES >> GO TO 8.
NO >> Repair or replace harness.

8.CHECK TRANSMISSION RANGE SWITCH

Refer to [SEC-87, "Component Inspection \(Transmission Range Switch\)"](#).

Is the inspection result normal?

- YES >> GO TO 9.
NO >> Replace transmission assembly. Refer to [TM-213, "Removal and Installation"](#).

9.CHECK INTERMITTENT INCIDENT

Refer to [GI-42, "Intermittent Incident"](#).

>> INSPECTION END

Component Inspection (Transmission Range Switch)

INFOID:0000000011564206

1.CHECK TRANSMISSION RANGE SWITCH

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

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

Is the inspection result normal?

- YES >> INSPECTION END
NO >> Replace transmission assembly. Refer to [TM-213, "Removal and Installation"](#).

B2605 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B2605 SHIFT POSITION

DTC Logic

INFOID:0000000011323404

DTC DETECTION LOGIC

NOTE:

- If DTC B2605 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-87, "DTC Logic"](#).
- If DTC B2605 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-88, "DTC Logic"](#).

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000011323405

1.CHECK FUSE

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

Signal name	Fuse No.
Ignition power supply	42 (10A)

Is the inspection result normal?

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

2.CHECK TRANSMISSION RANGE SWITCH POWER SUPPLY

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

(+)		(-)	Voltage
Transmission range switch			
Connector	Terminal		
F17	1	Ground	6 - 16 V

Is the inspection result normal?

- YES >> GO TO 4.

B2605 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

NO >> GO TO 3.

3.CHECK TRANSMISSION RANGE SWITCH POWER SUPPLY CIRCUIT

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

Transmission range switch		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
F17	1	F12	74	Existed

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

Transmission range switch		Ground	Continuity
Connector	Terminal		
F17	1		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-36. "Removal and Installation"](#).

NO >> Repair or replace harness.

4.CHECK IPDM E/R INPUT SIGNAL

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

(+)		(-)	Condition		Voltage (V) (Approx.)
IPDM E/R					
Connector	Terminal				
F12	72	Ground	Selector lever	P or N position	9 - 16
				Other than above	0 - 1.5

Is the inspection result normal?

YES >> GO TO 8.

NO >> GO TO 5.

5.CHECK IPDM E/R INPUT SIGNAL CIRCUIT

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

IPDM E/R		Transmission range switch		Continuity
Connector	Terminal	Connector	Terminal	
F12	72	F17	2	Existed

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

Transmission range switch		Ground	Continuity
Connector	Terminal		
F17	2		Not existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

6.CHECK BCM INPUT SIGNAL CIRCUIT

B2605 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

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

IPDM E/R		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E10	30	M124	102	Existed

3. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M124	102		Not existed

Is the inspection result normal?

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

7. REPLACE BCM

1. Replace BCM. Refer to [BCS-98, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.
3. Perform DTC CONFIRMATION PROCEDURE for B2605. Refer to [SEC-88, "DTC Logic"](#).

Is DTC B2605 detected again?

- YES >> Replace IPDM E/R. Refer to [PCS-36, "Removal and Installation"](#).
NO >> INSPECTION END

8. CHECK INTERMITTENT INCIDENT

Refer to [GI-42, "Intermittent Incident"](#).

>> INSPECTION END

B2608 STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B2608 STARTER RELAY

DTC Logic

INFOID:0000000011323406

DTC DETECTION LOGIC

NOTE:

- If DTC B2608 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-87, "DTC Logic"](#).
- If DTC B2608 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-88, "DTC Logic"](#).
- If DTC B2608 is displayed with DTC B210D (IPDM E/R), first perform the trouble diagnosis for DTC B210D. Refer to [SEC-112, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2608	STARTER RELAY	BCM outputs starter relay OFF signal but BCM receives starter relay ON signal from IPDM E/R (CAN).	• Harness or connectors (CAN communication line is open or shorted.) • Harness or connectors (Starter relay circuit is open or shorted.) • IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000011323407

1.CHECK DTC OF IPDM E/R

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

Is DTC detected?

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

2.CHECK STARTER RELAY CIRCUIT

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

IPDM E/R		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E11	46	M124	97	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E11	46		Not existed

Is the inspection result normal?

B2608 STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

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

3.REPLACE IPDM E/R

1. Replace IPDM E/R. Refer to [PCS-36, "Removal and Installation"](#).
2. Perform DTC CONFIRMATION PROCEDURE for DTC B2608. Refer to [SEC-91, "DTC Logic"](#).

Is DTC B2608 detected again?

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

4.REPLACE BCM

1. Replace BCM. Refer to [BCS-98, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

B260F ENGINE STATUS

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B260F ENGINE STATUS

Description

INFOID:0000000011323408

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

DTC Logic

INFOID:0000000011323409

DTC DETECTION LOGIC

NOTE:

- If DTC B260F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-87, "DTC Logic"](#).
- If DTC B260F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-88, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260F	ENG STATE SIG LOST	BCM has not yet received the engine status signal from ECM when ignition switch is in the ON position.	• Harness or connectors (CAN communication line is open or shorted.) • ECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

- YES >> Go to [SEC-93, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011323410

1.INSPECTION START

1. Turn ignition switch ON.
2. Select "Self Diagnostic Result" mode of "BCM" using CONSULT.
3. Touch "ERASE".
4. Perform DTC CONFIRMATION PROCEDURE for DTC B260F. Refer to [SEC-93, "DTC Logic"](#).

Is DTC detected?

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

2.REPLACE ECM

Replace ECM.
Refer to [EC-512, "Removal and Installation"](#).

>> INSPECTION END

B261A PUSH-BUTTON IGNITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B261A PUSH-BUTTON IGNITION SWITCH

DTC Logic

INFOID:0000000011323411

DTC DETECTION LOGIC

NOTE:

- If DTC B261A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-87, "DTC Logic"](#).
- If DTC B261A is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-88, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B261A	PUSH-BTN IGN SW	BCM detects the mismatch between the following for 1 second or more • Push-button ignition switch operation condition judged by push switch signal • Push-button ignition switch status signal from IPDM E/R (CAN)	• Harness or connectors (Push-button ignition switch circuit is open or shorted) • IPDM E/R • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press push-button ignition switch for 1 second under the following condition.
 - Selector lever: In the P position
 - Brake pedal: Not depressed
2. Release push-button ignition switch and wait 1 second.
3. Check DTC in "Self diagnostic result" mode of "BCM" using CONSULT.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000011323412

1.CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT 1

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

Push-button ignition switch		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M101	4	E10	28	Existed

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

Push-button ignition switch		Ground	Continuity
Connector	Terminal		
M101	4		Not existed

Is the inspection result normal?

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

2.CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT 2

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

B261A PUSH-BUTTON IGNITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Push-button ignition switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M101	4	M124	76	Existed

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

Push-button ignition switch		Ground	Continuity
Connector	Terminal		
M101	4		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3.REPLACE BCM

1. Replace BCM. Refer to [BCS-98, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.
3. Perform DTC CONFIRMATION PROCEDURE for B261A. Refer to [SEC-94, "DTC Logic"](#).

Is DTC B261A detected again?

YES >> Replace IPDM E/R. Refer to [PCS-36, "Removal and Installation"](#).

NO >> INSPECTION END

SEC

B26F3 STARTER CONTROL RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B26F3 STARTER CONTROL RELAY

DTC Logic

INFOID:0000000011323413

DTC DETECTION LOGIC

NOTE:

- If DTC B26F3 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-87, "DTC Logic"](#).
- If DTC B26F3 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-88, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26F3	START CONT RLY ON	BCM requests IPDM E/R to turn starter control relay OFF, but BCM cannot receive starter control relay OFF state signal from IPDM E/R (CAN).	• Harness or connectors (CAN communication line is open or shorted.) • IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press push-button ignition switch under the following conditions to start engine.
 - Selector lever: In the P position
 - Brake pedal: Depressed
2. Wait 2 seconds after engine started.
3. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

Is DTC detected?

- YES >> Go to [SEC-96, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011323414

1.CHECK DTC OF IPDM E/R

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

Is DTC detected?

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

2.CHECK INTERMITTENT INCIDENT

Refer to [GI-42, "Intermittent Incident"](#).

>> INSPECTION END

B26F4 STARTER CONTROL RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B26F4 STARTER CONTROL RELAY

DTC Logic

INFOID:0000000011323415

DTC DETECTION LOGIC

NOTE:

- If DTC B26F4 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-87, "DTC Logic"](#).
- If DTC B26F4 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-88, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26F4	START CONT RELAY OFF	BCM requests IPDM E/R to turn starter control relay ON, but BCM cannot receive starter control relay ON state signal from IPDM E/R.	• Harness or connectors (CAN communication line is open or shorted.) • IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000011323416

1.CHECK DTC OF IPDM E/R

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

Is DTC detected?

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

2.CHECK INTERMITTENT INCIDENT

Refer to [GI-42, "Intermittent Incident"](#).

>> INSPECTION END

B26F7 BCM**DTC Logic**

INFOID:0000000011323417

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26F7	BCM	Inside key antenna output circuit in BCM is malfunctioning.	BCM

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

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000011323418

1.INSPECTION START

1. Turn ignition switch ON.
2. Select "Self Diagnostic Result" mode of "BCM" using CONSULT.
3. Touch "ERASE".
4. Perform DTC CONFIRMATION PROCEDURE for DTC B26F7. Refer to [SEC-98, "DTC Logic"](#).

Is DTC detected?

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

2.REPLACE BCM

1. Replace BCM. Refer to [BCS-98, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

B26F8 BCM

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B26F8 BCM

DTC Logic

INFOID:0000000011323419

DTC DETECTION LOGIC

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000011323420

1.INSPECTION START

1. Turn ignition switch ON.
2. Select "Self Diagnostic Result" mode of "BCM" using CONSULT.
3. Touch "ERASE".
4. Perform DTC CONFIRMATION PROCEDURE for DTC B26F8.
Refer to [SEC-99, "DTC Logic"](#).

Is DTC detected?

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

2.REPLACE BCM

1. Replace BCM. Refer to [BCS-98, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

B26F9 CRANKING REQUEST CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B26F9 CRANKING REQUEST CIRCUIT

DTC Logic

INFOID:0000000011323421

DTC DETECTION LOGIC

NOTE:

- If DTC B26F9 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-87, "DTC Logic"](#).
- If DTC B26F9 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-88, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26F9	CRANK REQ CIR SHORT	BCM detects that the status of the following signals does not match. • Cranking request signal from ECM • Starter control relay control signal from ECM (CAN)	• Harness or connectors (CAN communication line is open or shorted.) • Harness or connectors (Cranking request signal circuit is open or shorted.) • ECM • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION

1. Perform DTC CONFIRMATION PROCEDURE for DTC P1650. Refer to [EC-418, "DTC Logic"](#).
2. Turn ignition switch ON.
3. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000011323422

1.CHECK CRANKING REQUEST SIGNAL

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

(+) BCM		(-)	Condition		Voltage (V) (Approx.)
Connector	Terminal				
M123	64	Ground	Ignition switch OFF		3.6
			Ignition switch ON	• Engine: Stopped • Selector lever position: P	0 - 1
				• Engine: Stopped • Selector lever position: Other than P	9 - 16
				Engine running	9 - 16

Is the inspection result normal?

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

2.CHECK CRANKING REQUEST SIGNAL CIRCUIT

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

B26F9 CRANKING REQUEST CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

BCM		ECM		Continuity
Connector	Terminal	Connector	Terminal	
M123	64	F7	8	Existed

5. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M123	64		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.REPLACE BCM

1. Replace BCM. Refer to [BCS-98, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.
3. Perform DTC CONFIRMATION PROCEDURE for DTC B26F9. Refer to [SEC-100, "DTC Logic"](#).

Is DTC detected?

YES >> GO TO 4.

NO >> INSPECTION END

4.REPLACE ECM

Replace ECM.

Refer to [EC-512, "Removal and Installation"](#).

>> INSPECTION END

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SEC

B26FA CRANKING REQUEST CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B26FA CRANKING REQUEST CIRCUIT

DTC Logic

INFOID:000000011323423

DTC DETECTION LOGIC

NOTE:

- If DTC B26FA is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-87, "DTC Logic"](#).
- If DTC B26FA is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-88, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26FA	CRANK REQ CIR OPEN	BCM detects that the status of the following signals does not match. • Cranking request signal from ECM • Starter control relay control signal from ECM (CAN)	• Harness or connectors (CAN communication line is open or shorted.) • Harness or connectors (Cranking request signal circuit is open or shorted.) • BCM • ECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION

1. Perform DTC CONFIRMATION PROCEDURE for DTC P1650. Refer to [EC-418, "DTC Logic"](#).
2. Turn ignition switch ON.
3. Check DTC in "Self Diagnostic Result" mode of "BCM" using CONSULT.

Is DTC detected?

- YES >> Go to [SEC-102, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000011323424

1.CHECK CRANKING REQUEST SIGNAL

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

(+)		(-)	Condition		Voltage (V) (Approx.)
BCM					
Connector	Terminal				
M123	64	Ground	Ignition switch OFF		3.6
			Ignition switch ON	• Engine: Stopped • Selector lever position: P	0 - 1
				• Engine: Stopped • Selector lever position: Other than P	9 - 16
				Engine running	9 - 16

Is the inspection result normal?

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

2.CHECK CRANKING REQUEST SIGNAL CIRCUIT

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

B26FA CRANKING REQUEST CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

BCM		ECM		Continuity
Connector	Terminal	Connector	Terminal	
M123	64	F7	8	Existed

5. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M123	64		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.REPLACE BCM

1. Replace BCM. Refer to [BCS-98, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.
3. Perform DTC CONFIRMATION PROCEDURE for DTC B26FA. Refer to [SEC-102, "DTC Logic"](#).

Is DTC detected?

YES >> GO TO 4.

NO >> INSPECTION END

4.REPLACE ECM

Replace ECM.

Refer to [EC-512, "Removal and Installation"](#).

>> INSPECTION END

SEC

B26FC KEY REGISTRATION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B26FC KEY REGISTRATION

DTC Logic

INFOID:0000000011323425

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26FC	KEY REGISTRATION	Intelligent Key that does not match the vehicle is registered.	• Improper registration operation • Intelligent Key • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to [SEC-104, "Diagnosis Procedure"](#)
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011323426

1.REPLACE INTELLIGENT KEY

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

Is DTC detected?

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

2.REPLACE BCM

1. Replace BCM. Refer to [BCS-98, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

B209F CRANKING REQUEST CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B209F CRANKING REQUEST CIRCUIT

DTC Logic

INFOID:0000000011323427

DTC DETECTION LOGIC

NOTE:

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

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B209F	STR CUT OFF OPEN	When the following items do not match, a malfunction is detected. • Cranking request signal from ECM • Starter control relay control signal from ECM (CAN)	• Harness or connectors (CAN communication line is open or shorted.) • Harness or connectors (Cranking request signal circuit is open or shorted.) • IPDM E/R • ECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Perform DTC CONFIRMATION PROCEDURE for DTC P1650. Refer to [EC-418, "DTC Logic"](#).
2. Turn ignition switch ON.
3. Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

Is DTC detected?

- YES >> Refer to [SEC-105, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011323428

1.CHECK CRANKING REQUEST SIGNAL

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

(+) IPDM E/R		(-)	Condition	Voltage (V) (Approx.)
Connector	Terminal			
F12	71	Ground	Ignition switch OFF	3.6
			Ignition switch ON • Engine: Stopped • Selector lever position: P	0 - 1
				9 - 16
			Engine running	9 -16

Is the inspection result normal?

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

2.CHECK CRANKING REQUEST SIGNAL CIRCUIT

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

B209F CRANKING REQUEST CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

IPDM E/R		ECM		Continuity
Connector	Terminal	Connector	Terminal	
F12	71	F7	8	Existed

5. Check continuity between BCM harness connector and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
F12	71		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.REPLACE IPDM E/R

1. Replace IPDM E/R. Refer to [PCS-36, "Removal and Installation"](#).

2. Perform DTC CONFIRMATION PROCEDURE for DTC B209F. Refer to [SEC-105, "DTC Logic"](#).

Is DTC detected?

YES >> GO TO 4.

NO >> INSPECTION END

4.REPLACE ECM

Replace ECM.

Refer to [EC-512, "Removal and Installation"](#).

>> INSPECTION END

B20A0 CRANKING REQUEST CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B20A0 CRANKING REQUEST CIRCUIT

DTC Logic

INFOID:0000000011323429

DTC DETECTION LOGIC

NOTE:

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

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B20A0	STR CUT OFF SHORT	When the following items do not match, a malfunction is detected. • Cranking request signal from ECM • Starter control relay control signal from ECM (CAN)	• Harness or connectors (CAN communication line is open or shorted.) • Harness or connectors (Cranking request signal circuit is open or shorted.) • IPDM E/R • ECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Perform DTC CONFIRMATION PROCEDURE for DTC P1650. Refer to [EC-418, "DTC Logic"](#).
2. Turn ignition switch ON.
3. Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

Is DTC detected?

- YES >> Refer to [SEC-107, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011323430

1.CHECK CRANKING REQUEST SIGNAL

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

(+) IPDM E/R		(-)	Condition	Voltage (V) (Approx.)
Connector	Terminal			
F12	71	Ground	Ignition switch OFF	3.6
			Ignition switch ON • Engine: Stopped • Selector lever position: P	0 - 1
				9 - 16
			Engine running	9 - 16

Is the inspection result normal?

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

2.CHECK CRANKING REQUEST SIGNAL CIRCUIT

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

B20A0 CRANKING REQUEST CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

IPDM E/R		ECM		Continuity
Connector	Terminal	Connector	Terminal	
F12	71	F7	8	Existed

5. Check continuity between BCM harness connector and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
F12	71		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.REPLACE IPDM E/R

1. Replace IPDM E/R. Refer to [PCS-36, "Removal and Installation"](#).

2. Perform DTC CONFIRMATION PROCEDURE for DTC B20A0. Refer to [SEC-107, "DTC Logic"](#).

Is DTC detected?

YES >> GO TO 4.

NO >> INSPECTION END

4.REPLACE ECM

Replace ECM.

Refer to [EC-512, "Removal and Installation"](#).

>> INSPECTION END

B210B STARTER CONTROL RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B210B STARTER CONTROL RELAY

DTC Logic

INFOID:0000000011323431

DTC DETECTION LOGIC

NOTE:

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

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210B	STR CONT RLY ON CIRC	When comparing the following items, IPDM E/R detects that starter control relay is stuck in the ON position for 5 seconds or more. • Starter control relay signal (CAN) from BCM • Starter relay status signal (CAN) from BCM • Starter control relay and starter relay status signal (IPDM E/R input) • Starter control relay control signal (IPDM E/R output) • P/N position signal input • Ignition power supply No.2 signal from BCM	• Harness or connectors (CAN communication line is open or shorted. (Ignition power supply No.2 circuit is open or shorted.) • IPDM E/R • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

- YES >> Refer to [SEC-109, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011323432

1.CHECK SELF DIAGNOSTIC RESULT

Check DTC using CONSULT.

What is the display history of DTC "B210B"?

- "CRNT">> Replace IPDM E/R. Refer to [PCS-36, "Removal and Installation"](#).
"PAST">> GO TO 2.

2.CHECK INTERMITTENT INCIDENT

Refer to [GI-42, "Intermittent Incident"](#)

>> INSPECTION END

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SEC

B210C STARTER CONTROL RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B210C STARTER CONTROL RELAY

DTC Logic

INFOID:0000000011323433

DTC DETECTION LOGIC

NOTE:

- If DTC B210C is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [PCS-30, "DTC Logic"](#).
- When IPDM E/R power supply voltage is low (Approx. 7 - 8 V for about 1 second), the DTC B210C may be detected.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210C	STR CONT RLY OFF CIRC	When comparing the following items, IPDM E/R detects that starter control relay is stuck in the OFF position for 5 seconds or more. • Starter control relay signal (CAN) from BCM • Starter relay status signal (CAN) from BCM • Starter control relay and starter relay status signal (IPDM E/R input) • Starter control relay control signal (IPDM E/R output) • P/N position signal input • Ignition power supply No.2 signal from BCM	• Harness or connectors (CAN communication line is open or shorted. (Ignition power supply No.2 circuit is open or shorted.) • IPDM E/R • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press push-button ignition switch to start engine, and wait 1 second or more.
2. Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

Is DTC detected?

- YES >> Refer to [SEC-110, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011323434

1.CHECK SELF DIAGNOSTIC RESULT

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

What is the display history of DTC "B210C"?

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

2.CHECK BATTERY VOLTAGE

Measure the battery voltage.

Which is the measurement result?

- More than 12.4 V>>GO TO 5
Less than 12.4 V>>Perform battery inspection. Refer to [PG-110, "How to Handle Battery"](#).

3.CHECK P/N POSITION SIGNAL CIRCUIT VOLTAGE

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

(+)		(-)	Voltage (Approx.)
IPDM E/R			
Connector	Terminal		
E11	46	Ground	Battery voltage

Is the inspection result normal?

B210C STARTER CONTROL RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

YES >> Replace IPDM E/R. Refer to [PCS-36, "Removal and Installation"](#).

NO >> GO TO 4.

4.CHECK P/N POSITION SIGNAL CIRCUIT

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

IPDM E/R		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E11	46	M124	97	Existed

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-98, "Removal and Installation"](#).

NO >> Repair or replace harness.

5.CHECK INTERMITTENT INCIDENT

Check intermittent incident. Refer to [GI-42, "Intermittent Incident"](#).

>> INSPECTION END

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SEC

B210D STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B210D STARTER RELAY

DTC Logic

INFOID:000000011323435

DTC DETECTION LOGIC

NOTE:

If DTC B210D is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [PCS-30, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210D	STARTER RLY ON CIRC	When comparing the following items, IPDM E/R detects that starter relay is stuck in the ON position for 5 seconds or more. • Starter control relay signal (CAN) from BCM • Starter relay status signal (CAN) from BCM • Starter control relay and starter relay status signal (IPDM E/R input) • Starter control relay control signal (IPDM E/R output) • P/N position signal input • Ignition power supply No.2 signal from BCM	• Harness or connectors (CAN communication line is open or shorted.) (Ignition power supply No.2 circuit is open or shorted.) • BCM • IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 2

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

Is DTC detected?

YES >> Refer to [SEC-110, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000011323436

1.CHECK SELF DIAGNOSTIC RESULT

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

What is the display history of DTC "B210D"?

"CRNT">> GO TO 2.
"PAST">> GO TO 4.

2.CHECK STARTER RELAY CONTROL SIGNAL CIRCUIT VOLTAGE

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

(+)		(-)	Condition	Voltage (Approx.)
IPDM E/R				
Connector	Terminal			
E11	46	Ground	Other than at engine cranking	12 V

Is the inspection result normal?

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

3.CHECK STARTER RELAY CONTROL SIGNAL CIRCUIT

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

B210D STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

IPDM E/R		Ground	Continuity
Connector	Terminal		
E11	46		Not existed

Is the inspection result normal?

YES >> Perform the diagnosis procedure for DTC B2608 of BCM. Refer to [BCS-63, "DTC Index"](#).

NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Check intermittent incident. Refer to [GI-42, "Intermittent Incident"](#).

>> INSPECTION END

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B210E STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B210E STARTER RELAY

DTC Logic

INFOID:0000000011323437

DTC DETECTION LOGIC

NOTE:

- If DTC B210E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [PCS-30, "DTC Logic"](#).
- If DTC B210E is displayed with DTC B2605, first perform the trouble diagnosis for DTC B2605. Refer to [SEC-88, "DTC Logic"](#).
- When IPDM E/R power supply voltage is low (Approx. 7 - 8 V for about 1 second), the DTC B210E may be detected.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210E	STARTER RLY OFF CIRC	When comparing the following items, IPDM E/R detects that starter relay is stuck in the OFF position for 5 seconds or more. • Starter control relay signal (CAN) from BCM • Starter relay status signal (CAN) from BCM • Starter control relay and starter relay status signal (IPDM E/R input) • Starter control relay control signal (IPDM E/R output) • P/N position signal input • Ignition power supply No.2 signal from BCM	• Harness or connector (CAN communication line is open or shorted.) • Harness or connector (Starter relay circuit is open or shorted.) • IPDM E/R • BCM • Battery

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press push-button ignition switch to start engine, and wait 1 seconds or more.
2. Check DTC in "Self Diagnostic Result" mode of "IPDM E/R" using CONSULT.

Is DTC detected?

- YES >> Refer to [SEC-112, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011323438

1.CHECK SELF DIAGNOSTIC RESULT

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

What is the display history of DTC "B210E"?

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

2.CHECK BATTERY VOLTAGE

Check the battery voltage.

Which is the measurement result?

- More than 12.4 V>>GO TO 5.
Less than 12.4 V>>Perform battery inspection. Refer to [PG-110, "How to Handle Battery"](#).

3.CHECK STARTER RELAY CONTROL SIGNAL

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

(+)		(-)	Condition	Voltage (Approx.)
IPDM E/R				
Connector	Terminal			
E11	46	Ground	Other than at engine cranking	12 V

Is the inspection result normal?

B210E STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

YES >> GO TO 4.

NO >> Replace IPDM E/R. Refer to [PCS-36, "Removal and Installation"](#).

4.CHECK STARTER RELAY CONTROL SIGNAL CIRCUIT

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

BCM		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M124	97	E11	46	Existed

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-98, "Removal and Installation"](#).

NO >> Repair or replace harness.

5.CHECK INTERMITTENT INCIDENT

Check intermittent incident. Refer to [GI-42, "Intermittent Incident"](#).

>> INSPECTION END

SEC

B210F SHIFT POSITION/CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B210F SHIFT POSITION/CLUTCH INTERLOCK SWITCH

DTC Logic

INFOID:0000000011323439

DTC DETECTION LOGIC

NOTE:

If DTC B210F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [PCS-30, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210F	INTRLCK/PNP SW ON	There is a difference between P/N position signal from transmission range switch and P/N position signal from BCM (CAN).	• Harness or connectors (CAN communication line is open or shorted.) • Harness or connectors (transmission range switch circuit is open or shorted.) • Transmission range switch • IPDM E/R • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to [SEC-116, "Diagnosis Procedure"](#).

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011323440

1.CHECK DTC OF BCM

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

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to [BCS-63, "DTC Index"](#).

NO >> GO TO 2.

2.CHECK IPDM E/R SIGNAL CIRCUIT OPEN AND SHORT

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

IPDM E/R		Transmission range switch		Continuity
Connector	Terminal	Connector	Terminal	
F12	72	F17	2	Existed

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

(+)		(-)	Continuity
IPDM E/R			
Connector	Terminal		
F12	72	Ground	Not existed

Is the inspection result normal?

B210F SHIFT POSITION/CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

YES >> Replace IPDM E/R. Refer to [PCS-36, "Removal and Installation"](#).
NO >> Repair or replace harness.

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B2110 SHIFT POSITION/CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B2110 SHIFT POSITION/CLUTCH INTERLOCK SWITCH

DTC Logic

INFOID:0000000011323441

DTC DETECTION LOGIC

NOTE:

If DTC B2110 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [PCS-30, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2110	INTRLCK/PNP SW OFF	There is a difference between P/N position signal from transmission range switch and P/N position signal from BCM (CAN).	• Harness or connectors (CAN communication line is open or shorted.) • Harness or connectors (transmission range switch circuit is open or shorted.) • Transmission range switch • IPDM E/R • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to [SEC-118, "Diagnosis Procedure"](#).

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011323442

1.CHECK DTC OF BCM

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

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to [BCS-63, "DTC Index"](#).

NO >> GO TO 2.

2.CHECK IPDM E/R SIGNAL CIRCUIT OPEN AND SHORT

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

IPDM E/R		Transmission range switch		Continuity
Connector	Terminal	Connector	Terminal	
F12	72	F17	2	Existed

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

(+)		(-)	Continuity
IPDM E/R			
Connector	Terminal		
F12	72	Ground	Not existed

Is the inspection result normal?

B2110 SHIFT POSITION/CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

YES >> Replace IPDM E/R. Refer to [PCS-36, "Removal and Installation"](#).
NO >> Repair or replace harness.

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HEADLAMP FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

HEADLAMP FUNCTION

Component Function Check

INFOID:0000000011323443

1.CHECK FUNCTION

1. Perform "HEAD LAMP(HI)" in "ACTIVE TEST" mode of "THEFT ALM" of "BCM" using CONSULT.
2. Check headlamps operation.

Test item		Description	
HEAD LAMP (HI)	ON	Headlamps (Hi)	Light
	OFF		Do not light

Is the inspection result normal?

- YES >> INSPECTION END
NO >> Refer to [SEC-120, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000011323444

1.CHECK HEADLAMP FUNCTION

Refer to [EXL-62, "WITHOUT DAYTIME RUNNING LIGHT SYSTEM : Component Function Check"](#) (Xenon type without daytime running light system),
[EXL-63, "WITH DAYTIME RUNNING LIGHT SYSTEM : Component Function Check"](#) (Xenon type with daytime running light system),
[EXL-174, "WITHOUT DAYTIME RUNNING LIGHT SYSTEM : Component Function Check"](#) (Halogen type without daytime running light system), or
[EXL-175, "WITH DAYTIME RUNNING LIGHT SYSTEM : Component Function Check"](#) (Halogen type with daytime running light system).

Is the inspection result normal?

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

2.CHECK INTERMITTENT INCIDENT

Refer to [GI-42, "Intermittent Incident"](#).

>> INSPECTION END

HORN FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

HORN FUNCTION

Component Function Check

INFOID:0000000011323445

1.CHECK FUNCTION

1. Perform "VEHICLE SECURITY HORN" in "ACTIVE TEST" mode of "THEFT ALM" of "BCM" using CONSULT.
2. Check the horn operation.

Test item		Description	
VEHICLE SECURITY HORN	ON	Horn	Sounds (for 0.5 sec)

Is the operation normal?

- YES >> INSPECTION END
NO >> Go to [SEC-121. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000011323446

1.CHECK HORN FUNCTION

Check that horn functions properly using horn switch.

Do horns sound?

- YES >> GO TO 2.
NO >> Check horn circuit. Refer to [HRN-3. "Wiring Diagram"](#).

2.CHECK HORN CONTROL CIRCUIT

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

IPDM E/R		Horn relay		Continuity
Connector	Terminal	Connector	Terminal	
E11	44	E5	1	Existed

Is the inspection result normal?

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

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-42. "Intermittent Incident"](#).

>> INSPECTION END

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SEC

SECURITY INDICATOR LAMP

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

SECURITY INDICATOR LAMP

Component Function Check

INFOID:0000000011323447

1.CHECK FUNCTION

1. Perform "THEFT IND" in "ACTIVE TEST" mode of "IMMU" of "BCM" using CONSULT.
2. Check security indicator lamp operation.

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

Is the inspection result normal?

YES >> INSPECTION END

NO >> Go to [SEC-122, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000011323448

1.CHECK FUSE

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

Signal name	Fuse No.
Battery power supply	11 (10 A)

Is the inspection result normal?

YES >> GO TO 2.

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

2.CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT

1. Disconnect combination meter connector.
2. Check voltage between combination meter harness connector and ground.

(+)		(-)	Voltage (V) (Approx.)
Combination meter			
Connector	Terminal		
M34	1	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK SECURITY INDICATOR LAMP SIGNAL

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

(+)		(-)	Voltage (V) (Approx.)
BCM			
Connector	Terminal		
M121	23	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 5.

4.REPLACE BCM

SECURITY INDICATOR LAMP

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

1. Replace BCM. Refer to [BCS-98, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

5.CHECK SECURITY INDICATOR LAMP CIRCUIT

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

Combination meter		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M34	28	M121	23	Existed

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

Combination meter		Ground	Continuity
Connector	Terminal		
M34	28		Not existed

Is the inspection result normal?

- YES >> Replace combination meter. Refer to [MWI-90, "Removal and Installation"](#).
NO >> Repair or replace harness.

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SYMPTOM DIAGNOSIS

ENGINE DOES NOT START WHEN INTELLIGENT KEY IS INSIDE OF VEHICLE

Description

INFOID:0000000011323449

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

NOTE:

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

Conditions of Vehicle (Operating Conditions)

- “ENGINE START BY I-KEY”: ON
Check the setting of “ENGINE START BY I-KEY” in “Work Support” mode of “INTELLIGENT KEY” of “BCM” using CONSULT.
- One or more of Intelligent Keys with registered Intelligent Key ID are in the vehicle.

Diagnosis Procedure

INFOID:0000000011323450

1.PERFORM WORK SUPPORT

Perform “INSIDE ANT DIAGNOSIS” in “Work Support” mode of “INTELLIGENT KEY” of BCM using CONSULT.

Refer to [DLK-95, "INTELLIGENT KEY : CONSULT Function \(BCM - INTELLIGENT KEY\)"](#).

>> GO TO 2.

2.PERFORM SELF-DIAGNOSIS RESULT

Perform Self-Diagnosis Result in “BCM”, and check whether or not DTC of inside key antenna is detected.

Is DTC detected?

YES >> Refer to [BCS-63, "DTC Index"](#).

NO >> GO TO 3.

3.CHECK PUSH-BUTTON IGNITION SWITCH

Check push-button ignition switch.

Refer to [PCS-71, "Component Function Check"](#).

Is the operation normal?

YES >> GO TO 4.

NO >> Repair or replace malfunctioning parts.

4.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection normal?

YES >> Check intermittent incident. Refer to [GI-42, "Intermittent Incident"](#).

NO >> GO TO 1.

SECURITY INDICATOR LAMP DOES NOT TURN ON OR BLINK

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

SECURITY INDICATOR LAMP DOES NOT TURN ON OR BLINK

Description

INFOID:0000000011323451

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

NOTE:

- Before performing the diagnosis, check "Work Flow". Refer to [SEC-53, "Work Flow"](#).
- Check that vehicle is under the condition shown in "CONDITIONS OF VEHICLE (OPERATING CONDITIONS)" before starting diagnosis, and check each symptom.

CONDITIONS OF VEHICLE (OPERATING CONDITIONS)

Power supply position is not the ON position.

Diagnosis Procedure

INFOID:0000000011323452

1.CHECK SECURITY INDICATOR LAMP

Check security indicator lamp.

Refer to [SEC-122, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-42, "Intermittent Incident"](#).

NO >> GO TO 1.

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VEHICLE SECURITY SYSTEM CANNOT BE SET

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

VEHICLE SECURITY SYSTEM CANNOT BE SET INTELLIGENT KEY

INTELLIGENT KEY : Description

INFOID:0000000011323453

Armed phase is not activated when all doors are locked using Intelligent Key.

NOTE:

Check that vehicle is under the condition shown in "CONDITIONS OF VEHICLE (OPERATING CONDITIONS)" before starting diagnosis, and check each symptom.

CONDITION OF VEHICLE (OPERATING CONDITIONS)

"SECURITY ALARM SET": ON

Check the setting of "SECURITY ALARM SET" in "Work Support" mode of "THEFT ALM" of "BCM" using CONSULT.

INTELLIGENT KEY : Diagnosis Procedure

INFOID:0000000011323454

1.CHECK INTELLIGENT KEY SYSTEM (REMOTE KEYLESS ENTRY FUNCTION)

Lock/unlock door with Intelligent Key.

Refer to [DLK-44, "REMOTE KEYLESS ENTRY FUNCTION : System Description"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check Intelligent Key system (remote keyless entry function). Refer to [DLK-368, "Diagnosis Procedure"](#).

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-42, "Intermittent Incident"](#).

NO >> GO TO 1.

DOOR REQUEST SWITCH

DOOR REQUEST SWITCH : Description

INFOID:0000000011323455

Armed phase is not activated when all doors are locked using door request switch.

NOTE:

Check that vehicle is under the condition shown in "CONDITIONS OF VEHICLE (OPERATING CONDITIONS)" before starting diagnosis, and check each symptom.

CONDITION OF VEHICLE (OPERATING CONDITIONS)

"SECURITY ALARM SET": ON

Check the setting of "SECURITY ALARM SET" in "Work Support" mode of "THEFT ALM" of "BCM" using CONSULT.

DOOR REQUEST SWITCH : Diagnosis Procedure

INFOID:0000000011323456

1.CHECK INTELLIGENT KEY SYSTEM (DOOR LOCK FUNCTION)

Lock/unlock door with door request switch.

Refer to [DLK-40, "DOOR LOCK FUNCTION : System Description"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check Intelligent Key system (door lock function). Refer to [DLK-365, "ALL DOOR REQUEST SWITCHES : Diagnosis Procedure"](#).

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-42, "Intermittent Incident"](#).

VEHICLE SECURITY SYSTEM CANNOT BE SET

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

NO >> GO TO 1.

DOOR KEY CYLINDER

DOOR KEY CYLINDER : Description

INFOID:0000000011323457

ARMED phase is not activated when all doors are locked using mechanical key.

NOTE:

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

CONDITION OF VEHICLE (OPERATING CONDITION)

- SECURITY ALARM SET: ON

Check the setting of "SECURITY ALARM SET" in "Work Support" mode of "THEFT ALM" of "BCM" using CONSULT.

DOOR KEY CYLINDER : Diagnosis Procedure

INFOID:0000000011323458

1.CHECK POWER DOOR LOCK SYSTEM

Lock or unlock doors using mechanical key.

Refer to [DLK-33. "System Description"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check power door lock system. Refer to [DLK-364. "Diagnosis Procedure"](#).

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-42. "Intermittent Incident"](#).

NO >> GO TO 1.

DOOR LOCK AND UNLOCK SWITCH

DOOR LOCK AND UNLOCK SWITCH : Description

INFOID:0000000011323459

Armed phase is not activated when all doors are locked by door lock and unlock switch.

NOTE:

Check that vehicle is under the condition shown in "CONDITIONS OF VEHICLE (OPERATING CONDITIONS)" before starting diagnosis, and check each symptom.

CONDITION OF VEHICLE (OPERATING CONDITIONS)

"SECURITY ALARM SET": ON

Check the setting of "SECURITY ALARM SET" in "Work Support" mode of "THEFT ALM" of "BCM" using CONSULT.

DOOR LOCK AND UNLOCK SWITCH : Diagnosis Procedure

INFOID:0000000011323460

1.CHECK DOOR LOCK FUNCTION

Lock/unlock door using mechanical key inserted into door key cylinder.

Refer to [DLK-33. "System Description"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check Intelligent Key system (remote keyless entry function). Refer to [DLK-361. "ALL DOOR : Diagnosis Procedure"](#).

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-42. "Intermittent Incident"](#).

NO >> GO TO 1.

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G

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O

P

VEHICLE SECURITY ALARM DOES NOT ACTIVATE

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

VEHICLE SECURITY ALARM DOES NOT ACTIVATE

Description

INFOID:0000000011323461

Alarm does not operate when alarm operating condition is satisfied.

NOTE:

Check that vehicle is under the condition shown in "CONDITIONS OF VEHICLE (OPERATING CONDITIONS)" before starting diagnosis, and check each symptom.

CONDITION OF VEHICLE (OPERATING CONDITIONS)

"SECURITY ALARM SET": ON

Check the setting of "SECURITY ALARM SET" in "Work Support" mode of "THEFT ALM" of "BCM" using CONSULT.

Diagnosis Procedure

INFOID:0000000011323462

1.CHECK DOOR SWITCH

Check door switch.

Refer to [DLK-241, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the malfunctioning door switch

2.CHECK HEADLAMPS FUNCTION

Check head lamps function.

Refer to [SEC-120, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.CHECK HORN FUNCTION

Check horn function.

Refer to [SEC-121, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunctioning parts.

4.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-42, "Intermittent Incident"](#).

NO >> GO TO 1.

REMOVAL AND INSTALLATION

NATS ANTENNA AMP.

Removal and Installation

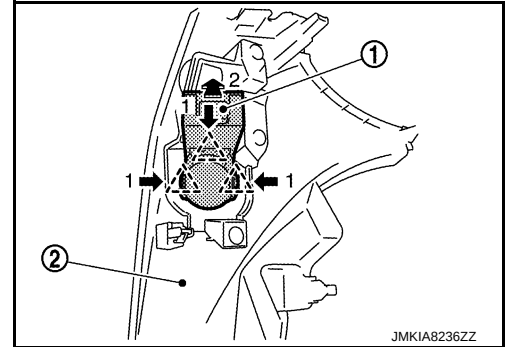
INFOID:0000000011323463

REMOVAL

1. Remove the push-button ignition switch. Refer to [SEC-130. "Removal and Installation"](#).
2. Press the NATS antenna amp. fixing pawls in the direction of the arrow (1), as shown in the figure, to disengage them.

 : Pawl

3. Push NATS antenna amp. (1) in the direction of the arrow (2), as shown in the figure, to remove it from instrument finisher A (2).



INSTALLATION

Install in the reverse order of removal.

A
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SEC

PUSH-BUTTON IGNITION SWITCH

< REMOVAL AND INSTALLATION >

[WITH INTELLIGENT KEY SYSTEM]

PUSH-BUTTON IGNITION SWITCH

Removal and Installation

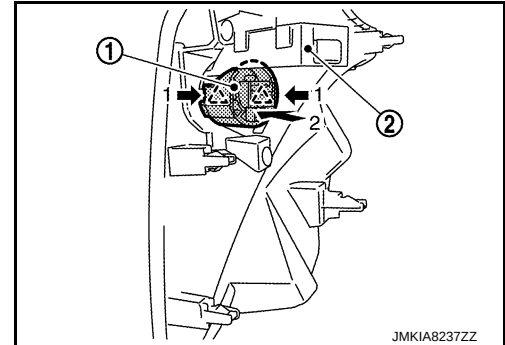
INFOID:000000011323464

REMOVAL

1. Remove instrument finisher A. Refer to [IP-14, "Removal and Installation"](#).
2. Disconnect NATS antenna amp. connector and push-button ignition switch connector.
3. Disengage the push-button ignition switch fixing pawls by pushing them in the direction of the arrow (1) as shown in the figure.

 : Pawl

4. Push push-button ignition switch (1) in the direction of the arrow (2), as shown in the figure, and remove push-button ignition switch from NATS antenna amp (2).



INSTALLATION

Install in the reverse order of removal.