SECTION SEC
SECURITY CONTROL SYSTEM

CONTENTS

PRECAUTION

PRECAUTIONS

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

INFOID:0000000009653695

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

WARNING:

Always observe the following items for preventing accidental activation.

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

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

WARNING:

Always observe the following items for preventing accidental activation.

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

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

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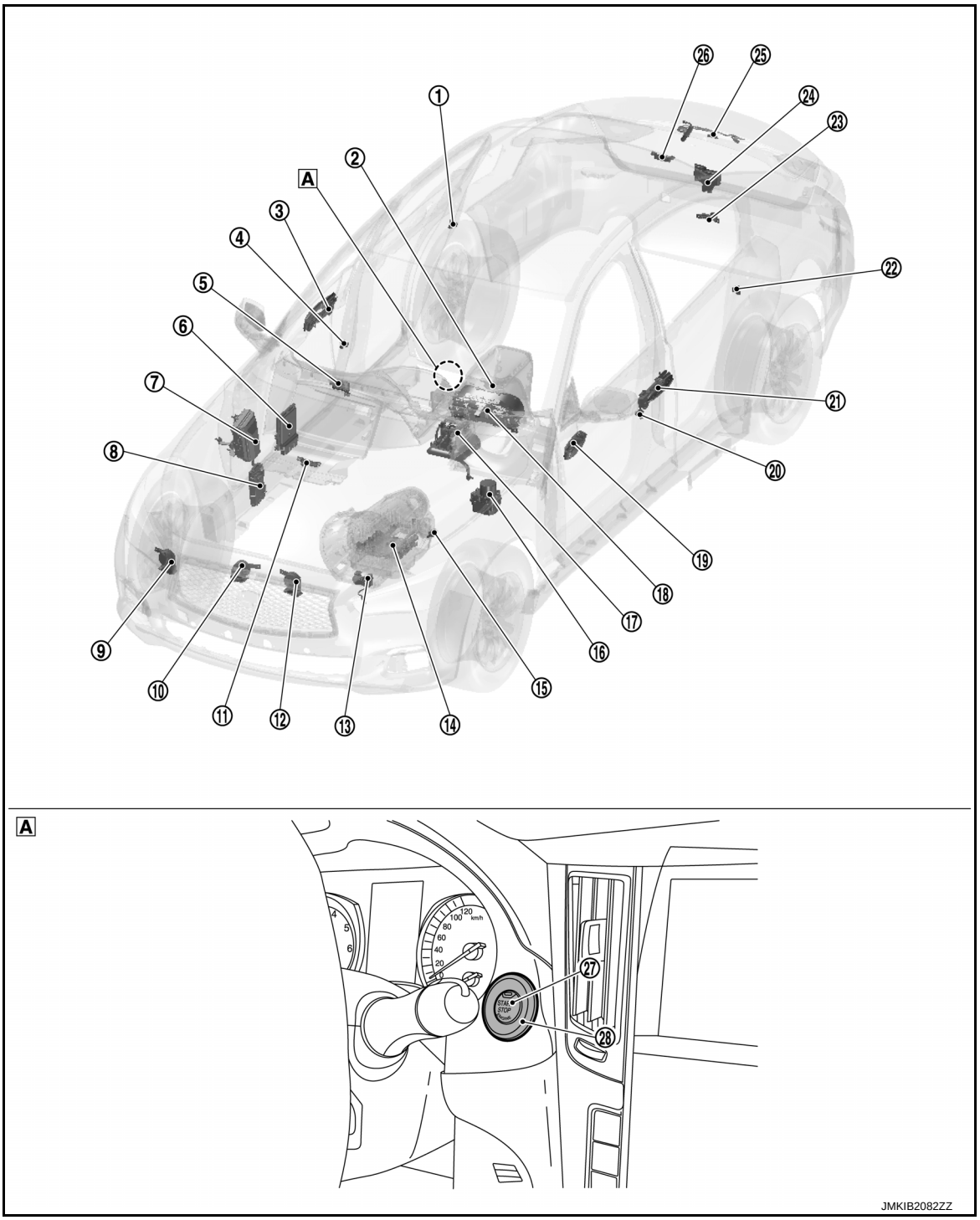

A View with cluster lid A

No.	Component	Function
①	Rear door switch RH	Door switch detects door open/close condition and then transmits ON/OFF signal to BCM.
②	Inside key antenna (console)	Inside key antenna (console) detects whether Intelligent Key is inside the vehicle, and transmits the signal to BCM. Refer to DLK-9, "DOOR LOCK SYSTEM : Component Parts Location" for detailed installation location.
③	One touch unlock sensor assembly (passenger side)	One touch unlock sensor detects user hold outside handle operation and transmits one touch unlock sensor signal to BCM. Refer to DLK-9, "DOOR LOCK SYSTEM : Component Parts Location" for detailed installation location.
④	Front door switch (passenger side)	Door switch detects door open/close condition and then transmits ON/OFF signal to BCM.
⑤	Remote keyless entry 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-9, "DOOR LOCK SYSTEM : Component Parts Location" for detailed installation location.
⑥	ECM	ECM controls the engine. When ignition switch is turned ON, BCM starts communication with ECM and performs the ID verification between BCM and ECM. If the verification result is OK, the engine can start. If the verification result is NG, the engine can not start. Refer to EC-16, "ENGINE CONTROL SYSTEM : Component Parts Location" for detailed installation location.
⑦	IPDM E/R	Starter control relay and starter relay are integrated in IPDM E/R, and used for the engine 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, "Component Parts Location" for detailed installation location.
⑧	BCM	BCM controls INTELLIGENT KEY SYSTEM (ENGINE START FUNCTION), INFINITI VEHICLE IMMOBILIZER SYSTEM (NATS) and VEHICLE SECURITY SYSTEM. BCM performs the ID verification between BCM and Intelligent Key when the Intelligent Key is carried into the detection area of inside key antenna, and push-button ignition switch is pressed. If the ID verification result is OK, ignition switch operation is available. Then, when the ignition switch is turned ON, BCM performs ID verification between BCM and ECM. If the ID verification result is OK, ECM can start engine. Refer to BCS-4, "BODY CONTROL SYSTEM : Component Parts Location" for detailed installation location.
⑨	Vehicle security horn	Vehicle security horn and horn (high) operate for warning vehicle surroundings when VEHICLE SECURITY SYSTEM operates.
⑩	Horn (high)	
⑪	Inside key antenna (instrument lower)	Inside key antenna (instrument lower) detects whether Intelligent Key is inside the vehicle, and transmits the signal to BCM. Refer to DLK-9, "DOOR LOCK SYSTEM : Component Parts Location" for detailed installation location.
⑫	Horn (low)	Horn (low) operate for warning vehicle surroundings when VEHICLE SECURITY SYSTEM operates.
⑬	Hood switch	Refer to SEC-8, "Hood Switch".

No.	Component	Function
⑭	A/T assembly (TCM)	TCM detects the selector lever position, and then transmits the P/N position signal to BCM and IPDM E/R. BCM confirms the A/T shift selector position with the following 4 signals. • P position signal from A/T shift selector (detention switch) • P/N position signal from TCM • Interlock/PNP switch signal from IPDM E/R (CAN) • P/N position signal from TCM (CAN) IPDM E/R confirms the A/T shift selector position with the following 3 signals. • P position signal from A/T shift selector (detention switch) • P/N position signal from TCM • P/N position signal from BCM (CAN) Refer to TM-12, "A/T CONTROL SYSTEM : Component Parts Location" for detailed installation location.
⑮	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.
⑯	ABS actuator and electric unit (control unit)	ABS actuator and electric unit (control unit) transmits the vehicle speed signal to BCM via CAN communication. BCM also receives the vehicle speed signal from combination meter via CAN communication. BCM compares both signals to detect the vehicle speed. Refer to BRC-9, "Component Parts Location" for detailed installation location.
⑰	A/T shift selector (detention switch)	Detention switch is integrated into A/T shift sector, and detects that selector lever is locked in the P position, then transmits ON/OFF signal to BCM and IPDM E/R.
⑱	Combination meter	Combination meter transmits the vehicle speed signal to BCM via CAN communication. BCM also receives the vehicle speed signal from ABS actuator and electric unit (control unit) via CAN communication. BCM compares both signals to detect the vehicle speed. Security indicator lamp is located on combination meter. Security indicator lamp blinks when ignition switch is in any position other than ON to warn that INFINITI VEHICLE IMMOBILIZER SYSTEM (NATS) is on board.
⑲	Power window main switch (door lock and unlock switch)	Door lock and unlock switch transmits door lock/unlock signal operation to BCM.
⑳	Front door switch (driver side)	Door switch detects door open/close condition and then transmits ON/OFF signal to BCM.
㉑	One touch unlock sensor assembly (driver side)	One touch unlock sensor detects user hold outside handle operation and transmits one touch unlock sensor signal to BCM. Refer to DLK-9, "DOOR LOCK SYSTEM : Component Parts Location" for detailed installation location.
㉒	Rear door switch LH	Door switch detects door open/close condition and then transmits ON/OFF signal to BCM.
㉓	Outside key antenna (rear bumper)	Outside key antenna detects whether Intelligent Key is within the detection area or not, and then transmits signal to BCM. Refer to DLK-9, "DOOR LOCK SYSTEM : Component Parts Location" for detailed installation location.
㉔	Trunk lid lock assembly (trunk room lamp switch)	Trunk room lamp switch is integrated into trunk lid lock assembly. Trunk room lamp switch detects trunk lid open/close condition and then transmits ON/OFF signal to BCM.
㉕	Trunk lid opener request switch	Trunk lid opener request switch detects open operation of trunk lid and transmits trunk lid opener request signal to BCM.
㉖	Inside key antenna (trunk room)	Inside key antenna (trunk room) detects whether Intelligent Key is inside the vehicle, and transmits the signal to BCM. Refer to DLK-9, "DOOR LOCK SYSTEM : Component Parts Location" for detailed installation location.
㉗	Push-button ignition switch	Push-button ignition switch has push switch inside which detects that push-button ignition switch is pressed, and then transmits ON/OFF signal to BCM. BCM change the ignition switch position with the operation of push-button ignition switch. BCM maintains the ignition switch position status while push-button ignition switch is not operated.
㉘	NATS antenna amp.	Refer to SEC-8, "NATS Antenna Amp.".

NATS Antenna Amp.

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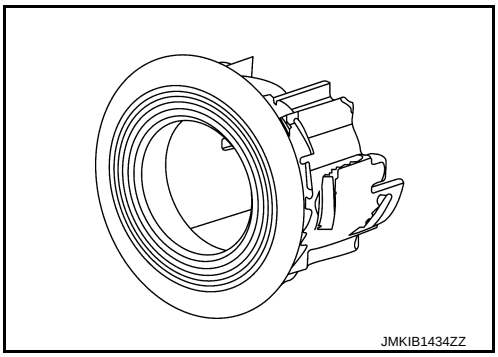
The ID verification is performed between BCM and transponder integrated into Intelligent Key via NATS antenna amp. when Intelligent Key backside is contacted to push-button ignition switch in case that Intelligent Key battery is discharged. If the ID verification result is OK, the operation of ignition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



Hood Switch

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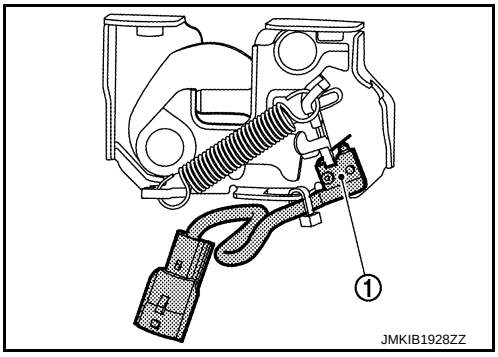
Hood switch ① detects that hood is open, and then transmits ON/OFF signal to IPDM E/R. IPDM E/R transmits hood switch signal to BCM via CAN communication. Hood switch is integrated into hood lock assembly LH.



SYSTEM

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION : System Description

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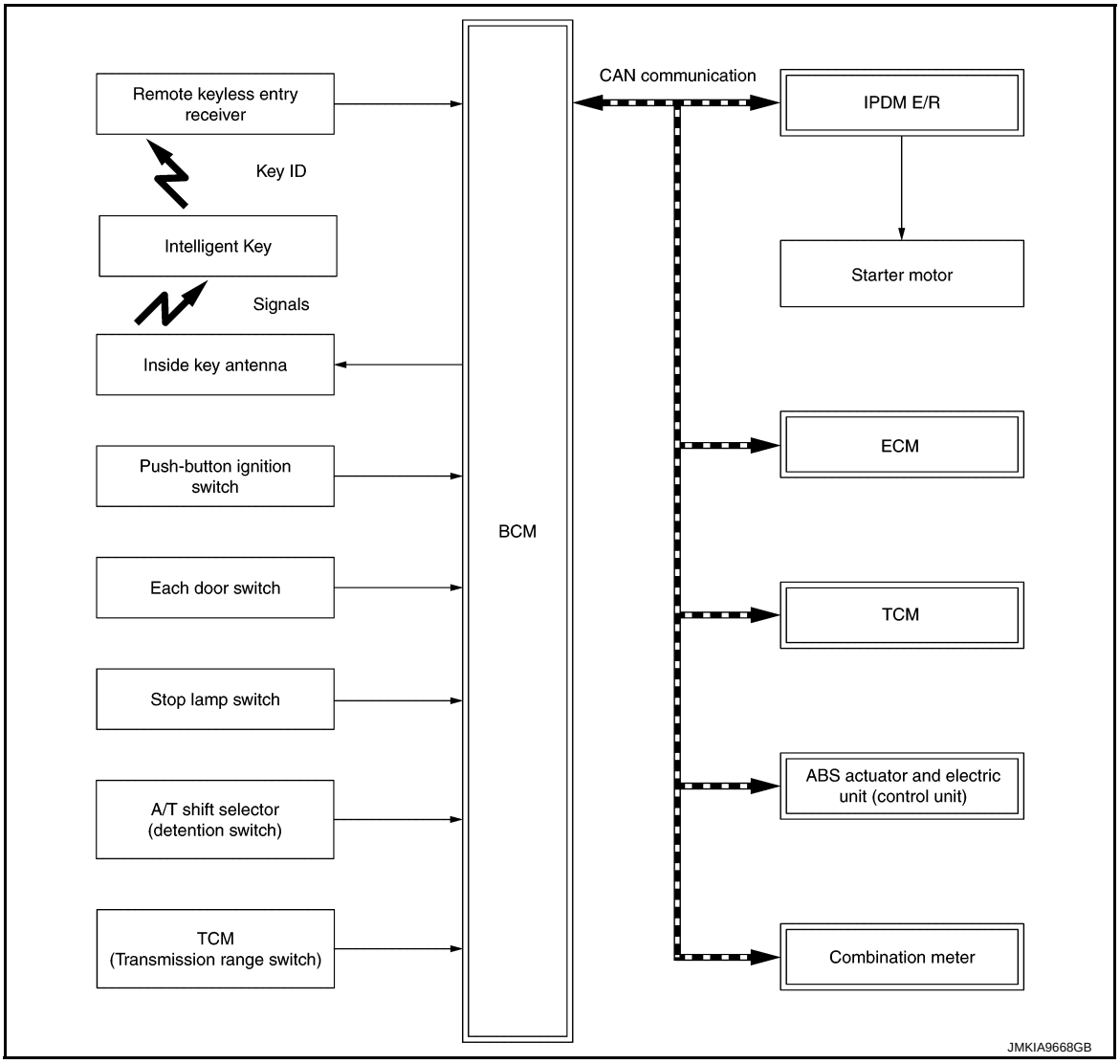
SYSTEM DIAGRAM



BCM 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
ABS actuator and electric unit (control unit)		Vehicle speed signal
Remote keyless entry receiver	Key ID signal	

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

Output Signal Item

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

SYSTEM DESCRIPTION

- The engine start function of Intelligent Key system makes it possible to start and stop the engine without using the key, based on the electronic ID verification. The electronic ID verification is performed between BCM and Intelligent Key when the push-button ignition switch is pressed while the Intelligent Key is within the detection area of inside key antenna.
  NOTE:
  The driver should carry the Intelligent Key at all times.
- Intelligent Key has 2 IDs (Intelligent Key ID and NATS ID). It can perform the door lock/unlock operation and the push-button ignition switch operation when the registered Intelligent Key is carried.
  NOTE:
  Refer to DLK-19, "INTELLIGENT KEY SYSTEM : System Description" for any functions other than engine start function of Intelligent Key system.
- If the ID is successfully verified, when push-button ignition switch is pressed, the engine can be started.
- Up to 4 Intelligent Keys can be registered (Including the standard Intelligent Key) upon request from the customer.
- For registration of Intelligent Keys, perform procedure according to the instructions displayed on the CONSULT monitor.

PRECAUTIONS FOR INTELLIGENT KEY SYSTEM

The transponder (the chip for NATS ID verification) is integrated into the Intelligent Key. (For the conventional models, it is integrated into the mechanical key.) Therefore, ID verification cannot be performed by mechanical key only.
In that case, NATS ID verification can be performed when Intelligent Key backside is contacted to push-button ignition switch while brake pedal is depressed. If verification result is OK, engine can be started.

OPERATION WHEN INTELLIGENT KEY IS CARRIED

1. When the push-button ignition switch is pressed, the BCM activates the inside key antenna and transmits the request signal to the Intelligent Key.
2. The Intelligent Key receives the request signal and transmits the Intelligent Key ID signal to the BCM.
3. BCM receives the Intelligent Key ID signal via remote keyless entry receiver and verifies it with the registered ID.
4. BCM turns ACC relay ON and transmits the ignition power supply ON signal to IPDM E/R.
5. IPDM E/R turns the ignition relay ON and starts the ignition power supply.
6. IPDM E/R turns the starter control relay ON for engine starting in advance.
7. BCM detects the selector lever position and brake pedal operation condition.
8. BCM transmits the starter request signal to IPDM E/R and turns the starter relay in IPDM E/R ON if BCM judges that the engine start condition* is satisfied.
9. Power supply is supplied through the starter relay and the starter control relay to operate the starter motor.
   CAUTION:
   If a malfunction is detected in the Intelligent Key system, the “Intelligent Key system malfunction display” display on information display in combination meter. At that time, the engine cannot be started.

10. When BCM receives feedback signal from ECM indicating that the engine is started, the BCM transmits a stop signal to IPDM E/R and stops cranking by turning OFF the starter motor relay. (If engine start is unsuccessful, cranking stops automatically within 5 seconds.)
    CAUTION:
    When the Intelligent Key is carried outside of the vehicle (inside key antenna detection area) while the power supply is in the ACC or ON position, even if the engine start condition* is satisfied, the engine cannot be started.

*: For the engine start condition, refer to “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, 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,
- 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

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

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

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION : Circuit Diagram

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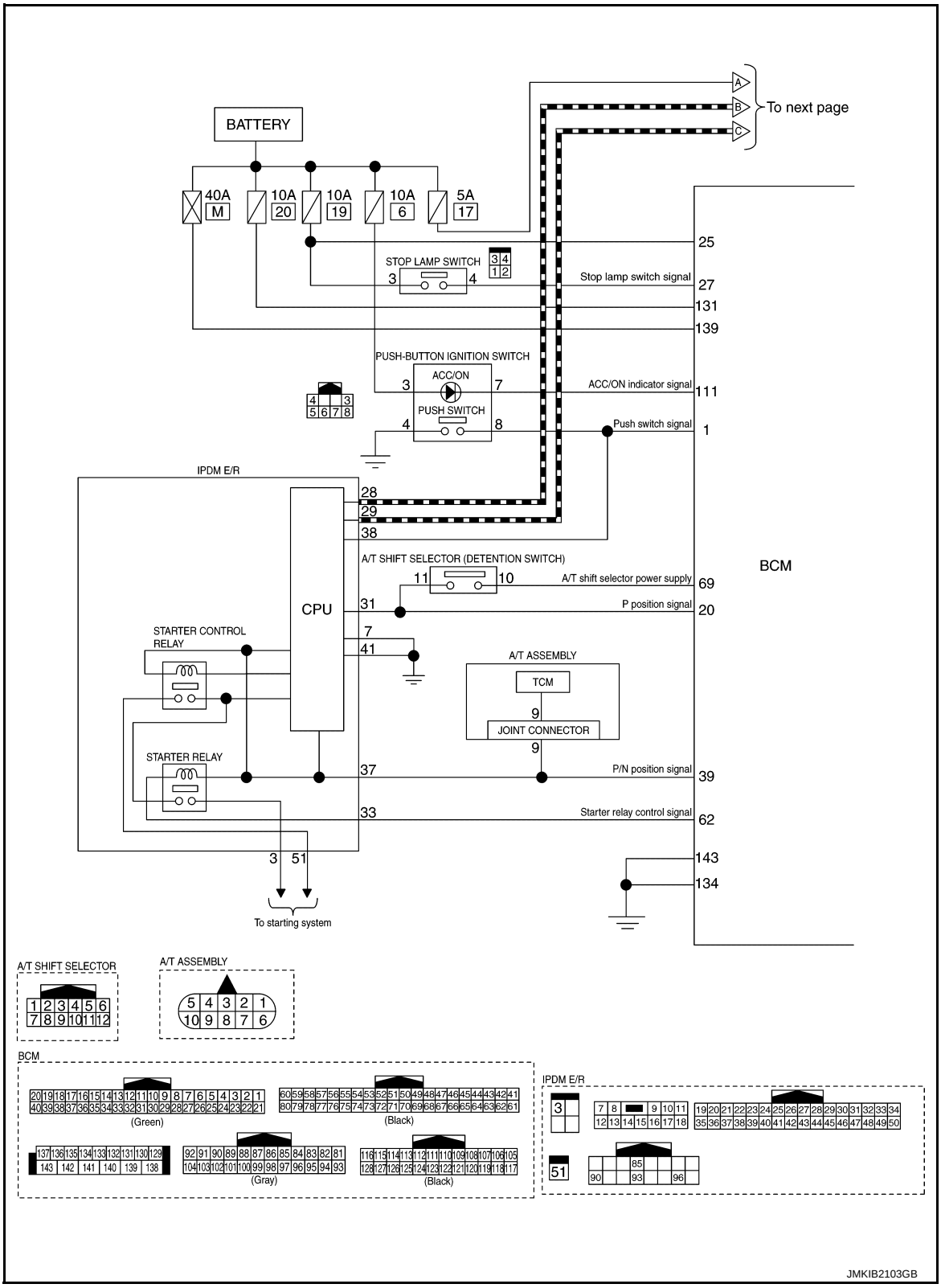
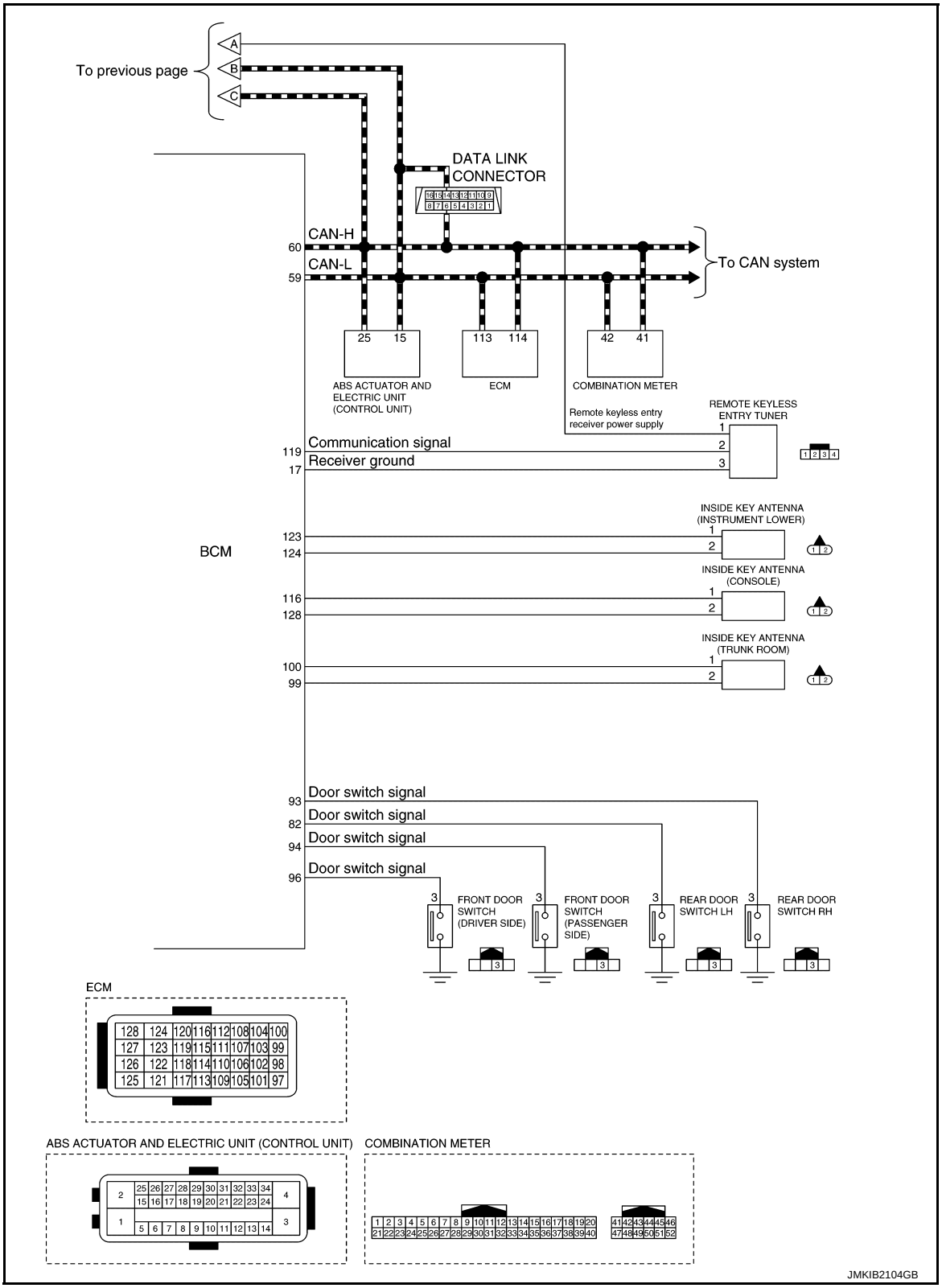


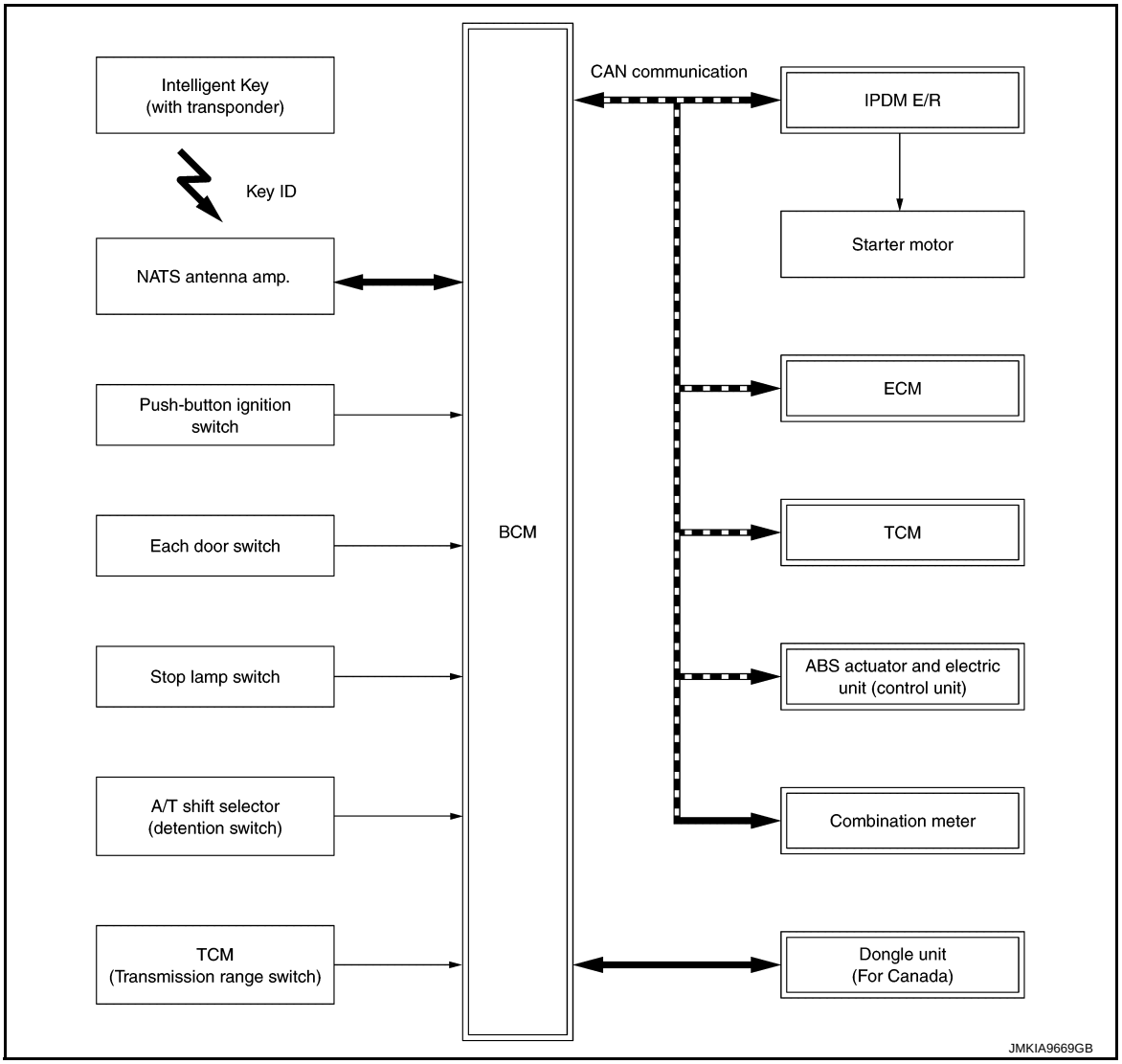


INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS

INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS : System Description

INFOID:0000000009345869

SYSTEM DIAGRAM



BCM 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
ABS actuator and electric unit (control unit)		Vehicle speed signal
NATS antenna amp.	Key ID signal	
Push-button ignition switch	Push switch signal	
Each door switch	Door switch signal	
Stop lamp switch	Stop lamp switch signal	

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

Output Signal Item

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

SYSTEM DESCRIPTION

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

PRECAUTIONS FOR KEY REGISTRATION

- The ID registration is a procedure that erases the current NATS ID once, and then registers a new ID. Therefore before starting the registration operation, collect all registered Intelligent Keys from the customer.
- When registering the Intelligent Key, perform only one procedure to simultaneously register both IDs (NATS ID and Intelligent Key ID).
- For registration of Intelligent Keys, perform procedure according to the instructions displayed on the CONSULT monitor.

SECURITY INDICATOR LAMP

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

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

ENGINE START OPERATION WHEN INTELLIGENT KEY IS CONTACTED TO PUSH-BUTTON 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 NATS ID verification between BCM and Intelligent Key (built-in transponder) via NATS antenna amp.
3. When NATS ID verification result is OK, buzzer in combination meter sounds and BCM transmits the result to ECM.
4. When push-button ignition switch is pressed, BCM turns ACC relay ON and transmits ignition power supply ON signal to IPDM E/R.
5. IPDM E/R turns the ignition relay ON and starts the ignition power supply.
6. IPDM E/R turns the starter control relay ON for engine starting in advance.
7. BCM detects that the selector lever position and brake pedal operation condition.

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

*: For the engine start condition, refer to “IGNITION SWITCH POSITION CHANGE TABLE BY PUSH-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,

- 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

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

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

INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS : Circuit Diagram

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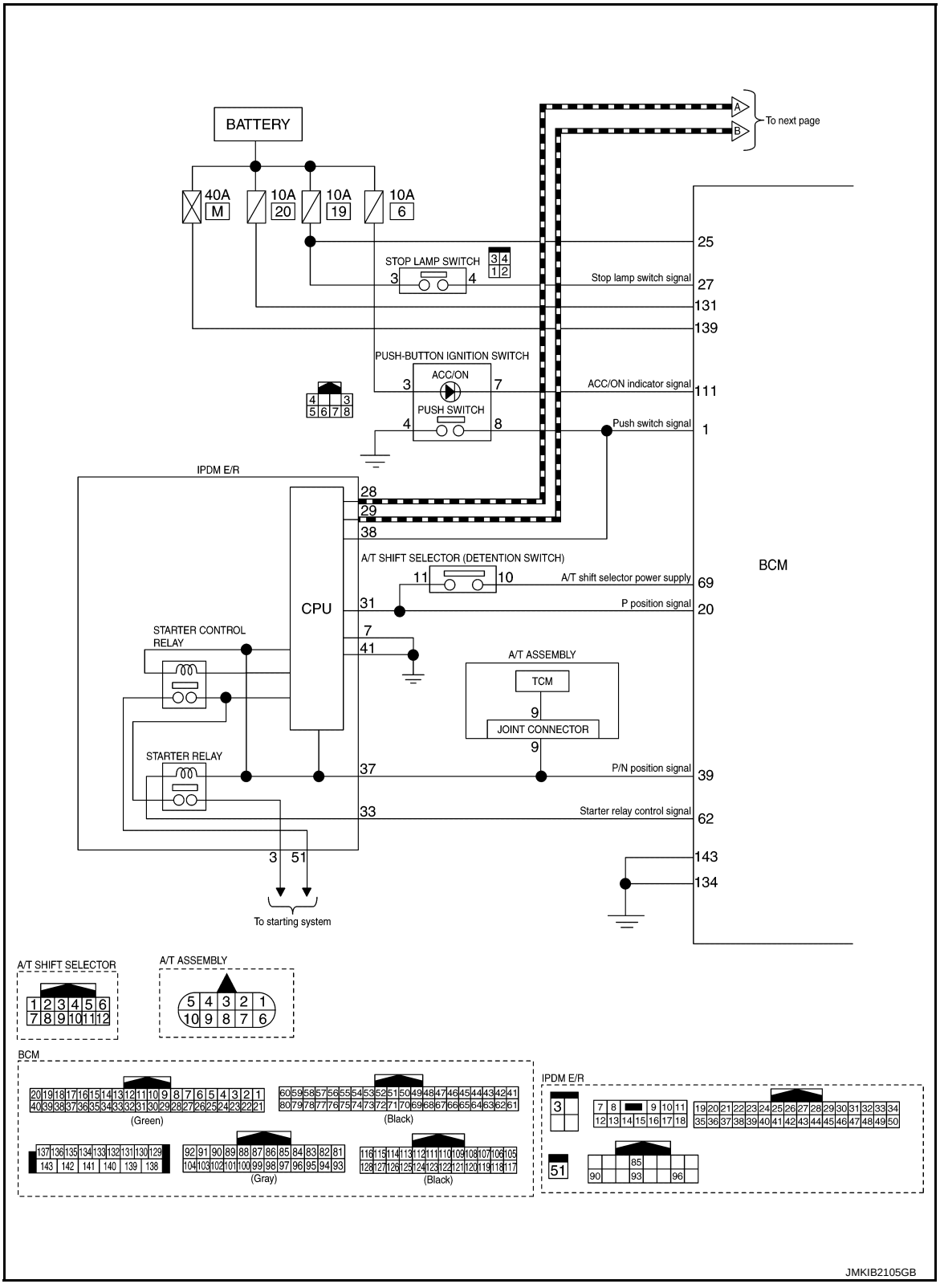
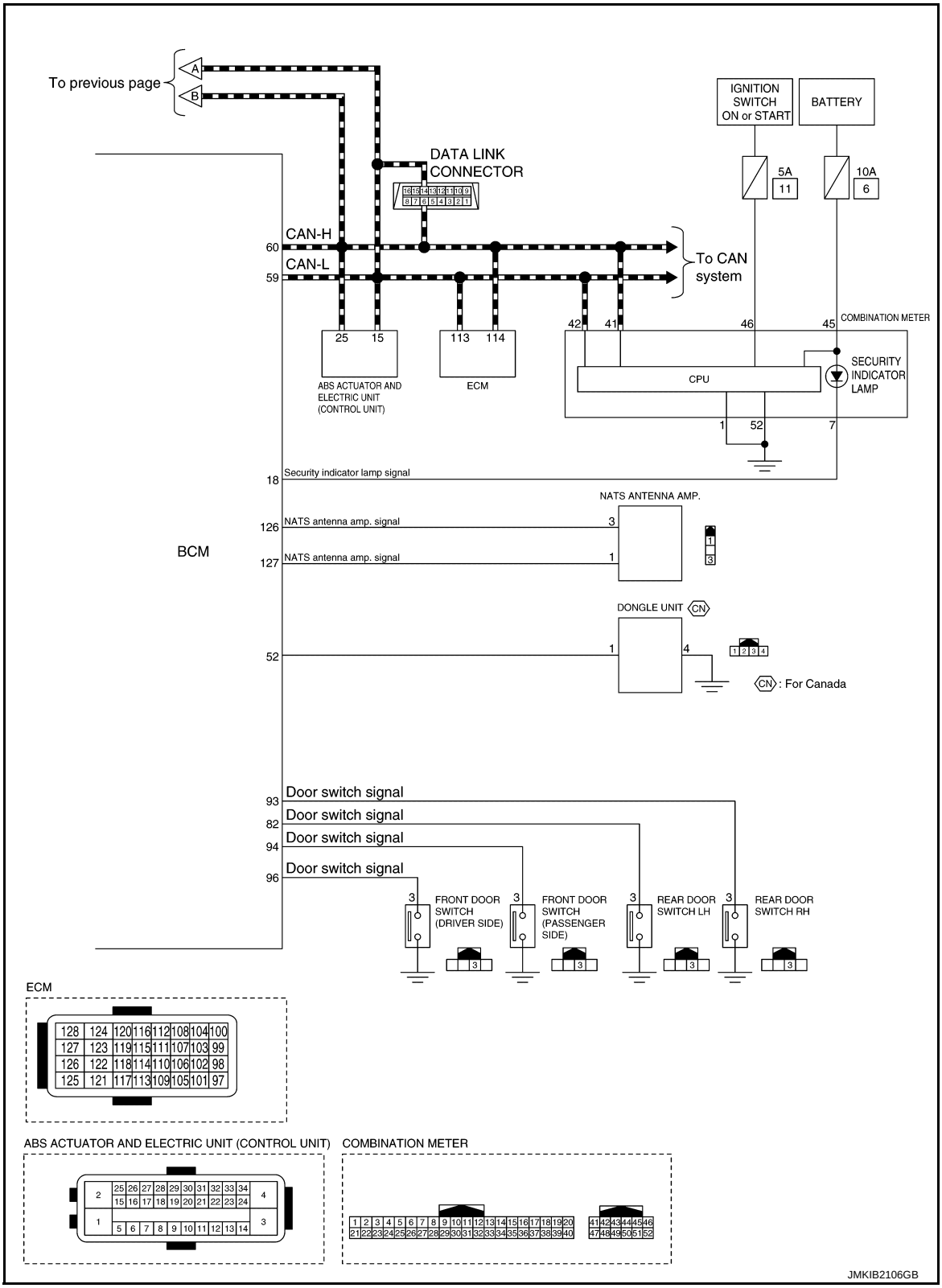


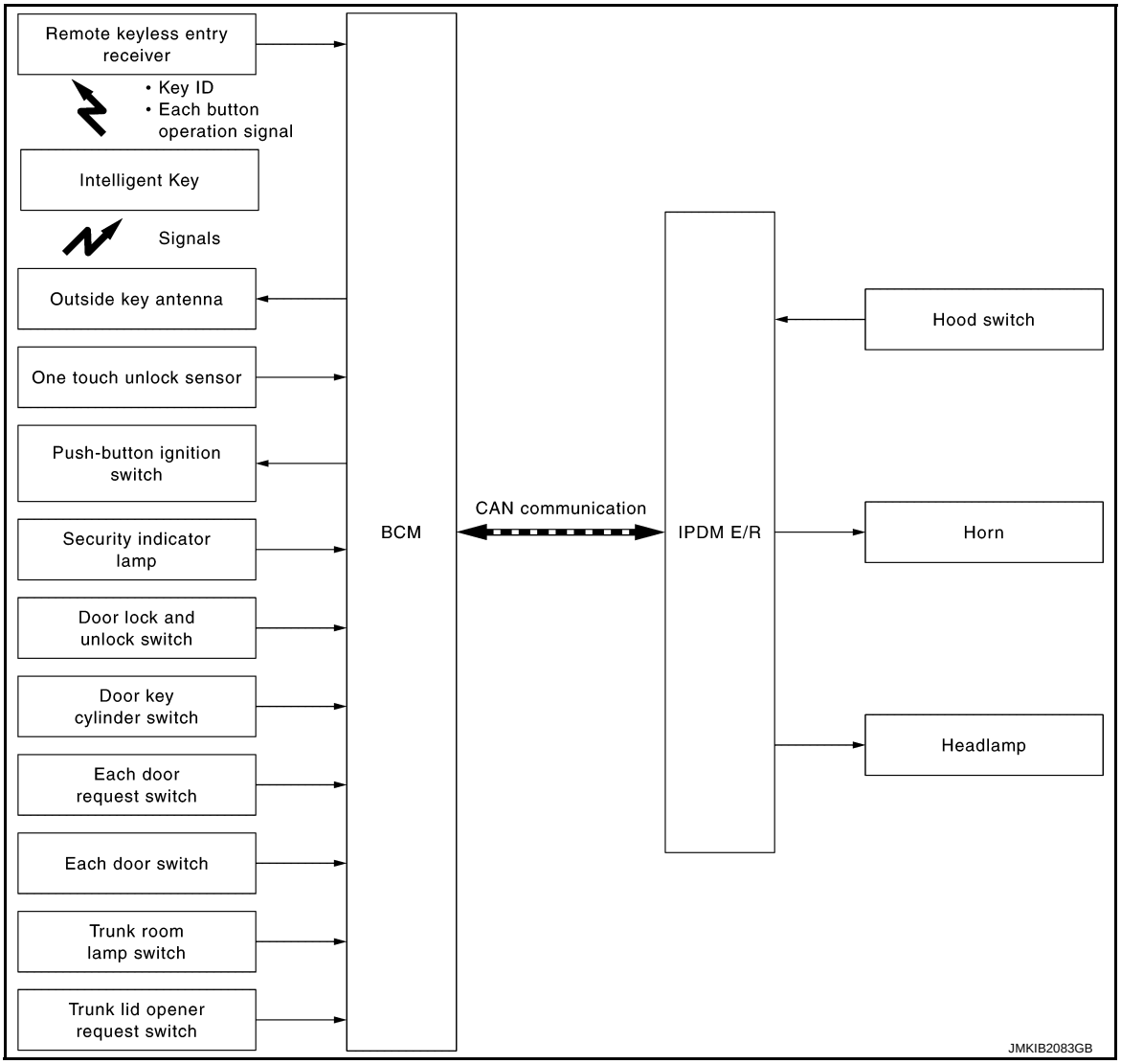


VEHICLE SECURITY SYSTEM

VEHICLE SECURITY SYSTEM : System Description

INFOID:0000000009345871

SYSTEM DIAGRAM



BCM INPUT/OUTPUT SIGNAL CHART

Input Signal Item

Transmit unit	Signal name	
IPDM E/R	CAN communication	Hood switch signal
Remote keyless entry receiver	• Key ID signal • Each button operation signal	
Push-button ignition switch	Push switch signal	
Each door switch	Door switch signal	
Each door request switch	Door request switch signal	
Trunk room lamp switch	Trunk room lamp switch signal	
Trunk lid opener request switch	Trunk opener request switch signal	
Door key cylinder switch	Door key cylinder switch signal	
One touch unlock sensor	One touch unlock sensor signal	

Output Signal Item

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

SYSTEM DESCRIPTION

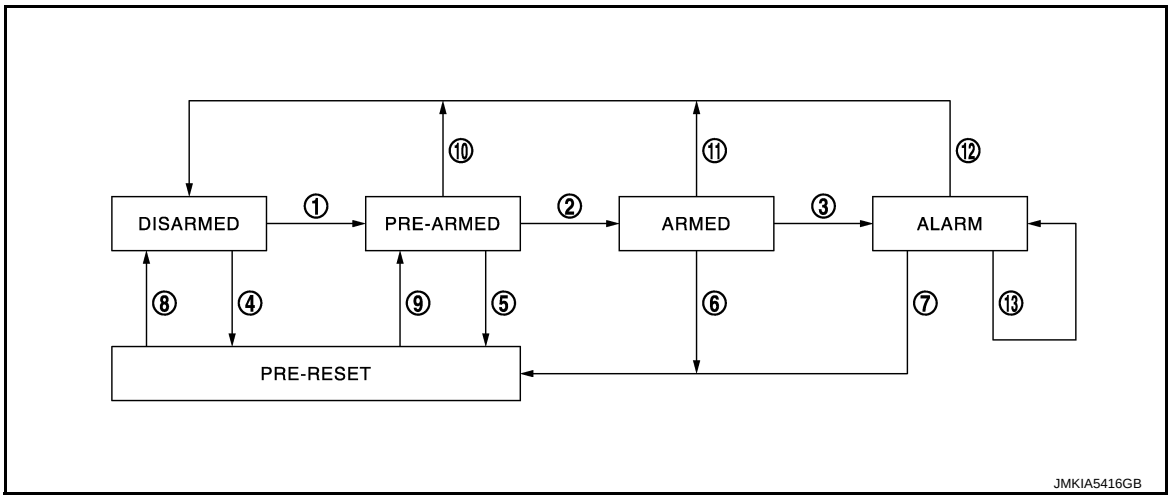
- The vehicle security system has two alarm functions (theft warning alarm and panic alarm), and reduces the possibility of a theft or mischief by activating horns and headlamps intermittently.
- The panic alarm does not start when the theft warning alarm is activating, and the panic alarm stops when 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 horns and headlamps intermittently when BCM detects that any door, hood or trunk lid is opened by unauthorized means, while the system is in the ARMED state.
- Security indicator lamp on combination meter always blinks when ignition switch is any position other than ON. Security indicator lamp blinking warns that the vehicle is equipped with a vehicle security system.

Operation Flow



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

<table>
<tr><th>No.</th><th>System state</th><th colspan="3">Switching condition</th></tr>
<tr><td rowspan="2">④</td><td rowspan="2">DISARMED to PRE-RESET</td><td rowspan="2">When all conditions of A and one condition of B is satisfied.</td><td>A</td><td>B</td></tr>
<tr><td>• Ignition switch: OFF
• All doors: Closed
• Hood and/or Trunk lid: Open</td><td>All doors are locked by:
• Door key cylinder LOCK switch
• LOCK button of Intelligent Key
• Door request switch</td></tr>
<tr><td>⑤</td><td>PRE-ARMED to PRE-RESET</td><td>When one of the following conditions is satisfied.</td><td colspan="2">• Hood: Open
• Trunk lid: Open</td></tr>
<tr><td>⑥</td><td>ARMED to PRE-RESET</td><td rowspan="2">When one of the following conditions is satisfied.</td><td colspan="2" rowspan="2">• Trunk lid opener request switch: ON
• TRUNK OPEN button of Intelligent Key: ON</td></tr>
<tr><td>⑦</td><td>ALARM to PRE-RESET</td></tr>
<tr><td>⑧</td><td>PRE-RESET to DISARMED</td><td>When one of the following conditions is satisfied.</td><td colspan="2">• Ignition switch: ACC/ON
• Door key cylinder UNLOCK switch: ON
• UNLOCK button of Intelligent Key: ON
• Door request switch: ON
• UNLOCK switch of door lock and unlock switch: ON
• Hold the outside handle grip (one touch unlock sensor: ON)
• Any door: Open</td></tr>
<tr><td rowspan="2">⑨</td><td rowspan="2">PRE-RESET to PRE-ARMED</td><td rowspan="2">When all conditions of A are satisfied, and all conditions of B are satisfied.</td><td>A</td><td>B</td></tr>
<tr><td>• Ignition switch: OFF
• All doors: Closed</td><td>• Hood: Closed
• Trunk lid: Closed</td></tr>
<tr><td>⑩</td><td>PRE-ARMED to DISARMED</td><td>When one of the following condition is satisfied.</td><td colspan="2">• Ignition switch: ACC/ON
• Door key cylinder UNLOCK switch: ON
• UNLOCK button of Intelligent Key: ON
• Door request switch: ON
• UNLOCK switch of door lock and unlock switch: ON
• Hold the outside handle grip (one touch unlock sensor: ON)
• Any door: Open</td></tr>
<tr><td>⑪</td><td>ARMED to DISARMED</td><td rowspan="2">When one of the following condition is satisfied.</td><td colspan="2" rowspan="2">• Ignition switch: ACC/ON
• Door key cylinder UNLOCK switch: ON
• UNLOCK button of Intelligent Key: ON
• Hold the outside handle grip (one touch unlock sensor: ON)
• Door request switch: ON</td></tr>
<tr><td>⑫</td><td>ALARM to DISARMED</td></tr>
<tr><td>⑬</td><td>RE-ALARM</td><td>When one of the following condition is satisfied after the ALARM operation is finished.</td><td colspan="2">• Any door: Open
• Hood: Open
• Trunk lid: Open</td></tr>
</table>

NOTE:

- BCM ignores the door key cylinder UNLOCK switch signal input for 1 second after the door key cylinder LOCK switch signal input.
- To lock/unlock all doors or trunk lid by operating remote controller button of Intelligent Key or door/trunk lid opener request switch, Intelligent Key must be within the detection area of outside key antenna. For details, refer to DLK-19, "INTELLIGENT KEY SYSTEM : System Description".

DISARMED Phase

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

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

PRE-ARMED Phase

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

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

ARMED Phase

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

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

ALARM Phase

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

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

NOTE:

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

PRE-RESET Phase

The PRE-RESET phase is the transient state between each phase and DISARMED phase. If only the condition of hood or trunk lid is not satisfied, the system switches to the PRE-RESET phase. Then, when any condition is changed, the system switches to the DISARMED phase or PRE-ARMED phase.

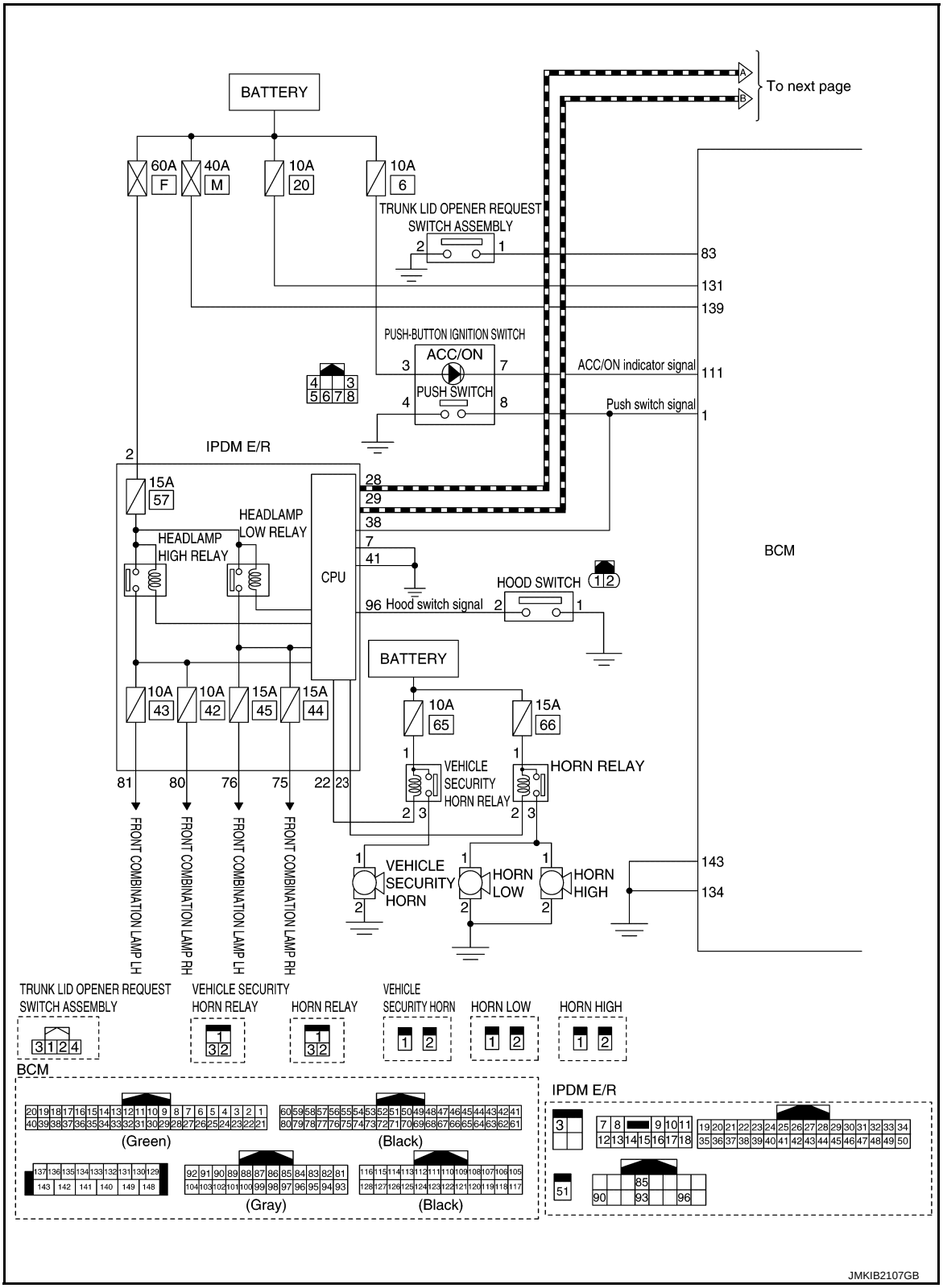
PANIC ALARM

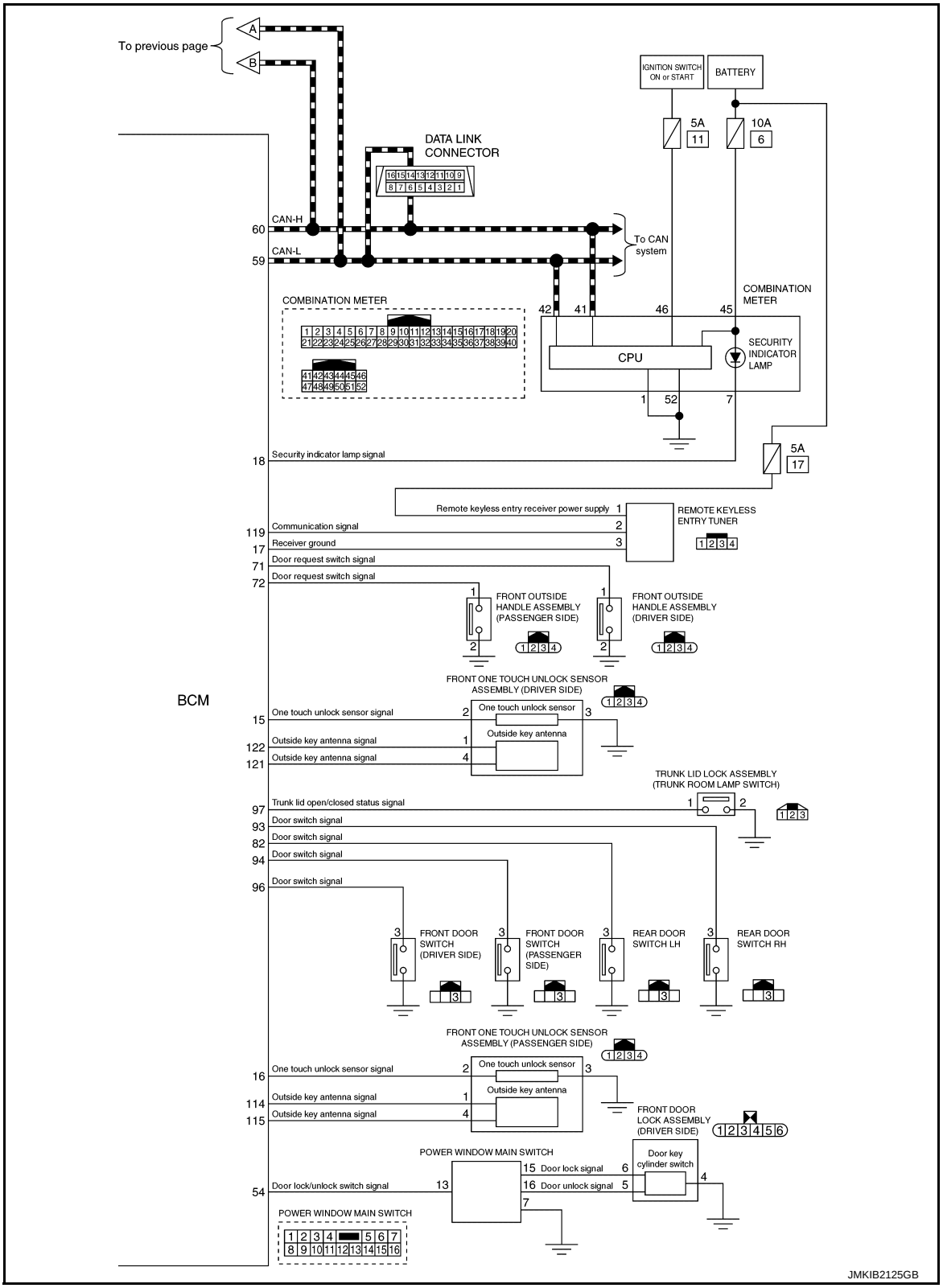
- The panic alarm function activates horns and headlamps intermittently when the owner presses the PANIC ALARM button of Intelligent Key outside the vehicle while the ignition switch is OFF.
- When BCM receives panic alarm signal from Intelligent Key, BCM transmits “Theft Warning Horn Request” signal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

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

VEHICLE SECURITY SYSTEM : Circuit Diagram

INFOID:0000000009345872





WARNING/INDICATOR/CHIME LIST

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

INFOID:0000000009345873

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

DIAGNOSIS SYSTEM (BCM)
COMMON ITEM
COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000009641389

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 timer	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
—	AIR CONDITONER*		×	×
• Intelligent Key system • Engine start system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
IVIS - NATS	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Trunk lid open	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	AIR PRESSURE MONITOR			×

*: This item is not used.

FREEZE FRAME DATA (FFD)
The BCM records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT.

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 “LOCK”*)
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power supply position is “OFF”.)
	LOCK>ACC		While turning power supply position from “LOCK” *to “ACC”
	ACC>ON		While turning power supply position from “ACC” to “IGN”
	RUN>ACC		While turning power supply position from “RUN” to “ACC” (Vehicle is stopping and selector lever is except P position.)
	CRANK>RUN		While turning power supply position from “CRANKING” to “RUN” (From cranking up the engine to run it)
	RUN>URGENT		While turning power supply position from “RUN“ to “ACC” (Emergency stop operation)
	ACC>OFF		While turning power supply position from “ACC” to “OFF”
	OFF>LOCK		While turning power supply position from “OFF” to “LOCK”*
	OFF>ACC		While turning power supply position from “OFF” to “ACC”
	ON>CRANK		While turning power supply position from “IGN” to “CRANKING”
	OFF>SLEEP		While turning BCM status from normal mode (Power supply position is “OFF”.) to low power consumption mode
	LOCK>SLEEP		While turning BCM status from normal mode (Power supply position is “LOCK”*.) to low power consumption mode
	LOCK		Power supply position is “LOCK” (Ignition switch OFF)*
	OFF		Power supply position is “OFF” (Ignition switch OFF)
	ACC		Power supply position is “ACC” (Ignition switch ACC)
	ON		Power supply position is “IGN” (Ignition switch ON with engine stopped)
	ENGINE RUN		Power supply position is “RUN” (Ignition switch ON with engine running)
	CRANKING		Power supply position is “CRANKING” (At engine cranking)
IGN Counter	0 - 39	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:
*: Power supply position shifts to “LOCK” from “OFF”, when ignition switch is in the OFF position, selector lever is in the P position, and any of the following conditions are met.
- Closing door
- Opening door
- Door is locked using door request switch
- Door is locked using Intelligent Key

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

INTELLIGENT KEY

INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY)

INFOID:0000000009641392

WORK SUPPORT

Monitor item	Description
INSIDE ANT DIAGNOSIS	This function allows inside key antenna self-diagnosis
LOCK/UNLOCK BY I-KEY	Door lock function (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	Reminder function (trunk lid opener request switch) mode can be changed to operation with this mode • On: Operate • Off: Non-operation
AUTO LOCK SET	Auto door lock operation time can be changed in this mode • MODE 1: OFF • MODE 2: 30 sec. • MODE 3: 1 minute • MODE 4: 2 minutes • MODE 5: 3 minutes • MODE 6: 4 minutes • MODE 7: 5 minutes
SHORT CRANKING OUTPUT	Starter motor can operate during the times below • 70 msec • 100 msec • 200 msec
CONFIRM KEY FOB ID	It can be checked whether Intelligent Key ID code is registered or not in this mode
RETRACTABLE MIRROR SET	**NOTE:** This item is displayed, but cannot be used
TOUCH SENSOR UNLOCK FUNCTION SETTING	One touch unlock function can be changed to operation with this mode • On: Operate • Off: Non-operation
IGN/ACC BATTERY SAVER	Ignition battery saver system mode can be changed to operation with this mode • On: Operate • Off: Non-operation
REMOTE ENGINE STARTE	**NOTE:** This item is displayed, but cannot be used
INTELLIGENT KEY LINK SET	**NOTE:** This item is displayed, but cannot be used
ANSWER BACK	Reminder function (door request switch and Intelligent Key) mode can be selected from the following with this mode • On: S mode (buzzer or horn reminder non-operation) • Off: C mode (buzzer or horn operate)
ANSWER BACK I-KEY LOCK UN-LOCK	Reminder function (door request switch) mode can be selected from the following with this mode • BUZZER: Sound Intelligent Key warning buzzer • HORN: Sound horn • Off: Only hazard warning lamp operate • INVALID: This item is displayed, but cannot be used
ANSWERBACK KEYLESS LOCK UNLOCK	Reminder function (Intelligent Key) mode can be selected from the following with this mode • On: Horn and hazard warning lamp operate • Off: Only hazard warning lamp operate
WELCOME LIGHT OP SET	**NOTE:** This item is displayed, but cannot be used

SELF-DIAG RESULT

Refer to BCS-62, "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 front door request switch (driver side)
REQ SW -AS	Indicates [On/Off] condition of front door request switch (passenger side)
REQ SW -BD/TR	Indicates [On/Off] condition of trunk lid opener request switch
PUSH SW	Indicates [On/Off] condition of push-button ignition switch
SHFTLCK SLNID PWR SPLY	Indicates [On/Off] condition of the power supply from BCM to shift lock solenoid
CLUCH SW	**NOTE:** This item is displayed, but cannot be monitored
BRAKE SW 1	Indicates [On/Off]* condition of stop lamp switch power supply
BRAKE SW 2	Indicates [On/Off] condition of stop lamp switch
DETE/CANCL SW	Indicates [On/Off] condition of P position
SFT PN/N SW	Indicates [On/Off] condition of P or N position
UNLK SEN -DR	Indicates [On/Off] condition of driver door UNLOCK status
PUSH SW -IPDM	Indicates [On/Off] condition of push-button ignition switch
IGN RLY1 -F/B	Indicates [On/Off] condition of ignition relay 1
DETE SW -IPDM	Indicates [On/Off] condition of P position
SFT PN -IPDM	Indicates [On/Off] condition of P or N position
SFT P -MET	Indicates [On/Off] condition of P position
SFT N -MET	Indicates [On/Off] condition of N position
ENGINE STATE	Indicates [STOP/STALL/CRANK/RUN] condition of engine states
VEH SPEED 1	Display the vehicle speed signal received from combination meter by numerical value [km/h]
VEH SPEED 2	Display the vehicle speed signal received from ABS or VDC or TCM by numerical value [km/h]
DOOR STAT-DR	Indicates [LOCK/READY/UNLK] condition of driver door status
DOOR STAT-AS	Indicates [LOCK/READY/UNLK] condition of passenger door status
DOOR STAT-RR	Indicates [LOCK/READY/UNLK] condition of rear door RH status
DOOR STAT-RL	Indicates [LOCK/READY/UNLK] condition of rear door LH status
BK DOOR STATE	**NOTE:** This item is displayed, but cannot be monitored
ID OK FLAG	Indicates [Set/Reset] condition of Intelligent Key ID
PRMT ENG STRT	Indicates [Set/Reset] condition of engine start possibility
PRMT RKE STRT	**NOTE:** This item is displayed, but cannot be monitored
I-KEY OK FLAG	Indicates [KEY On/NOT On] condition of Intelligent Key ID and Intelligent Key is detected inside vehicle
PRBT ENG STRT	Indicates whether or not the engine is in start prohibited status
ID AUTHENT CANCEL TIMER	Indicates whether or not it is in engine start possible status when Intelligent Key verification is unnecessary
ACC BATTERY SAVER	Indicates [On/Off] whether or not ignition battery saver is in operation
CRNK PRBT TMR	Indicates [On/Off] whether or not in cranking prohibited status due to starter motor protection function operation
AUT CRANK TMR	Indicates [On/Off] whether or not in AUTO CRANKING MODE status
CRNK PRBT TME	Indicates the time for changing from cranking prohibited status to cranking possible status
AUT CRANK TMR	Indicates the time that AUTO CRANKING MODE operates
CRANKING TME	Indicates the cranking operation time

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

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

ACTIVE TEST

Test item	Description
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation • On: Operates • 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 information display (combination meter) operation • KEY ON: [Intelligent Key system malfunction] displays when CONSULT screen is touched • KEY IND: [Steering lock unit ID registration complete] displays when CONSULT screen is touched • Off: Non-operation
INT LAMP	This test is able to check interior room lamp operation • On: Operates • Off: Non-operation
FLASHER	This test is able to check hazard warning lamp operation The hazard warning lamps are activated after “LH/RH/Off” on CONSULT screen is touched
HORN	This test is able to check horn operation • On: Operates
IGN CONT2	This test is able to operate the blower relay in fuse block (J/B) • On: Operates • Off: Non-operation
ENGINE SW ILLUMI	This test is able to check push-ignition switch illumination operation Push-ignition switch illumination illuminates when “On” on CONSULT screen is touched
PUSH SWITCH INDICATOR	This test is able to check push-ignition switch indicator operation when “On” on CONSULT screen is touched
ACC CONT	This test is able to operate the accessory relay in fuse block (J/B) • On: Operates • Off: Non-operation

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

*: When ignition switch is OFF, driver door opened, power window and sunroof is closed.

THEFT ALM

THEFT ALM : CONSULT Function (BCM - THEFT)

INFOID:0000000009345876

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 item is indicated, but not monitored.

Monitored Item	Description
REQ SW -RL	**NOTE:** This item is indicated, but not monitored.
REQ SW -BD/TR	Indicates [On/Off] condition of trunk lid opener request switch.
PUSH SW	Indicates [On/Off] condition of push-button ignition switch
UNLK SEN -DR	Indicates [On/Off] condition of driver door UNLOCK status.
DOOR SW-DR	Indicates [On/Off] condition of front door switch (driver side).
DOOR SW-AS	Indicates [On/Off] condition of front door switch (passenger side).
DOOR SW-RR	Indicates [On/Off] condition of rear door switch RH.
DOOR SW-RL	Indicates [On/Off] condition of rear door switch LH.
DOOR SW-BK	**NOTE:** This item is indicated, but not monitored.
CDL LOCK SW	Indicates [On/Off] condition of lock signal from door lock/unlock switch.
CDL UNLOCK SW	Indicates [On/Off] condition of unlock signal from door lock/unlock switch.
KEY CYL LK-SW	Indicates [On/Off] condition of lock signal from door key cylinder switch.
KEY CYL UN-SW	Indicates [On/Off] condition of unlock signal from door key cylinder switch.
KEY CYL SW-TR	**NOTE:** This item is indicated, but not monitored.
TR/BD OPEN SW	Indicates [On/Off] condition of trunk lid opener switch.
TRNK/HAT MNTR	Indicates [On/Off] condition of trunk room lamp switch.
SEN CANCEL SW	**NOTE:** This item is indicated, but not monitored.
RKE-LOCK	Indicates [On/Off] condition of LOCK signal from Intelligent Key.
RKE-UNLOCK	Indicates [On/Off] condition of UNLOCK signal from Intelligent Key.
RKE-TR/BD	Indicates [On/Off] condition of TRUNK OPEN signal from Intelligent Key.

WORK SUPPORT

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

ACTIVE TEST

Test Item	Description
FLASHER	This test is able to check turn signal lamp operation. Turn signal lamp is activated after “LH” or “RH” on CONSULT screen is touched.
THEFT IND	This test is able to check security indicator lamp operation. Security indicator lamp is turned on when “On” on CONSULT screen is touched.
VEHICLE SECURITY HORN	This test is able to check horn operation. Horn is activated for 0.5 seconds after “On” on CONSULT screen is touched.
HEADLAMP(HI)	This test is able to check headlamps operation. Headlamps are turned on when “On” on CONSULT screen is touched.

IMMU

IMMU : CONSULT Function (BCM - IMMU)

INFOID:0000000009345877

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

ACTIVE TEST

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

DIAGNOSIS SYSTEM (IPDM E/R)

CONSULT Function (IPDM E/R)

INFOID:0000000009653698

APPLICATION ITEM

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

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

SELF DIAGNOSTIC RESULT

Refer to PCS-22, "DTC Index".

DATA MONITOR

NOTE:

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

Monitor Item [Unit]	MAIN SIGNALS	Description
RAD FAN REQ [%]	×	Displays the value of the cooling fan speed request signal received from ECM via CAN communication.
AC COMP REQ [Off/On]	×	Displays the status of the A/C compressor request signal received from ECM via CAN communication.
TAIL&CLR REQ [Off/On]	×	Displays the status of the position light request signal received from BCM via CAN communication.
HL LO REQ [Off/On]	×	Displays the status of the low beam request signal received from BCM via CAN 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.

Monitor Item [Unit]	MAIN SIGNALS	Description
ST/INHI RLY [Off/ ST ON/INHI ON/UNKWN]		Displays the status of the starter relay and starter control relay judged by IPDM E/R.
DETENT SW [Off/On]		Displays the status of the A/T shift selector (detention switch) judged by IPDM E/R.
S/L RLY -REQ [Off/On]		**NOTE:** The item is indicated, but not monitored.
S/L STATE [LOCK/UNLK/UNKWN]		**NOTE:** The item is indicated, but not monitored.
DTRL REQ [Off/On]		Displays the status of the daytime running light request signal received from BCM via CAN communication.
OIL P SW [Open/Close]		Displays the status of the oil pressure switch judged by IPDM E/R.
HOOD SW [Off/On]		Displays the status of the hood switch judged by IPDM E/R.
HL WASHER REQ [Off/On]		**NOTE:** The item is indicated, but not monitored.
THFT HRN REQ [Off/On]		Displays the status of the theft warning horn request signal received from BCM via CAN communication.
HORN CHIRP [Off/On]		Displays the status of the horn reminder signal received from BCM via CAN communication.
HOOD SW 2 [Off/On]		**NOTE:** The item is indicated, but not monitored.

ACTIVE TEST

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

ECU DIAGNOSIS INFORMATION

ECM, IPDM E/R, BCM

List of ECU Reference

INFOID:0000000009345879

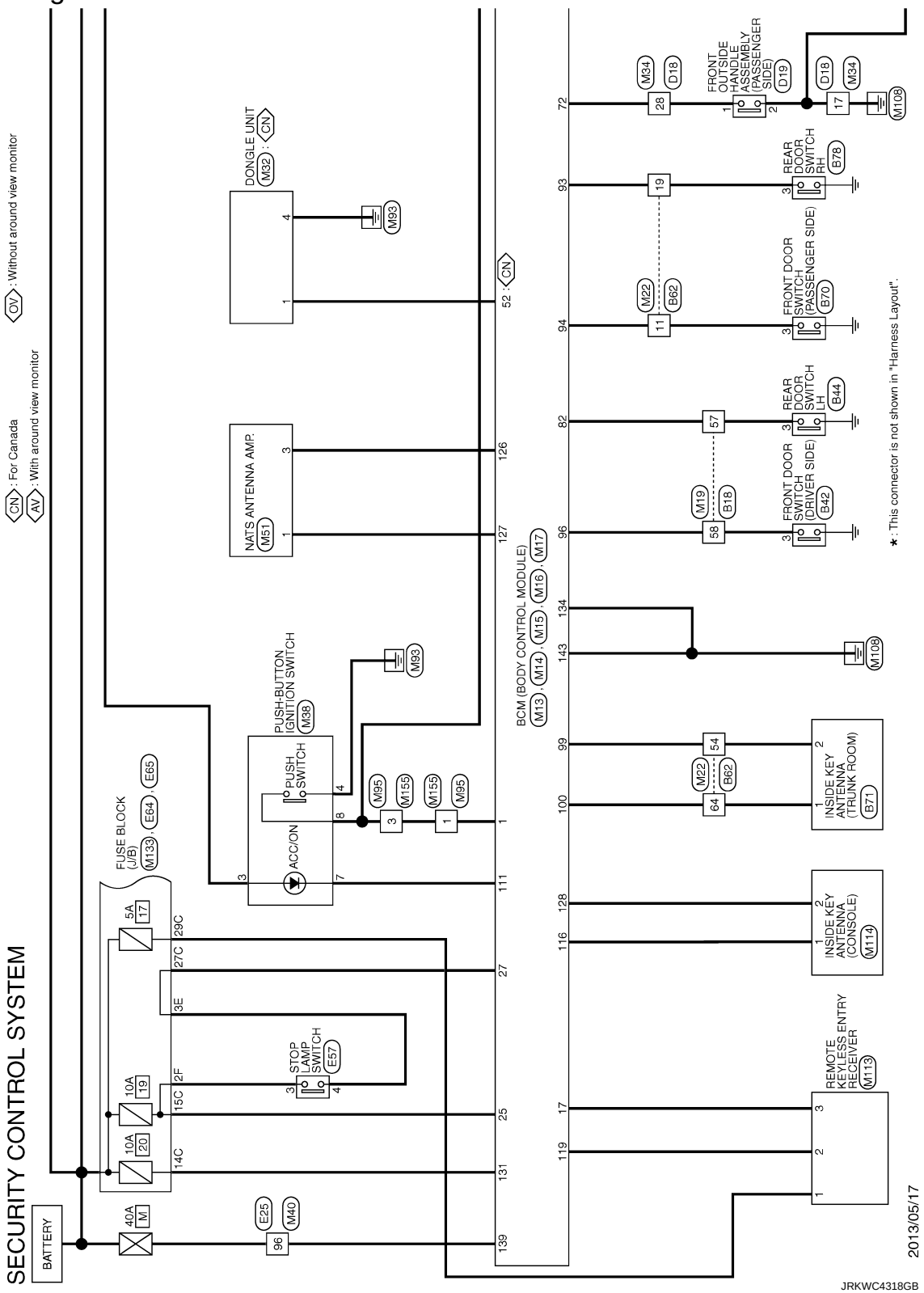
ECU		Reference
ECM	Reference Value	EC-86, "Reference Value"
	Fail-safe	EC-103, "Fail safe"
	DTC Inspection Priority Chart	EC-105, "DTC Inspection Priority Chart"
	DTC Index	EC-106, "DTC Index"
BCM	Reference Value	BCS-35, "Reference Value"
	Fail-safe	BCS-60, "Fail-safe"
	DTC Inspection Priority Chart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

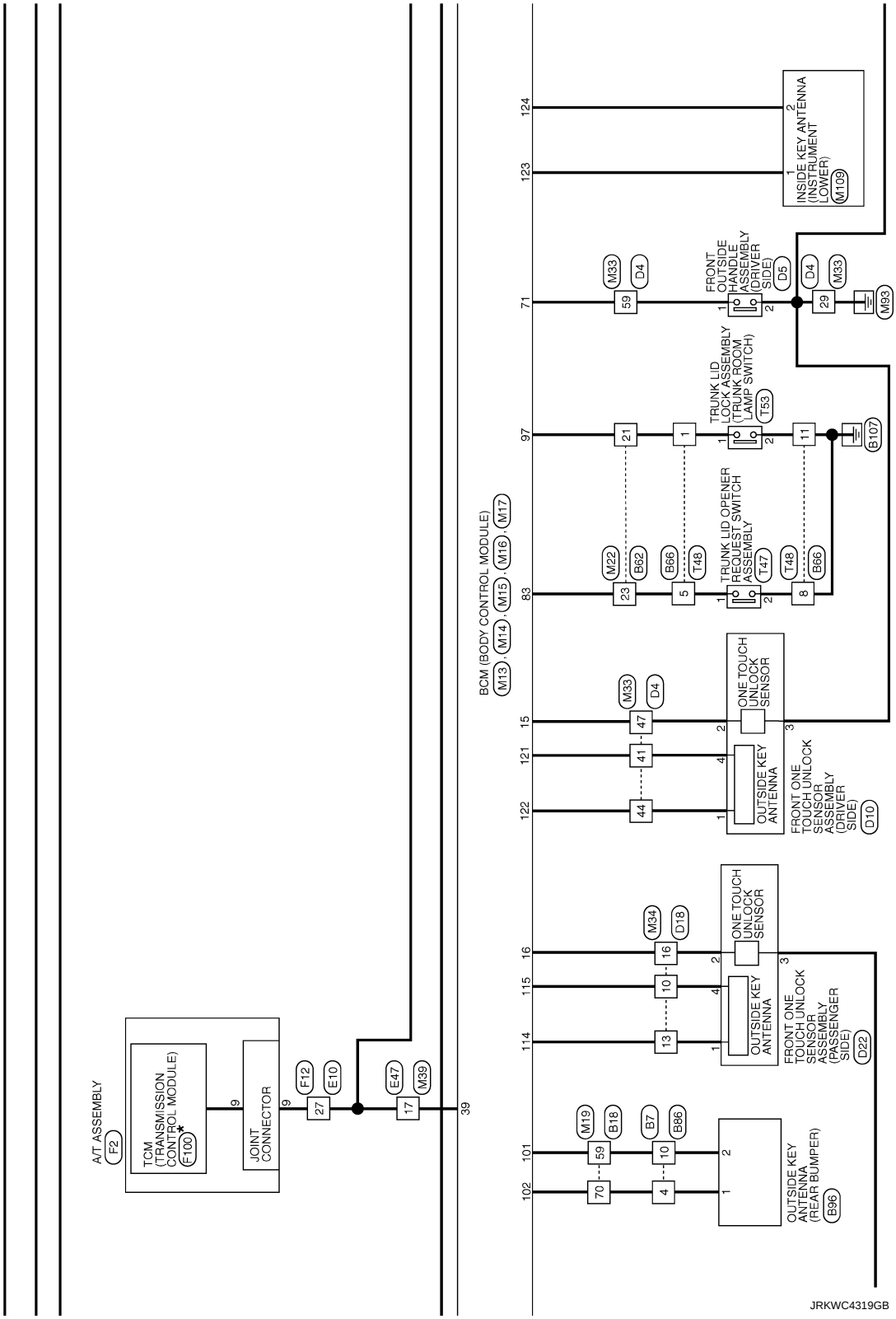
WIRING DIAGRAM

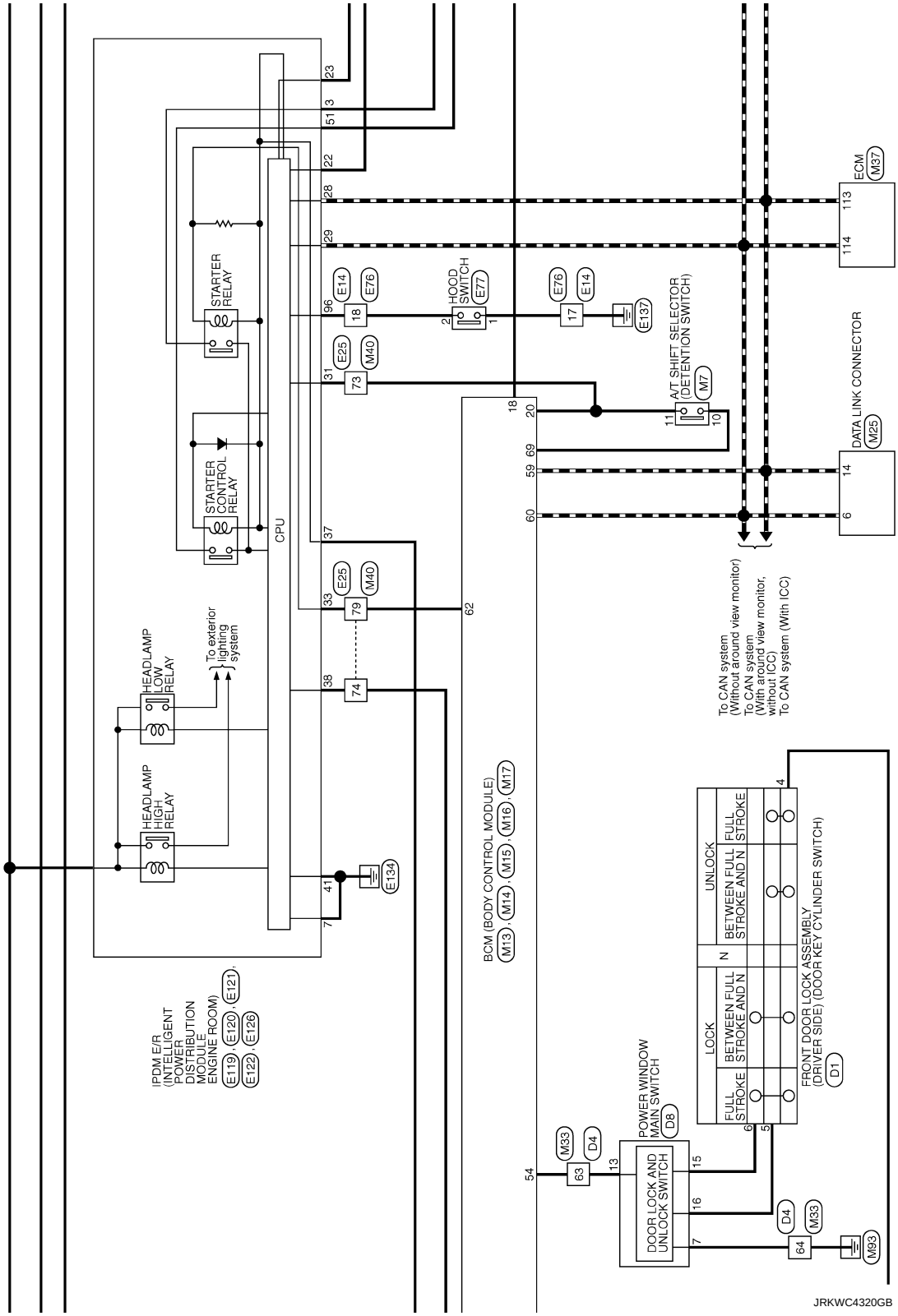
SECURITY CONTROL SYSTEM

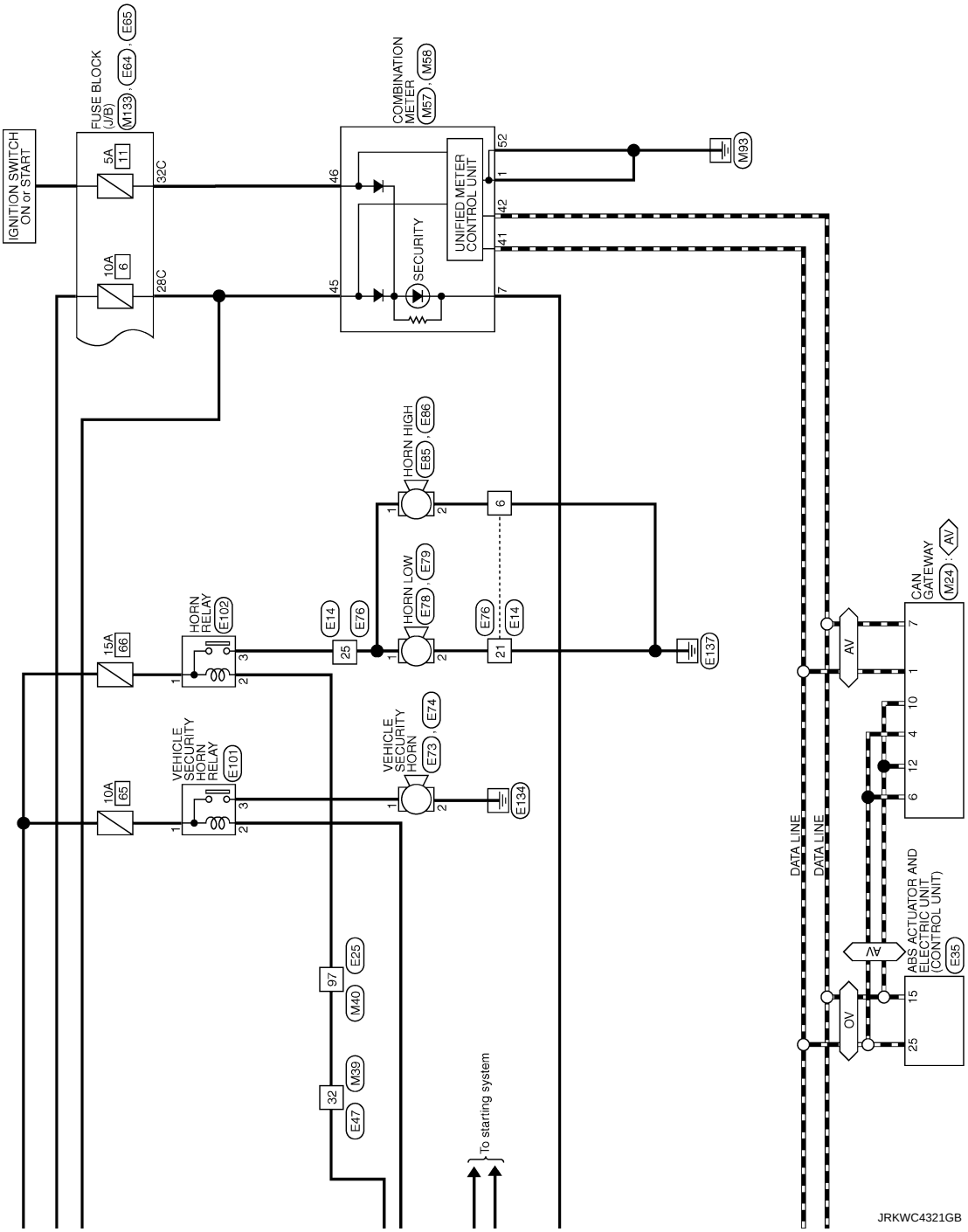
Wiring Diagram

INFOID:0000000009345880



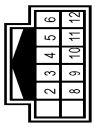

A/T ASSEMBLY
F2
TCM (TRANSMISSION CONTROL MODULE)
E100
JOINT CONNECTOR
F12
E10
E47
M39
27
17
39
BCM (BODY CONTROL MODULE)
M13, M14, M15, M16, M17
INSIDE KEY ANTENNA (INSTRUMENT LOWER)
M109
FRONT OUTSIDE HANDLE ASSEMBLY (PASSENGER SIDE)
D5
FRONT OUTSIDE HANDLE ASSEMBLY (DRIVER SIDE)
D4
M33
M93
TRUNK LID LOCK ASSEMBLY (TRUNK ROOM LAMP SWITCH)
T53
B107
TRUNK LID OPENER REQUEST SWITCH ASSEMBLY
T47
M22
B62
B66
T48
ONE TOUCH UNLOCK SENSOR
OUTSIDE KEY ANTENNA
FRONT ONE TOUCH UNLOCK SENSOR ASSEMBLY (DRIVER SIDE)
D10
FRONT ONE TOUCH UNLOCK SENSOR ASSEMBLY (PASSENGER SIDE)
D22
M34
D18
OUTSIDE KEY ANTENNA (REAR BUMPER)
B96
M19
B18
B7
B86
JRKWC4319GB


IPDM E/R
(INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E119, E120, E121, E122, E126
BCM (BODY CONTROL MODULE)
M13, M14, M15, M16, M17
CPU
STARTER RELAY
STARTER CONTROL RELAY
HEADLAMP LOW RELAY
HEADLAMP HIGH RELAY
To exterior lighting system
HOOD SWITCH
E77
A/T SHIFT SELECTOR (DETENTION SWITCH)
M7
ECM
M37
DATA LINK CONNECTOR
M25
To CAN system (Without around view monitor)
To CAN system (With around view monitor, without ICC)
To CAN system (With ICC)
POWER WINDOW MAIN SWITCH
D8
DOOR LOCK AND UNLOCK SWITCH
FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE) (DOOR KEY CYLINDER SWITCH)
D1
UNLOCK
LOCK
FULL STROKE
BETWEEN FULL STROKE AND N
N
E134
E137
JRKWC4320GB


IGNITION SWITCH ON or START
FUSE BLOCK (J/B)
M133, E64, E65
5A 11
10A 6
32C
28C
COMBINATION METER
M57, M58
UNIFIED METER CONTROL UNIT
SECURITY
46
45
52
1
42
41
7
M93
HORN HIGH
E85, E86
HORN LOW
E78, E79
HORN RELAY
E102
15A 66
E14
E76
25
6
21
E137
VEHICLE SECURITY HORN
E73, E74
VEHICLE SECURITY HORN RELAY
E101
10A 65
E134
97
E25
M40
32
M39
E47
To starting system
CAN GATEWAY
M24
AV
OV
DATA LINE
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
E35
JRKWC4321GB

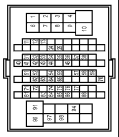
SECURITY CONTROL SYSTEM

Connector No.	B7
Connector Name	WIRE TO WIRE
Connector Type	TH12MW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
2	BG	–
3	B	–
4	R	–
5	W	–
6	B	–
8	G	–
9	B	–
10	GR	–
11	BR	–
12	B	–

Connector No.	B18
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	–
2	G	–
3	L	–
4	LG	–
6	R	–
7	V	–
8	LG	–
9	BR	–
10	P	–
11	BG	–
12	LG	–
13	GR	–
24	Y	–
25	W	–
31	B	–
32	B	–
33	B	–
34	LG	–
35	P	–
36	W	–
37	SB	–
38	LG	–
40	P	–
41	SB	–
42	BR	–
43	BG	–
44	BG	–
46	R	–
51	SB	–
52	V	–
54	R	–
55	R	–
57	W	–
58	V	–
59	GR	–
62	BG	–
63	BR	–
64	Y	–
65	W	–
70	R	–
71	W	–
72	B	–
74	L	–
75	V	–
76	BR	–
77	B	–
81	B	–
83	BG	–
84	L	–
85	V	–
86	B	–
88	G	–
91	GR	–
94	GR	–
96	Y	–
97	V	–
98	BR	–

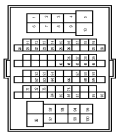
Connector No.	B42
Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)
Connector Type	TH04FW-NH

Terminal No.	Color Of Wire	Signal Name [Specification]
3	V	–

Connector No.	B44
Connector Name	REAR DOOR SWITCH LH
Connector Type	TH04FW-NH

Terminal No.	Color Of Wire	Signal Name [Specification]
3	W	–

Connector No.	B62
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	–
2	L	–
3	R	– [With BOSE system]
3	W	– [Without BOSE system]
4	SHIELD	–
5	G	–
6	W	– [Without BOSE system]
7	BR	– [With BOSE system]
7	W	– [Without BOSE system]
8	B	– [With BOSE system]
8	Y	– [Without BOSE system]
9	SHIELD	–
10	V	–
11	GR	–
12	Y	–
13	R	–
14	BG	–
15	GR	–
16	V	–
17	P	–
18	L	–
19	R	–
20	GR	–
21	R	–
22	P	–
23	W	–
24	V	–
25	SB	–
26	G	–
29	P	–
30	LG	–
36	R	–
37	R	–
38	W	–
39	W	–
45	G	–
46	SHIELD	–
47	G	–
48	BG	–
49	G	–
52	Y	–
53	R	–
54	GR	–
57	R	–
58	P	–
59	LG	–
62	P	–

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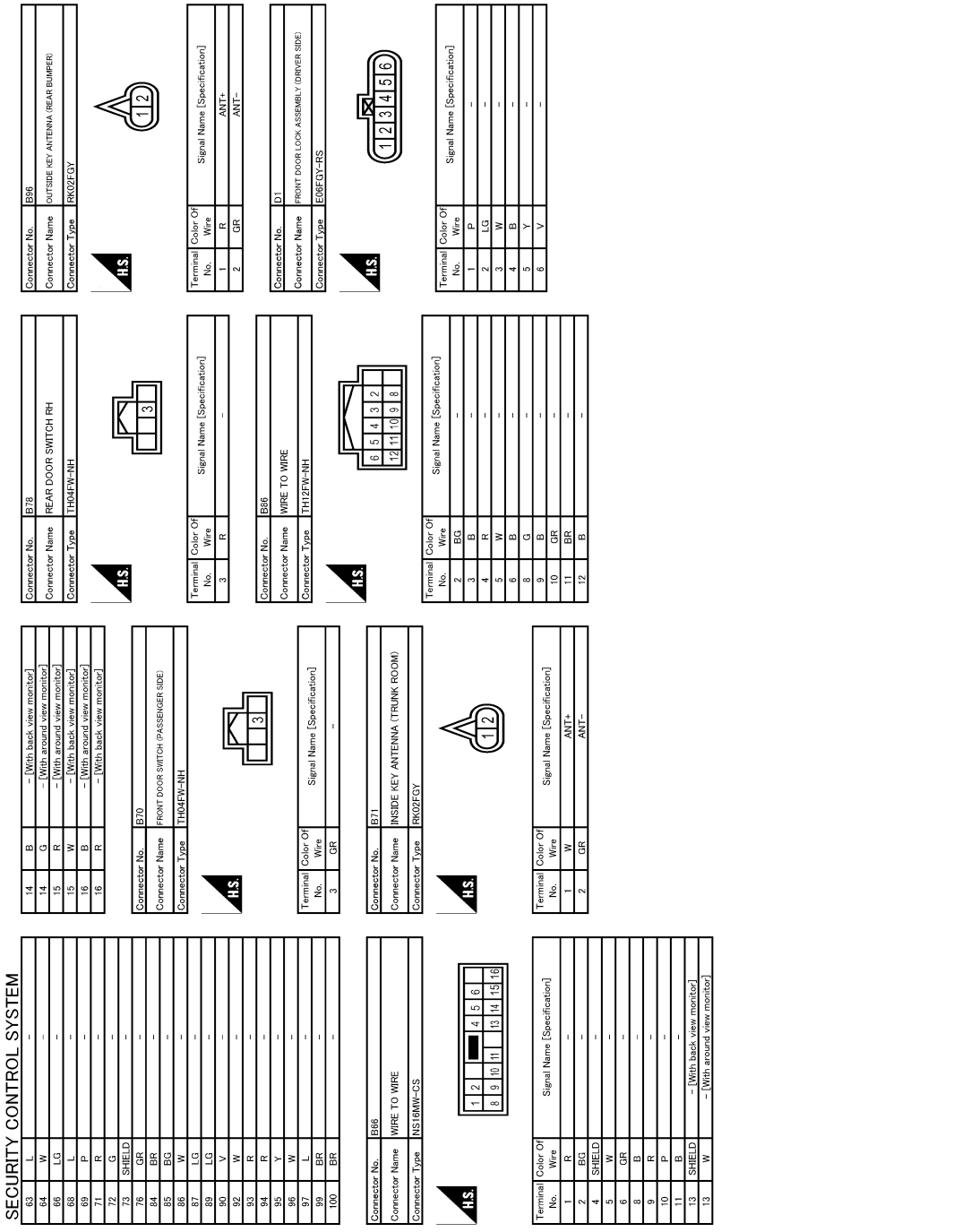

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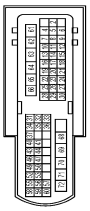
SECURITY CONTROL SYSTEM

Connector No.	D4
Connector Name	WIRE TO WIRE
Connector Type	NH80FW-TS12

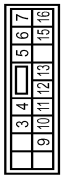


Terminal No.	Color Of Wire	Signal Name [Specification]
2	R	– [With DRPO]
2	SB	– [Without DRPO]
4	BG	–
5	R	– [With DRPO]
5	Y	– [Without DRPO]
6	V	–
7	LG	–
8	G	–
9	GR	–
10	Y	–
11	SHIELD	–
12	BG	–
13	L	–
14	B	–
15	Y	–
16	GR	–
17	R	–
18	GR	–
19	R	–
20	W	–
21	LG	–
22	W	–
23	L	–
24	G	–
25	BR	–
26	R	–
27	BR	–
28	V	–
29	B	–
30	W	–
31	P	–
32	Y	–
33	BR	–
34	L	–
35	R	–
36	GR	–
37	G	–
40	P	–
41	L	–
43	BG	–
44	Y	–
46	W	–
47	R	–
49	BR	–
50	B	–
52	V	–
53	GR	–
55	GR	–
56	BR	–
57	R	–
58	L	–
59	V	–
60	G	–
61	BG	–
62	Y	–
63	SB	–
64	B	–
65	Y	–
66	BR	–
68	Y	–
69	L	–
70	W	–
71	LG	–
72	P	–

Connector No.	D5
Connector Name	FRONT OUTSIDE HANDLE ASSEMBLY (DRIVER SIDE)
Connector Type	RH04FB

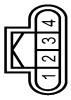
Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	–
2	B	–
3	BR	–
4	GR	–

Connector No.	D8
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS16FW-CS



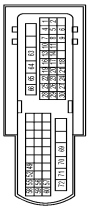
Terminal No.	Color Of Wire	Signal Name [Specification]
3	V	ENCODER +
4	Y	+B
5	G	DN
6	L	UP
7	B	–
9	BR	IGN
10	B	ENCODER GND
11	GR	ENCODER SIG1
12	BR	ENCODER SIG2
13	SB	COM
15	V	LOCK SW
16	Y	UNLOCK SW

Connector No.	D10
Connector Name	FRONT DNE TOUCH UNLOOK SENSOR ASSEMBLY (DRIVER SIDE)
Connector Type	RH04FLGY



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

Connector No.	D18
Connector Name	WIRE TO WIRE
Connector Type	NH80FW-TS12



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	–
2	P	–
4	SB	–
5	BR	–
6	Y	–
7	LG	–
8	W	–
9	L	–
10	L	–
11	GR	–
13	Y	–
14	R	–
16	R	–
17	B	–
18	W	–
19	B	–
20	G	–
21	SHIELD	–
22	GR	–
23	BG	–
24	B	–
25	BR	–
26	V	–
27	G	–
28	V	–
29	Y	–
30	R	–
49	LG	–
52	P	–
55	L	–
56	Y	–
57	R	–
58	SB	–
59	R	–
60	G	–
63	B	–

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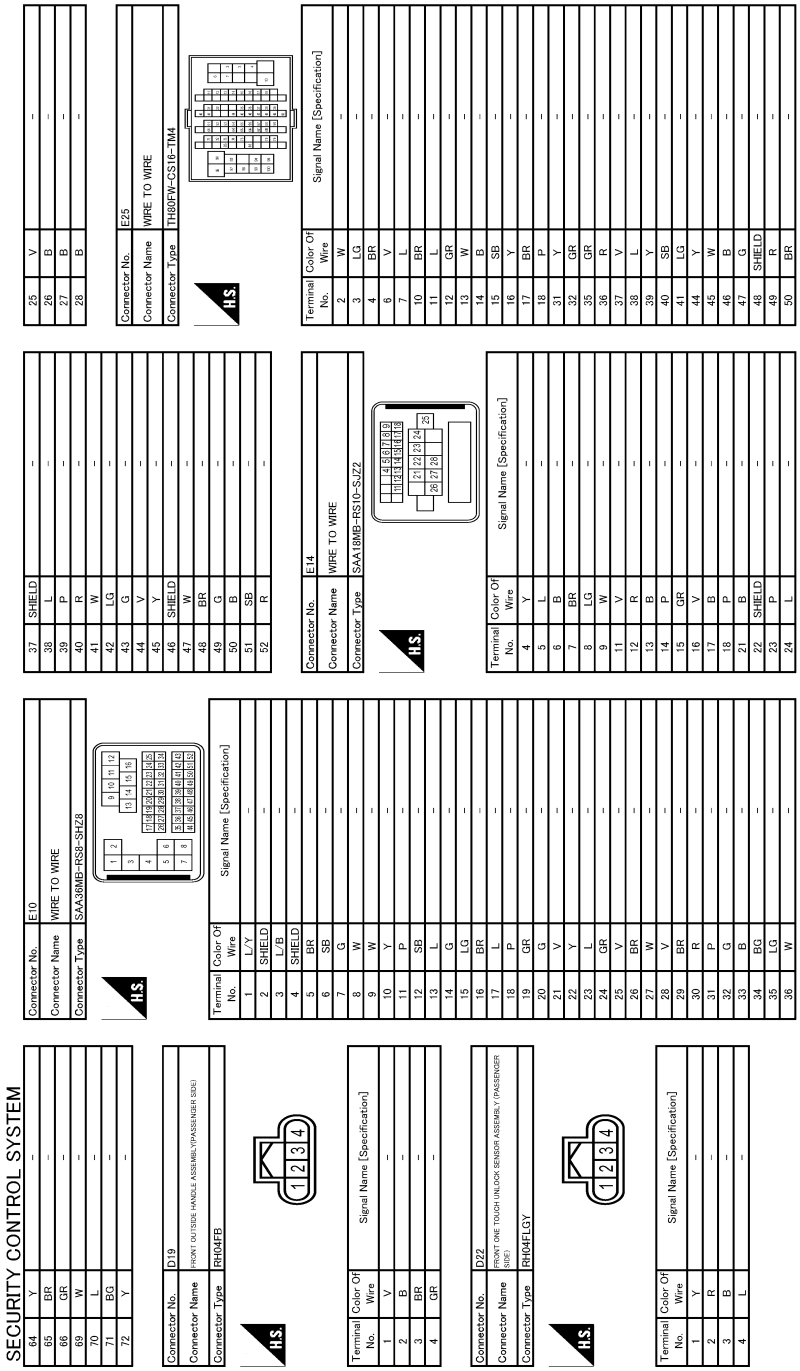
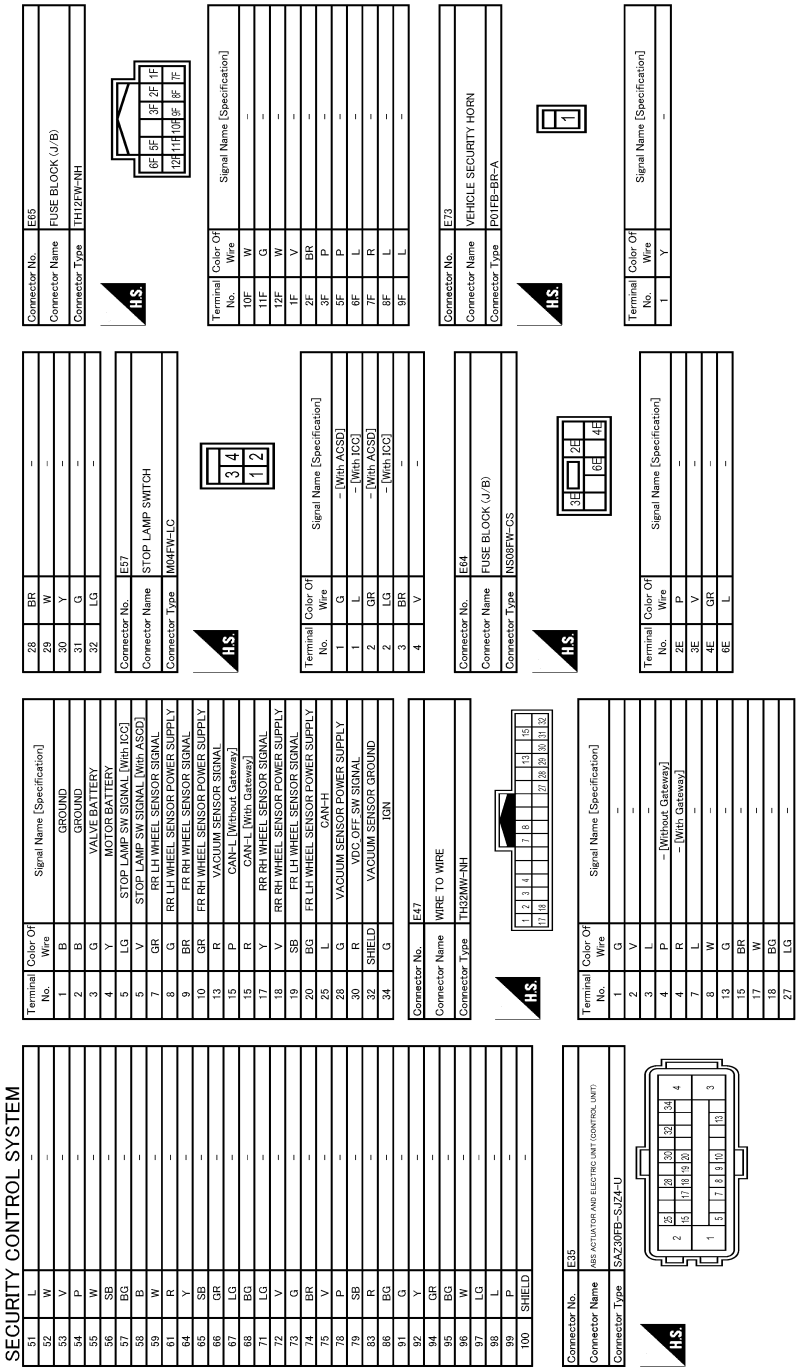


JRKWC4325GB



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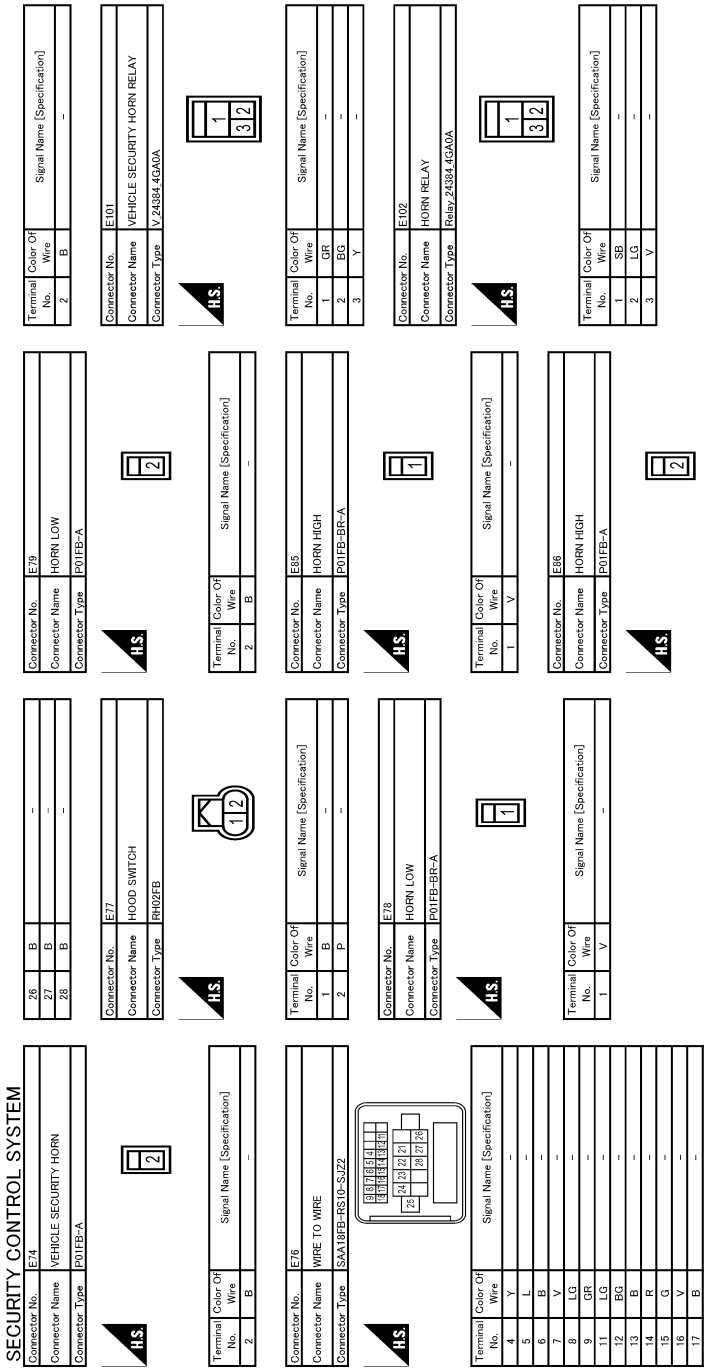


JRKWC4327GB

SECURITY CONTROL SYSTEM

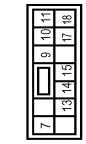
Connector No.	E119
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	M04FW-LC

H.S.

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

Connector No.	E120
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	NS12FW-CS

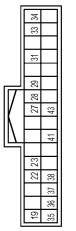
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
7	B/W	–
9	P	–
10	LG	–
11	V	–
13	Y	–
14	SB	–
15	Y	–
17	GR	–
18	L	–

Connector No.	E121
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH32FW-NH

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
19	G	–
22	BG	–
23	LG	–
27	GR	–
28	P	–
29	L	–
31	G	–
33	SB	–
34	Y	–
35	G	–
36	SB	–
37	GR	–
38	BR	–
41	GR	–
43	V	–

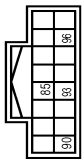
Connector No.	E122
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	M01FB-LC

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
51	W	–

Connector No.	E126
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH16FW-NH

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
85	L	–
90	BR	–
93	V	–
96	P	–

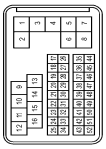
Connector No.	F2
Connector Name	A/T ASSEMBLY
Connector Type	RK10FG-DGY

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	IGNITION POWER SUPPLY
2	P	BATTERY POWER SUPPLY (MEMORY BACK–UP)
3	L	CAN–H
4	LG	K–LINE
5	B	GROUND
6	GR	IGNITION POWER SUPPLY
7	BG	BACK–UP LAMP RELAY
8	P	CAN–L
9	GR	STARTER RELAY
10	B	GROUND

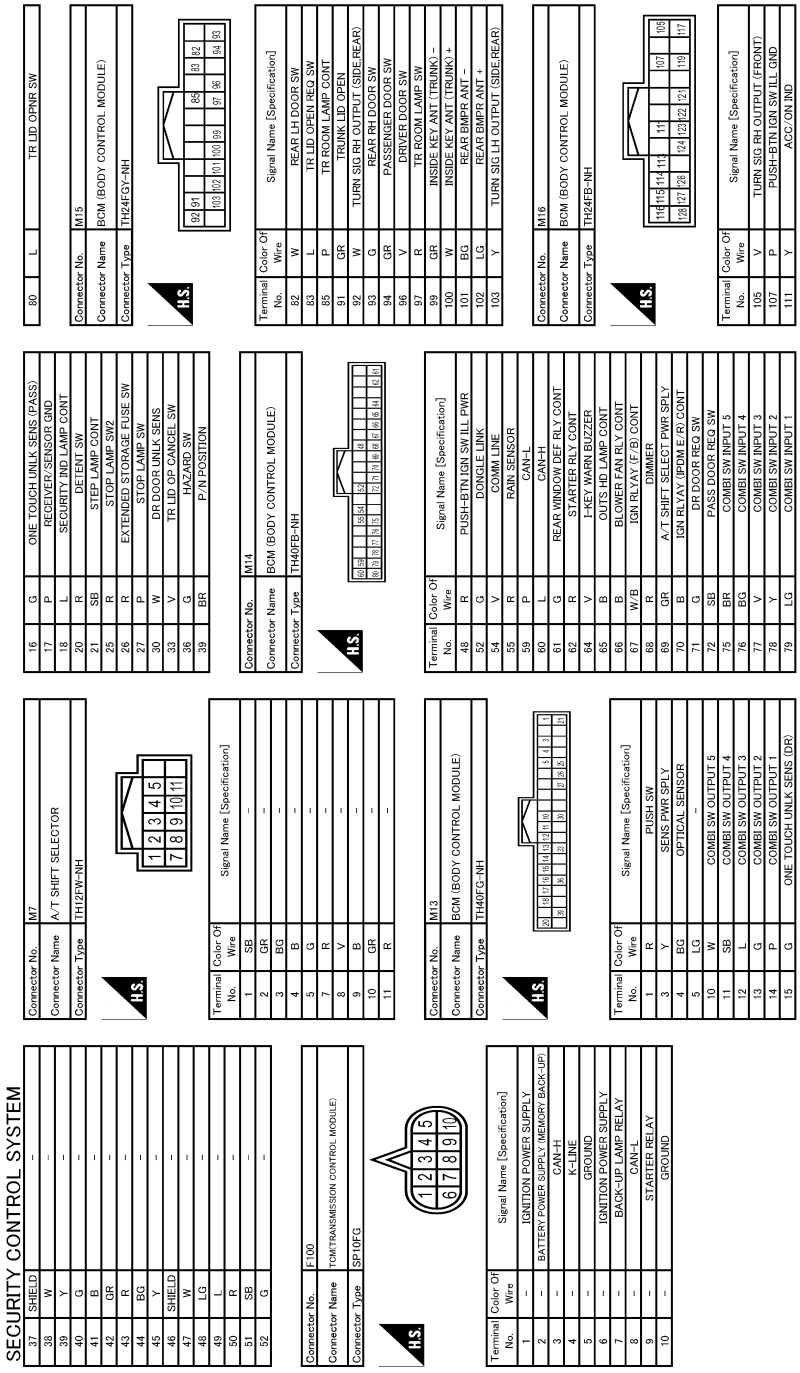
Connector No.	F12
Connector Name	WIRE TO WIRE
Connector Type	SAA36FB-RS8-SHZ8

H.S.



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

JRKWC4328GB



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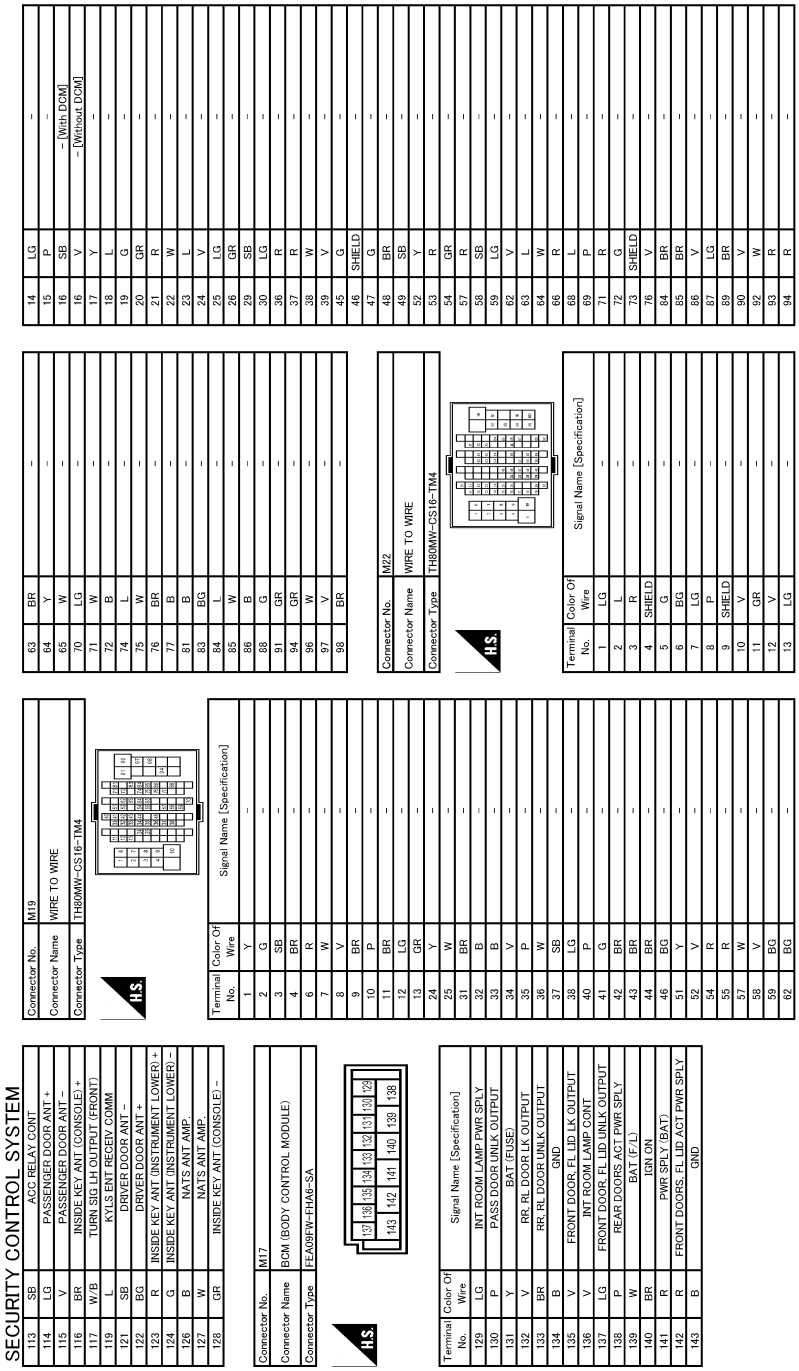
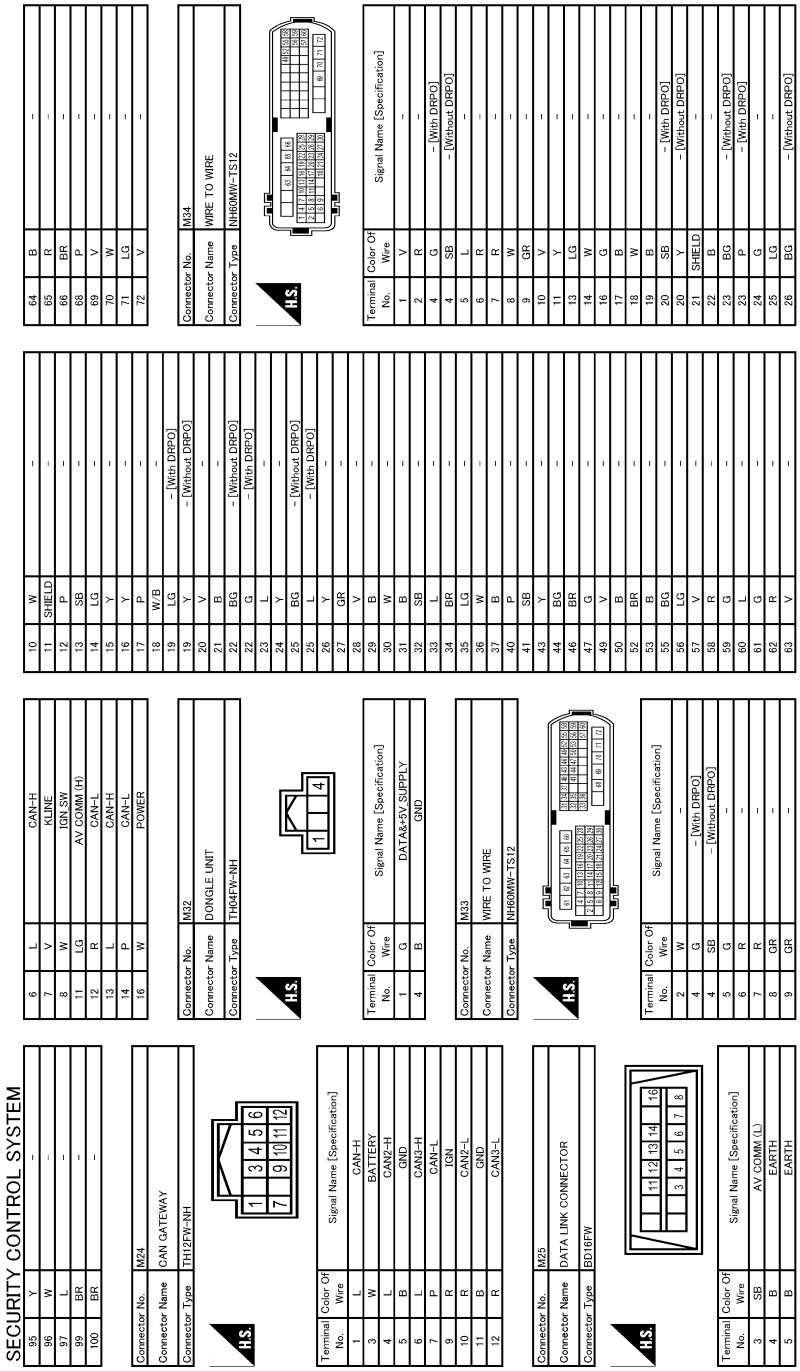
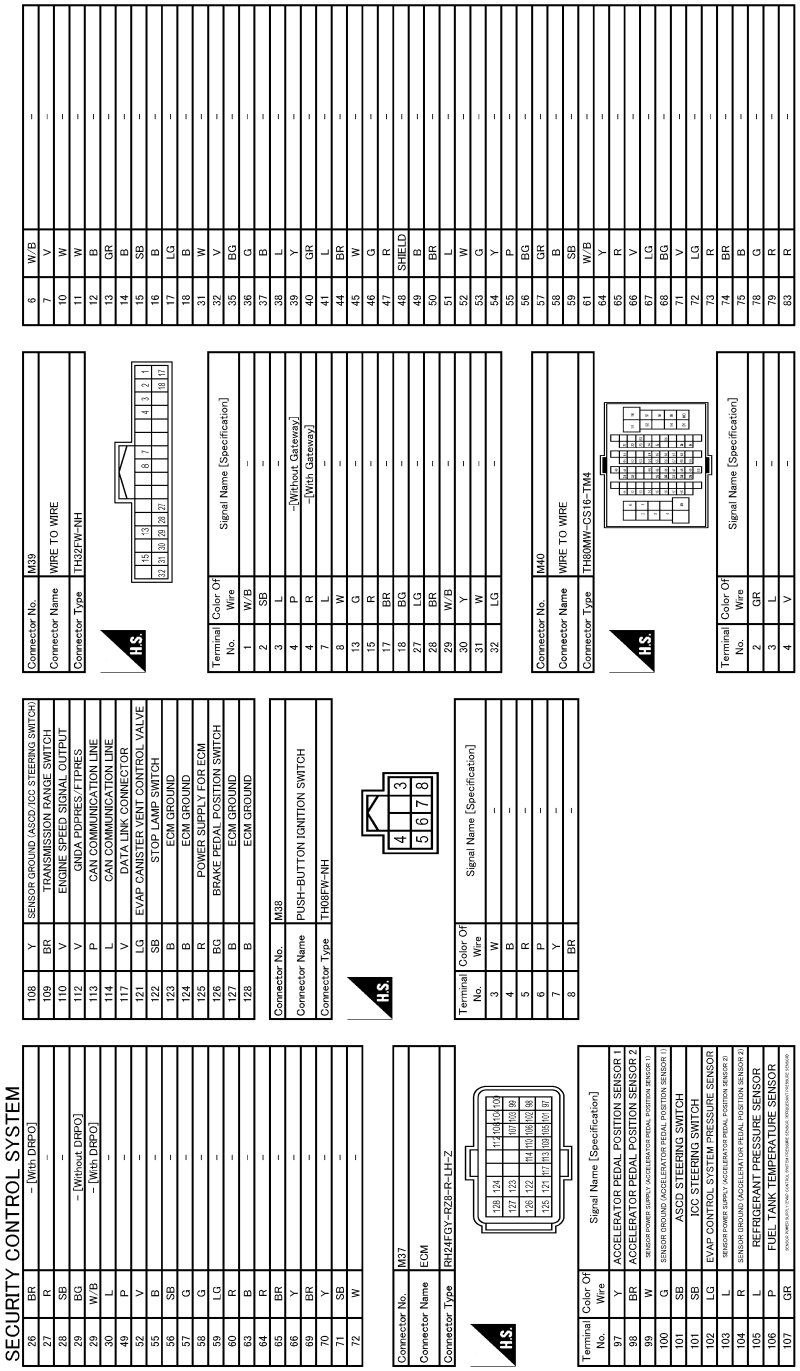
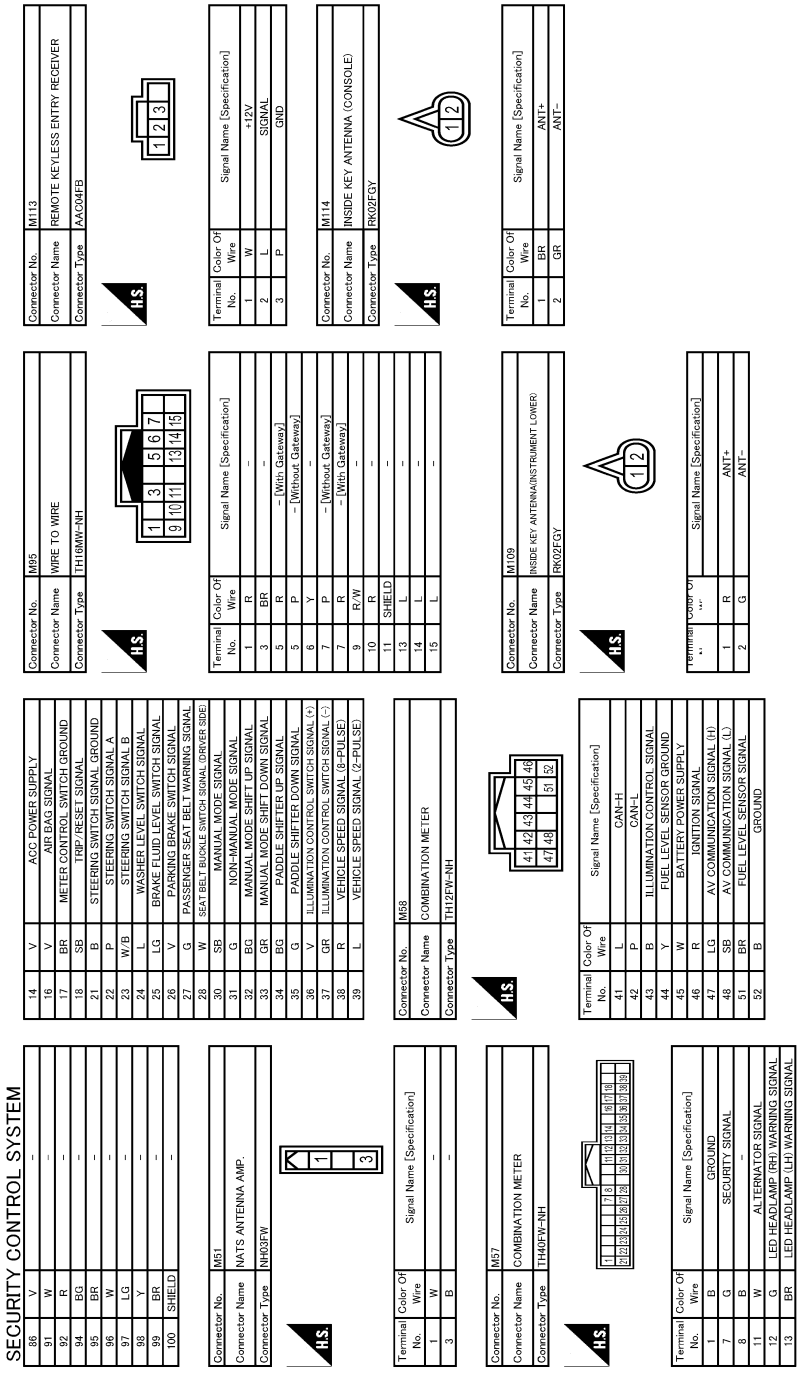

SECURITY CONTROL SYSTEM
Connector No. M19
Connector Name WIRE TO WIRE
Connector Type TH80MW-CS16-TM4
H.S.
Connector No. M17
Connector Name BCM (BODY CONTROL MODULE)
Connector Type FEA08FW-FHA6-SA
H.S.
Connector No. M22
Connector Name WIRE TO WIRE
Connector Type TH80MW-CS16-TM4
H.S.
JRKWC4330GB



JRKWC4331GB



JRKWC4332GB



JRKWC4333GB

SECURITY CONTROL SYSTEM

Connector No.	M133
Connector Name	FUSE BLOCK (J/B)
Connector Type	TH40FW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
10C	V	–
11C	V	–
13C	L	–
14C	Y	–
15C	R	–
16C	R	–
17C	L	–
18C	BG	– [Without DRPO]
18C	P	– [With DRPO]
19C	B	–
20C	W	–
21C	L	–
22C	L	–
23C	L	–
25C	LG	–
26C	SB	–
27C	P	–
28C	W	–
29C	W	–
2C	R	–
30C	R	–
31C	W	–
32C	R	–
33C	B	–
34C	W/B	–
35C	SB	–
36C	R	–
37C	W	–
38C	SB	–
39C	V	–
3C	P	–
40C	G	–
4C	P	–
5C	P	–
6C	G	–
7C	G	–

9C	V	–

Connector No.	M155
Connector Name	WIRE TO WIRE
Connector Type	TH16FW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	–
3	R	–
5	R	– [With Gateway]
5	Y	– [With ADAS]
5	P	– [Without Gateway]
6	Y	–
7	P	– [Without Gateway]
7	R	– [With Gateway]
9	R/W	–
10	R	–
11	SHIELD	–
13	L	–
14	L	–
15	L	–

Connector No.	T47
Connector Name	TRUNK LID OPENER REQUEST SWITCH ASSEMBLY
Connector Type	TH04MW-NH

H.S.

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

Connector No.	T48
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	–
2	BG	–
4	L	–
5	P	–
6	G	–
8	B	–
9	R	–
10	P	–
11	L	–
13	G	– [With around view monitor]
13	L	– [With back view monitor]
14	B	– [With back view monitor]
14	R	– [With around view monitor]
15	B	– [With around view monitor]
15	W	– [With back view monitor]
16	R	– [With back view monitor]
16	W	– [With around view monitor]

Connector No.	T53
Connector Name	TRUNK LID LOCK ASSEMBLY
Connector Type	TB03FW-LC

H.S.

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

JRKWC4334GB

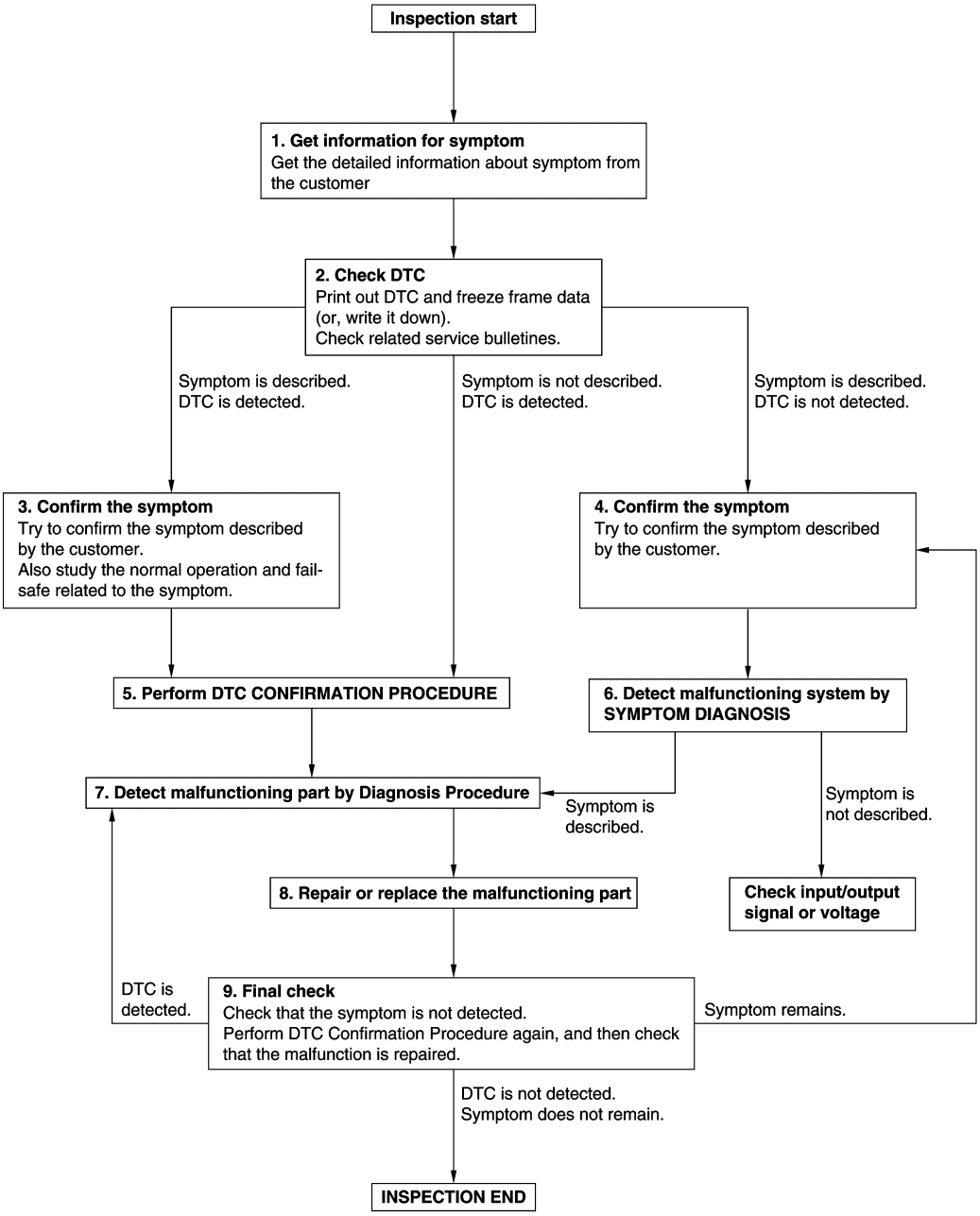
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000009345881

OVERALL SEQUENCE



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DETAILED FLOW

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-61, "DTC Inspection Priority Chart" 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-43, "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

Inspect according to Diagnosis Procedure of the system.

Is malfunctioning part detected?

YES >> GO TO 8.
NO >> Check according to GI-43, "Intermittent Incident".

8. REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 9.

9. FINAL CHECK

When DTC is detected in step 2, perform DTC CONFIRMATION PROCEDURE again, and then check that the malfunction is repaired securely.
When symptom is described by the customer, refer to confirmed symptom in step 3 or 4, and check that the symptom is not detected.

Is DTC detected and does symptom remain?

YES-1 >> DTC is detected: GO TO 7.
YES-2 >> Symptom remains: GO TO 4.
NO >> Before returning the vehicle to the customer, always erase DTC.

ADDITIONAL SERVICE WHEN REPLACING ECM

Description

INFOID:0000000009345882

Performing the following procedure can automatically activate recommunication of ECM, 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 the replaced ECM is not a brand new, the specified procedure using CONSULT is necessary.**
- **If multiple keys are attached to the key holder, separate them before beginning work.**
- **Distinguish keys with unregistered key IDs from those with registered IDs.**

Work Procedure

INFOID:0000000009345883

1.PERFORM ECM RECOMMUNICATING FUNCTION

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

>> GO TO 2.

2.PERFORM ADDITIONAL SERVICE WHEN REPLACING ECM

Refer to EC-152, "Description"

>> END

DTC/CIRCUIT DIAGNOSIS

P1610 LOCK MODE

DTC Description

INFOID:0000000009345887

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

DTC DETECTION LOGIC

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

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

POSSIBLE CAUSE

Engine start operation is performed five times or more under the following conditions,
- Infiniti Vehicle Immobilizer System malfunction
- Operation by unregistered key

FAIL-SAFE

Inhibit engine cranking

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

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

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000009345888

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

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

2.CHECK ENGINE START FUNCTION

1. Check that DTC except for DTC P1610 is not detected.
   If detected, erase the DTC after fixing.
2. Turn ignition switch OFF.

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 Description

INFOID:0000000009345889

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

- BCM
- ECM

FAIL-SAFE

Inhibit engine cranking

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000009345890

1. INTELLIGENT KEY REGISTRATION

Using CONSULT, register all Intelligent Keys again.

Can engine be started with the registered Intelligent Key?

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

2.CHECK SELF DIAGNOSTIC RESULT

1. Select “Self Diagnostic Result” mode of “ENGINE” using CONSULT.
2. Erase DTC.
3. Perform DTC CONFIRMATION PROCEDURE for DTC P1611. Refer to SEC-60, "DTC Description".

Is DTC detected?

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

3.REPLACE BCM

1. Replace BCM. Refer to BCS-98, "Removal and Installation".
2. Perform DTC CONFIRMATION PROCEDURE for DTC P1611. Refer to SEC-60, "DTC Description".

Is DTC detected?

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

4.REPLACE ECM

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

>> INSPECTION END

P1612 CHAIN OF ECM-IMMU

DTC Description

INFOID:0000000009345891

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
P1612	CHAIN OF ECM-IMMU (Chain of engine control module - immobilizer unit)	Inactive communication between ECM and BCM

POSSIBLE CAUSE

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

FAIL-SAFE

Inhibit engine cranking

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC P1612 is displayed with DTC U1000 (for BCM) or U1010 (for BCM), first perform the trouble diagnosis for DTC U1000 (for BCM) or U1010(for BCM).

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000 (for BCM): Refer to EC-106, "DTC Index". U1010 (for BCM): Refer to BCS-62, "DTC Index".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to SEC-61, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009345892

1.CHECK DTC PRIORITY

If DTC P1612 is displayed with DTC U1000 (for BCM) or U1010 (for BCM), first perform the trouble diagnosis for DTC U1000 (for BCM) or U1010(for BCM).

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000 (for BCM): Refer to EC-106, "DTC Index". U1010 (for BCM): Refer to BCS-62, "DTC Index".
NO >> GO TO 2.

2.REPLACE BCM

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

Does the engine start?

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

3.REPLACE ECM

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

>> INSPECTION END

B2192 ID DISCORD, IMMU-ECM

DTC Description

INFOID:0000000009345893

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

- BCM
- ECM

FAIL-SAFE

Inhibit engine cranking

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000009345894

1. INTELLIGENT KEY REGISTRATION

Using CONSULT, register all Intelligent Keys again.

Can engine be started with the registered Intelligent Key?

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

2.CHECK SELF-DIAGNOSIS RESULT

1. Select “Self Diagnostic Result” mode of “BCM” using CONSULT.
2. Erase DTC.
3. Perform DTC CONFIRMATION PROCEDURE for DTC B2192. Refer to SEC-62, "DTC Description".

Is DTC detected?

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

3.REPLACE BCM

1. Replace BCM. Refer to BCS-98, "Removal and Installation".
2. Perform DTC CONFIRMATION PROCEDURE for DTC B2192. Refer to SEC-62, "DTC Description".

Is DTC detected?

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

4.REPLACE ECM

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

>> INSPECTION END

B2193 CHAIN OF ECM-IMMU

DTC Description

INFOID:0000000009345895

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B2193	CHAIN OF BCM-ECM (Chain of body control module - engine control module)	Inactive communication between BCM and ECM

POSSIBLE CAUSE

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

FAIL-SAFE

Inhibit engine cranking

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC B2193 is displayed with DTC U1000 or U1010, first perform the trouble diagnosis for DTC U1000 or U1010.

Is applicable DTC detected?

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

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

Diagnosis Procedure

INFOID:0000000009345896

1.CHECK DTC PRIORITY

If DTC B2193 is displayed with DTC U1000 or U1010, first perform the trouble diagnosis for DTC U1000 or U1010.

Is applicable DTC detected?

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

2.REPLACE BCM

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

Does the engine start?

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

3.REPLACE ECM

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

>> INSPECTION END

B2195 ANTI-SCANNING

DTC Description

INFOID:0000000009345897

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

ID verification request out of the specified specification

FAIL-SAFE

Inhibits engine cranking

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to SEC-64, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009345898

1.CHECK SELF DIAGNOSTIC RESULT 1

1. Select “Self Diagnostic Result” mode of “BCM” using CONSULT.
2. Erase DTC.
3. Perform DTC CONFIRMATION PROCEDURE for DTC B2195. Refer to SEC-64, "DTC Description".

Is DTC detected?

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

2.CHECK EQUIPMENT OF THE VEHICLE

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

Is unspecified accessory part related to engine start installed?

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

3.CHECK SELF DIAGNOSTIC RESULT 2

1. Obtain the customers approval to remove unspecified accessory part related to engine start, and then remove it.
2. Select “Self Diagnostic Result” mode of “BCM” using CONSULT.
3. Erase DTC.
4. Perform DTC CONFIRMATION PROCEDURE for DTC B2195. Refer to SEC-64, "DTC Description".

Is DTC detected?

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

4.REPLACE BCM

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

>> INSPECTION END

B2196 DONGLE UNIT

DTC Description

INFOID:0000000009346013

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

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B2196	DONGLE NG (Dongle unit not good)	The ID verification results between BCM and dongle unit is NG.

POSSIBLE CAUSE

- Harness or connectors
  (Dongle unit circuit is open or shorted.)
- Dongle unit

FAIL-SAFE

—

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC B2196 is displayed with DTC U1000 or U1010, first perform the trouble diagnosis for DTC U1000 or U1010.

Is applicable DTC detected?

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

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Turn ignition switch OFF.
3. Turn ignition switch ON.
4. Check “Self-diagnosis result” using CONSULT.

Is the DTC detected?

YES >> Refer to SEC-65, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009346014

1.CHECK DTC PRIORITY

If DTC B2196 is displayed with DTC U1000 or U1010, first perform the trouble diagnosis for DTC U1000 or U1010.

Is applicable DTC detected?

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

2.PERFORM INITIALIZATION

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

Does the engine start?

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

3.CHECK DONGLE UNIT CIRCUIT

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

BCM		Dongle unit		Continuity
Connector	Terminal	Connector	Terminal	
M14	52	M32	1	Existed

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M14	52		Not existed

Is the inspection result normal?

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

4.CHECK DONGLE UNIT GROUND CIRCUIT

Check continuity between dongle unit harness connector and ground.

Dongle unit		Ground	Continuity
Connector	Terminal		
M32	4		Existed

Is the inspection result normal?

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

B2198 NATS ANTENNA AMP.

DTC Description

INFOID:0000000009345899

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

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

FAIL-SAFE

Inhibit engine cranking

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Make the conditions that BCM enters in the low power consumption mode (BCM sleep condition).
   Refer to 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?

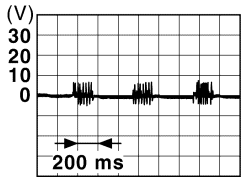
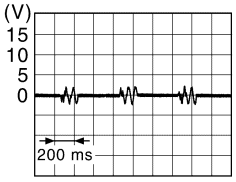
YES >> Refer to SEC-67, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009345900

1.CHECK NATS ANTENNA COMMUNICATION SIGNAL

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

(+) NATS antenna amp. Connector	(+) NATS antenna amp. Terminal	(–)	Condition		Voltage
M51	1	Ground	Intelligent Key: Intelligent Key battery is removed	Brake pedal: Depressed	 JSMIA1415GB
	3				 JSKIA3178ZZ

Is the inspection result normal?

YES >> Replace NATS antenna amp. Refer to SEC-128, "Removal and Installation".
NO >> GO TO 2.

2.CHECK NATS ANTENNA AMP. OUTPUT SIGNAL CIRCUIT

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

NATS antenna amp.		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M51	1	M16	127	Existed
	3		126	

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

NATS antenna amp.		Ground	Continuity
Connector	Terminal		
M51	1		Not existed
	3		

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-98, "Removal and Installation".
NO >> Repair or replace harness.

B2555 STOP LAMP

DTC Description

INFOID:0000000009345905

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B2555	STOP LAMP (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.

POSSIBLE CAUSE

- Harness or connectors
  (Stop lamp switch circuit is open or shorted.)
- Stop lamp switch
- Fuse
- BCM

FAIL-SAFE

—

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Depress brake pedal and wait 1 second or more.
2. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT.

Is DTC detected?

YES >> Refer to SEC-69, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009345906

1.CHECK FUSE

Check that the following fuse in the fuse block (J/B) is not blown.

Signal name	Fuse No.
Battery power supply	19 (10 A)

Is the inspection normal?

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

2.CHECK STOP LAMP SWITCH 2 SIGNAL

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

(+)		(–)	Voltage
BCM			
Connector	Terminal		
M13	25	Ground	9 – 16 V

Is the inspection normal?

YES >> GO TO 3.
NO >> Check harness for open or short between BCM and fuse.

3.CHECK STOP LAMP SWITCH POWER SUPPLY CIRCUIT

1. Disconnect stop lamp switch connector.

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

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

Is the inspection result normal?

YES >> GO TO 4.
NO >> Check harness for open or short between stop lamp switch and fuse.

4.CHECK STOP LAMP SWITCH 1 SIGNAL

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

(+)		(–)	Condition		Voltage
BCM					
Connector	Terminal				
M13	27	Ground	Brake pedal	Depressed	9 – 16 V
				Not depressed	0 V

Is the inspecting result normal?

YES >> Replace BCM. Refer to BCS-98, "Removal and Installation".
NO >> GO TO 5.

5.CHECK STOP LAMP SWITCH 1 SIGNAL CIRCUIT

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

Stop lamp switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E57	4	M13	27	Existed

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

Stop lamp switch		Ground	Continuity
Connector	Terminal		
E57	4		Not existed

Is the inspection result normal?

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

6.CHECK STOP LAMP SWITCH

Refer to SEC-70, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 7.
NO >> Replace stop lamp switch. Refer to BR-21, "Removal and Installation".

7.CHECK INTERMITTENT INCIDENT

Refer to GI-43, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000009345907

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				
3	4	Brake pedal	Not depressed	Not existed
			Depressed	Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace stop lamp switch. Refer to BR-21, "Removal and Installation".

B2556 PUSH-BUTTON IGNITION SWITCH

DTC Description

INFOID:0000000009345908

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

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

FAIL-SAFE

—

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to SEC-72, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009345909

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
Push-button ignition switch			
Connector	Terminal		
M38	8	Ground	9 – 16 V

Is the inspection result normal?

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

2.CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT

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

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

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

Push-button ignition switch		Ground	Continuity
Connector	Terminal		
M38	8		Not existed

Is the inspection result normal?

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

3.REPLACE BCM

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

>> 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		
M38	4		Existed

Is the inspection result normal?

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

5.CHECK PUSH-BUTTON IGNITION SWITCH

Refer to SEC-73, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Replace push-button ignition switch. Refer to PCS-88, "Removal and Installation".

6.CHECK INTERMITTENT INCIDENT

Refer to GI-43, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000009345910

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				
4	8	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 PCS-88, "Removal and Installation".

B2557 VEHICLE SPEED

DTC Description

INFOID:0000000009345911

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B2557	VEHICLE SPEED (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

POSSIBLE CAUSE

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

FAIL-SAFE

—

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

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

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000009345912

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

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

2.CHECK DTC OF “ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)”

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

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to BRC-57, "DTC Index".
NO >> GO TO 3.

3.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-80, "DTC Index".
NO >> GO TO 4.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-43, "Intermittent Incident".

>> INSPECTION END

B2601 SHIFT POSITION

DTC Description

INFOID:0000000009345913

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

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

FAIL-SAFE

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DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

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

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000009345914

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

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

2.CHECK A/T SHIFT SELECTOR CIRCUIT (BCM)

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

A/T shift selector (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M7	11	M13	20	Existed

4. Check continuity between A/T shift selector (detention switch) harness connector and ground.

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

Is the inspection result normal?

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

3. CHECK A/T SHIFT SELECTOR CIRCUIT (IPDM E/R)

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

A/T shift selector (detention switch)		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M7	11	E121	31	Existed

Is the inspection result normal?

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

4. REPLACE BCM

1. Replace BCM. Refer to BCS-98, "Removal and Installation".
2. Perform DTC CONFIRMATION PROCEDURE for DTC B2601. Refer to SEC-76, "DTC Description".

Is DTC B2601 detected again?

YES >> Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".
NO >> INSPECTION END

B2602 SHIFT POSITION

DTC Description

INFOID:0000000009345915

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B2602	SHIFT POSITION (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

POSSIBLE CAUSE

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

FAIL-SAFE

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DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

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

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000009345916

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

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

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

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

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to BRC-57, "DTC Index".

NO >> GO TO 3.

3. 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-80, "DTC Index".
NO >> GO TO 4.

4. CHECK A/T SHIFT SELECTOR POWER SUPPLY

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

(+)		(–)	Voltage
A/T shift selector (detention switch)			
Connector	Terminal		
M7	10	Ground	9 – 16 V

Is the inspection result normal?

YES >> GO TO 7.
NO >> GO TO 5.

5. CHECK A/T SHIFT SELECTOR POWER SUPPLY CIRCUIT

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

A/T shift selector (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M7	10	M14	69	Existed

3. Check continuity between A/T shift selector (detention switch) harness connector and ground.

A/T shift selector (detention switch)		Ground	Continuity
Connector	Terminal		
M7	10		Not existed

Is the inspection result normal?

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

6. REPLACE BCM

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

>> INSPECTION END

7. CHECK A/T SHIFT SELECTOR CIRCUIT

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

A/T shift selector (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M7	11	M13	20	Existed

3. Check continuity between A/T shift selector (detention switch) harness connector and ground.

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

Is the inspection result normal?

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

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

Refer to SEC-80, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 9.
NO >> Replace A/T shift selector. Refer to TM-210, "Removal and Installation".

9.CHECK INTERMITTENT INCIDENT

Refer to GI-43, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000009345917

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

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

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

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace A/T shift selector. Refer to TM-210, "Removal and Installation".

B2603 SHIFT POSITION

DTC Description

INFOID:0000000009345918

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B2603	SHIFT POSI STATUS (Shift position status)	BCM detects the following status when ignition switch is in the ON position. • P/N position signal: approx. 0 V (Other than P/N position) • A/T shift selector (detention switch) signal: approx. 0 V (P position)

POSSIBLE CAUSE

- Harness or connectors
  (The CAN communication line is open or shorted.)
- Harness or connectors
  (P/N position signal circuit is open or shorted.)
- A/T shift selector (detention switch)
- BCM
- TCM

FAIL-SAFE

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DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC B2603 is displayed with DTC B2601, first perform the trouble diagnosis for DTC B2601.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to SEC-76, "DTC Description".
NO >> GO TO 2.

2.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 >> Refer to SEC-81, "Diagnosis Procedure".
NO >> GO TO 3.

3.PERFORM DTC CONFIRMATION PROCEDURE 2

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

Is DTC detected?

YES >> Refer to SEC-81, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009345919

1.CHECK DTC PRIORITY

If DTC B2603 is displayed with DTC B2601, first perform the trouble diagnosis for DTC B2601.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. Refer to SEC-76, "DTC Description".
NO >> GO TO 2.

2.INSPECTION START

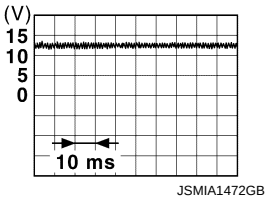
Perform inspection in accordance with procedure that confirms DTC.

Which procedure confirms DTC?

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

3.CHECK P/N POSITION SIGNAL

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

(+) BCM Connector	(+) BCM Terminal	(–)	Condition		Voltage
M13	39	Ground	Selector lever	P or N position	 JSMIA1472GB
				Other than above	0 V

Is the inspection result normal?

YES >> GO TO 12.
NO >> GO TO 4.

4.CHECK P/N POSITION SIGNAL CIRCUIT 1

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

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

Is the inspection result normal?

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

5.CHECK P/N POSITION SIGNAL CIRCUIT 2

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

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

Is the inspection result normal?

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

6.CHECK JOINT CONNECTOR

1. Remove joint connector.
2. Check continuity between joint connector terminals.

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

Is the inspection result normal?

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

7. CHECK A/T SHIFT SELECTOR POWER SUPPLY

1. Turn ignition switch OFF.
2. Disconnect A/T shift selector (detention switch) connector.
3. Turn ignition switch ON.
4. Check voltage between A/T shift selector (detention switch) harness connector and ground.

(+)		(–)	Voltage
A/T shift selector (detention switch)			
Connector	Terminal		
M7	10	Ground	9 – 16 V

Is the inspection result normal?

YES >> GO TO 9.
NO >> GO TO 8.

8. CHECK A/T SHIFT SELECTOR POWER SUPPLY CIRCUIT

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

A/T shift selector (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M7	10	M14	69	Existed

4. Check continuity between A/T shift selector (detention switch) harness connector and ground.

A/T shift selector (detention switch)		Ground	Continuity
Connector	Terminal		
M7	10		Not existed

Is the inspection result normal?

YES >> GO TO 11.
NO >> Repair or replace harness.

9. CHECK A/T SHIFT SELECTOR CIRCUIT

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

A/T shift selector (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M7	11	M13	20	Existed

4. Check continuity between A/T shift selector (detention switch) harness connector and ground.

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

Is the inspection result normal?

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

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

Refer to SEC-84, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 12.
NO >> Replace A/T shift selector. Refer to TM-210, "Removal and Installation".

11. CHECK INTERMITTENT INCIDENT

Refer to GI-43, "Intermittent Incident".

>> INSPECTION END

12. REPLACE BCM

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

>> INSPECTION END

Component Inspection

INFOID:0000000009345921

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

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

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

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace A/T shift selector. Refer to TM-210, "Removal and Installation".

B2604 SHIFT POSITION

DTC Description

INFOID:0000000009345922

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B2604	PNP/CLUTCH SW (Park neutral position/ clutch switch)	The following states are detected for 5 seconds while ignition switch is ON. • P/N position signal is sent from TCM but shift position signal input (CAN) from TCM is other than P and N • P/N position signal is not sent from TCM but shift position signal input (CAN) from TCM is P or N

POSSIBLE CAUSE

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

FAIL-SAFE

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DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC B2604 is displayed with DTC U1000 or U1010, first perform the trouble diagnosis for DTC U1000 or U1010.

Is applicable DTC detected?

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

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Shift the selector lever to the P position.
2. Turn ignition switch ON and wait 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 >> Refer to SEC-85, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009345923

1.CHECK DTC PRIORITY

If DTC B2604 is displayed with DTC U1000 or U1010, first perform the trouble diagnosis for DTC U1000 or U1010.

Is applicable DTC detected?

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

NO >> GO TO 2.

2.CHECK DTC OF TCM

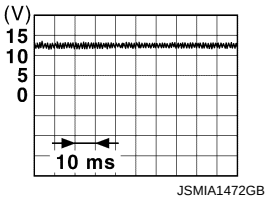
Check DTC in “Self Diagnostic Result” mode of “TCM” using CONSULT.

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to TM-85, "DTC Index".
NO >> GO TO 3.

3. CHECK P/N POSITION SIGNAL

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

(+) BCM Connector	(+) BCM Terminal	(–)	Condition		Voltage
M13	39	Ground	Selector lever	P or N position	 JSMIA1472GB
				Other than above	0 V

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-98, "Removal and Installation".
NO >> GO TO 4.

4. CHECK P/N POSITION SIGNAL CIRCUIT 1

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

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

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

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

Is the inspection result normal?

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

5. CHECK P/N POSITION SIGNAL CIRCUIT 2

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

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

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

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

Is the inspection result normal?

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

6. CHECK JOINT CONNECTOR

1. Remove joint connector.
2. Check continuity between joint connector terminals.

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

Is the inspection result normal?

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

B2605 SHIFT POSITION

DTC Description

INFOID:0000000009345925

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

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

FAIL-SAFE

—

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

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

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000009345926

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

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

2.CHECK DTC OF TCM

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

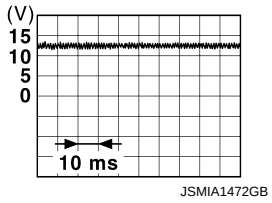
Is DTC detected?

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

NO >> GO TO 3.

3. CHECK P/N POSITION SIGNAL

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

(+) BCM Connector	(+) BCM Terminal	(–)	Condition		Voltage
M13	39	Ground	Selector lever	P or N position	 JSMIA1472GB
				Other than above	0 V

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-98, "Removal and Installation".
NO >> GO TO 4.

4. CHECK P/N POSITION SIGNAL CIRCUIT 1

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

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

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

IPDM E/R Connector	IPDM E/R Terminal	Ground	Continuity
E121	37		Not existed

Is the inspection result normal?

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

5. CHECK P/N POSITION SIGNAL CIRCUIT 2

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

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

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

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

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".
NO >> Repair or replace harness.

B2608 STARTER RELAY

DTC Description

INFOID:0000000009345927

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

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

FAIL-SAFE

Inhibit engine cranking

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

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

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000009345928

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

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

2.CHECK DTC OF IPDM E/R

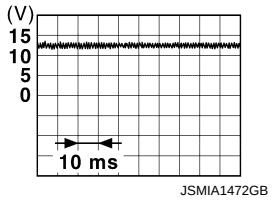
Check DTC in “Self Diagnostic Result” mode of “IPDM E/R” using CONSULT.

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to PCS-22, "DTC Index".
NO >> GO TO 3.

3.CHECK P/N POSITION SIGNAL 1

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

(+) BCM Connector	(+) BCM Terminal	(–)	Condition		Voltage
M13	39	Ground	Selector lever	P or N position	 JSMIA1472GB
				Other than above	0 V

Is the inspection result normal?

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

4. CHECK P/N POSITION SIGNAL 2

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

(+) IPDM E/R Connector	(+) IPDM E/R Terminal	(–)	Condition		Voltage
E121	37	Ground	Selector lever	P or N position	9 – 16 V
				Other than above	0 – 1.5 V

Is the inspection result normal?

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

5. REPLACE IPDM E/R

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

Is DTC B2608 detected again?

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

B260F ENGINE STATUS

Description

INFOID:0000000009345937

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

DTC Description

INFOID:0000000009345938

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

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

FAIL-SAFE

Inhibit engine cranking

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

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

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000009345939

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

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

2.INSPECTION START

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

Is DTC detected?

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

3.REPLACE ECM

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

>> INSPECTION END

B26F3 STARTER CONTROL RELAY

DTC Description

INFOID:0000000009345952

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B26F3	START CONT RLY ON (Starter control relay on)	BCM requests IPDM E/R to turn starter control relay OFF, but BCM cannot receive starter control relay OFF state signal from IPDM E/R (CAN).

POSSIBLE CAUSE

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

FAIL-SAFE

Inhibit engine cranking

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

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

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000009345953

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

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

2.CHECK DTC OF IPDM E/R

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

Is DTC detected?

YES >> Perform the diagnosis procedure related to the detected DTC. Refer to PCS-22, "DTC Index".
NO >> GO TO 3.

3.REPLACE BCM

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

>> INSPECTION END

B26F4 STARTER CONTROL RELAY

DTC Description

INFOID:0000000009345954

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B26F4	START CONT RLY OFF (Starter control relay off)	BCM requests IPDM E/R to turn starter control relay ON, but BCM cannot receive starter control relay ON state signal from IPDM E/R (CAN).

POSSIBLE CAUSE

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

FAIL-SAFE

Inhibit engine cranking

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

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

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000009345955

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

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

2.CHECK DTC OF IPDM E/R

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

Is DTC detected?

YES >> Perform the diagnosis procedure related to the detected DTC. Refer to PCS-22, "DTC Index".
NO >> GO TO 3.

3.REPLACE BCM

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

>> INSPECTION END

B26F7 BCM

DTC Description

INFOID:0000000009345958

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

BCM

FAIL-SAFE

Inhibit engine cranking by Intelligent Key system

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000009345959

1.INSPECTION START

1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “BCM” using CONSULT.
3. Touch “ERASE”.
4. Perform DTC CONFIRMATION PROCEDURE for DTC B26F7. Refer to SEC-98, "DTC Description".

Is DTC B26F7 detected again?

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

2.REPLACE BCM

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

>> INSPECTION END

B26F8 BCM

DTC Description

INFOID:0000000009345960

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B26F8	BCM (Body control module)	Starter control relay control signal and feedback circuit signal (inside BCM) does not match.

POSSIBLE CAUSE

BCM

FAIL-SAFE

—

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 >> Refer to SEC-99, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009345961

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 Description".

Is DTC detected?

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

2.REPLACE BCM

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

>> INSPECTION END

B26FC KEY REGISTRATION

DTC Description

INFOID:0000000009345962

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

- Improper registration operation
- Intelligent Key
- BCM

FAIL-SAFE

—

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000009345963

1.REPLACE INTELLIGENT KEY

1. Prepare Intelligent Key that matches the vehicle.
2. Registration of all Intelligent Keys using CONSULT.
3. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT.

Is DTC detected?

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

2.REPLACE BCM

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

>> INSPECTION END

B210B STARTER CONTROL RELAY

DTC Description

INFOID:0000000009345973

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B210B	STR CONT RLY ON CIRC (Starter control relay on circuit)	When comparing the following items, IPDM E/R detects that starter control relay is stuck in the ON position for 1 second 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)

POSSIBLE CAUSE

IPDM E/R

FAIL-SAFE

—

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC B210B is displayed with DTC U1000 or U1010, first perform the trouble diagnosis for DTC U1000 or U1010.

Is applicable DTC detected?

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

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to SEC-101, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".

NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009345974

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 “B210B”?

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

“PAST” >> GO TO 2.

2.CHECK INTERMITTENT INCIDENT

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

>> INSPECTION END

B210C STARTER CONTROL RELAY

DTC Description

INFOID:0000000009345975

DTC DETECTION LOGIC

NOTE:
When IPDM E/R power supply voltage is low (Approx. 7 - 8 V for about 1 second), the DTC B210C may be detected.

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B210C	STR CONT RLY OFF CIRC (Starter control relay off circuit)	When comparing the following items, IPDM E/R detects that starter control relay is stuck in the OFF position for 1 second 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)

POSSIBLE CAUSE

- IPDM E/R
- BCM
- Battery

FAIL-SAFE

Inhibit engine cranking

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

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

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000009345976

1.CHECK SELF DIAGNOSTIC RESULT

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

What is the display history of DTC “B210C”?

“CRNT”>> GO TO 3.
“PAST” >> GO TO 2.

2.CHECK BATTERY VOLTAGE

Measure the battery voltage.

Which is the measurement result?

More than 12.4 V>>GO TO 5
Less than 12.4 V>>Perform battery inspection. Refer to PG-98, "Work Flow".

3.CHECK P/N POSITION SIGNAL CIRCUIT VOLTAGE

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

(+)		(-)	Condition		Voltage
IPDM E/R					
Connector	Terminal				
E121	37	Ground	Shift position	P or N	9 – 16 V

Which is the measurement result?

Approx. 12 V>>Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".
Approx. 0 V>>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	
E121	37	M13	39	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-43, "Intermittent Incident".

>> INSPECTION END

B210D STARTER RELAY

DTC Description

INFOID:0000000009345977

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B210D	STARTER RLY ON CIRC (Starter relay on circuit)	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)

POSSIBLE CAUSE

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

FAIL-SAFE

—

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

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

2.PERFORM DTC CONFIRMATION PROCEDURE 1

1. Press push-button ignition switch under the following conditions to start engine, and wait 5 seconds or more.
- Selector lever: In the P position
- Brake pedal: Depressed
2. Check DTC in “Self Diagnostic Result” mode of “IPDM E/R” using CONSULT.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000009345978

1.CHECK SELF DIAGNOSTIC RESULT

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

What is the display history of DTC “B210D”?

“CRNT”>> GO TO 2.
“PAST” >> GO TO 4.

2.CHECK STARTER RELAY CONTROL SIGNAL CIRCUIT VOLTAGE

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

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

Which is the measurement result?

Approx. 12 V>>Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".
Approx. 0 V>>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.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E121	33		Not existed

Is the inspection result normal?

YES >> Perform the diagnosis procedure for DTC B2608 of BCM. Refer to SEC-90, "Diagnosis Procedure".
NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

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

>> INSPECTION END

B210E STARTER RELAY

DTC Description

INFOID:0000000009345979

DTC DETECTION LOGIC

NOTE:
When IPDM E/R power supply voltage is low (Approx. 7 - 8 V for about 1 second), the DTC B210E may be detected.

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition
B210E	STARTER RLY OFF CIRC (Starter relay off circuit)	When comparing the following items, IPDM E/R detects that starter relay is stuck in the OFF position for 5 seconds or more. • Starter relay control 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)

POSSIBLE CAUSE

- Harness or connectors
  (The CAN communication line is open or shorted.)
- Harness or connector
  (Starter relay control signal circuit is open or shorted.)
- IPDM E/R
- BCM
- Battery

FAIL-SAFE

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DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000: Refer to BCS-85, "DTC Description". U1010: Refer to BCS-86, "DTC Description". B2605: Refer to SEC-88, "DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Press push-button ignition switch under the following conditions to start engine, and wait 5 seconds or more.
- Selector lever: In the P position
- Brake pedal: Depressed
2. Check DTC in “Self Diagnostic Result” mode of “IPDM E/R” using CONSULT.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000009345980

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

Measure the battery voltage.

Which is the measurement result?

More than 12.4 V>>GO TO 5
Less than 12.4 V>>Perform battery inspection. Refer to PG-98, "Work Flow".

3.CHECK STARTER RELAY CONTROL SIGNAL

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

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

Which is the measurement result?

Approx. 12 V>>GO TO 4.
Approx. 0 V>>Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".

4.CHECK STARTER RELAY CONTROL SIGNAL CIRCUIT

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

BCM		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M14	62	E121	33	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-43, "Intermittent Incident".

>> INSPECTION END

B210F SHIFT POSITION/CLUTCH INTERLOCK SWITCH

DTC Description

INFOID:0000000009345981

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

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

FAIL-SAFE

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DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

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

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to SEC-108, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".

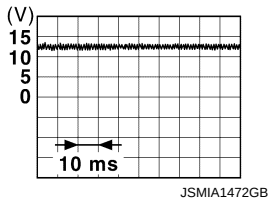
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009345982

1.CHECK P/N POSITION SIGNAL

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

(+)		(–)	Condition		Voltage
BCM					
Connector	Terminal				
M13	39	Ground	Selector lever	P or N position	 JSMIA1472GB
				Other than above	0 V

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-98, "Removal and Installation".
NO >> GO TO 2.

2.CHECK P/N POSITION SIGNAL CIRCUIT

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

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

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E121	37		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".
NO >> Repair or replace harness.

B2110 SHIFT POSITION/CLUTCH INTERLOCK SWITCH

DTC Description

INFOID:0000000009345983

DTC DETECTION LOGIC

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

POSSIBLE CAUSE

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

FAIL-SAFE

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DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

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

Is applicable DTC detected?

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

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

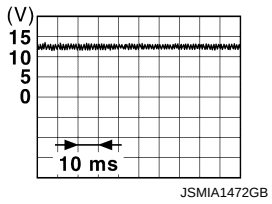
YES >> Refer to SEC-110, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009345984

1.CHECK P/N POSITION SIGNAL

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

(+)		(–)	Condition		Voltage
BCM					
Connector	Terminal				
M13	39	Ground	Selector lever	P or N position	 JSMIA1472GB
				Other than above	0 V

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-98, "Removal and Installation".
NO >> GO TO 2.

2.CHECK P/N POSITION SIGNAL CIRCUIT

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

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

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E121	37		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".
NO >> Repair or replace harness.

SECURITY INDICATOR LAMP

Component Function Check

INFOID:0000000009345985

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 >> Refer to SEC-112, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000009345986

1.CHECK FUSE

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

Signal name	Fuse No.
Battery power supply	6 (10 A)
Ignition power supply	11 (5 A)

Is the inspection result normal?

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

2.CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT

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

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

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
BCM			
Connector	Terminal		
M13	18	Ground	Battery voltage

Is the inspection result normal?

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

4. REPLACE BCM

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

>> 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	
M57	7	M13	18	Existed

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

Combination meter		Ground	Continuity
Connector	Terminal		
M57	7		Not existed

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-126, "Removal and Installation".
NO >> Repair or replace harness.

HOOD SWITCH

Component Function Check

INFOID:0000000009345987

1.CHECK FUNCTION

1. Select “HOOD SW” in “Data Monitor” mode of “IPDM E/R” using CONSULT.
2. Check “HOOD SW” indication under the following condition.

Monitor item	Condition		Indication
HOOD SW	Hood	Open	ON
		Close	OFF

Is the indication normal?

YES >> Hood switch is OK.
NO >> Refer to SEC-114, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000009345988

1.CHECK HOOD SWITCH SIGNAL

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

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

Is the inspection result normal?

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

2.CHECK HOOD SWITCH SIGNAL CIRCUIT

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

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

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

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

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".
NO >> Repair or replace harness.

3.CHECK HOOD SWITCH GROUND CIRCUIT

Check continuity between hood switch harness connector and ground.

Hood switch		Ground	Continuity
Connector	Terminal		
E77	1		Existed

Is the inspection result normal?

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

4.CHECK HOOD SWITCH

Refer to SEC-115, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace hood lock assembly. Refer to DLK-215, "HOOD LOCK : Removal and Installation".

5.CHECK INTERMITTENT INCIDENT

Refer to GI-43, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000009345989

1.CHECK HOOD SWITCH

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

Hood switch		Condition	Continuity
Terminal			
1	2	Close the hood	Not existed
		Open the hood	Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace hood lock assembly. Refer to DLK-215, "HOOD LOCK : Removal and Installation".

HEADLAMP FUNCTION

Component Function Check

INFOID:0000000009346010

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-116, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000009346011

1.CHECK HEADLAMP FUNCTION

Refer to EXL-130, "Component Function Check".

Is the inspection result normal?

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

2.CHECK INTERMITTENT INCIDENT

Refer to GI-43, "Intermittent Incident".

>> INSPECTION END

HORN FUNCTION

Component Function Check

INFOID:0000000009345990

1.CHECK FUNCTION 1

1. Disconnect vehicle security horn relay.
2. Perform “VEHICLE SECURITY HORN” in “ACTIVE TEST” mode of “THEFT ALM” of “BCM” using CONSULT.
3. Check the horn operation.

Test item		Description	
VEHICLE SECURITY HORN	ON	Horn (LOW and HIGH)	Sounds (for 0.5 sec.)

Is the operation normal?

YES >> GO TO 2.
NO >> Refer to SEC-117, "Diagnosis Procedure".

2.CHECK FUNCTION 2

1. Reconnect vehicle security horn relay.
2. Disconnect horn relay.
3. Perform “VEHICLE SECURITY HORN” in “ACTIVE TEST” mode of “THEFT ALM” of “BCM” using CONSULT.
4. Check the horn operation.

Test item		Description	
VEHICLE SECURITY HORN	ON	Vehicle security horn	Sounds (for 0.5 sec.)

Is the operation normal?

YES >> INSPECTION END
NO >> Refer to SEC-117, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000009345991

1.INSPECTION START

Perform inspection in accordance with procedure that confirms malfunction.

Which procedure confirms malfunction?

Component Function Check 1>>GO TO 2.
Component Function Check 2>>GO TO 5.

2.CHECK HORN FUNCTION

Check horn function using horn switch.

Do the horn sound?

YES >> GO TO 3.
NO >> Check horn circuit. Refer to HRN-3, "Wiring Diagram".

3.CHECK HORN RELAY CONTROL SIGNAL

1. Turn ignition switch ON.
2. Select “VEHICLE SECURITY HORN” in “ACTIVE TEST” mode of “THEFT ALM” of “BCM” using CONSULT.
3. Check voltage between IPDM E/R harness connector and ground.

(+)		(–)	Test item		Voltage
IPDM E/R					
Connector	Terminal				
E121	23	Ground	VEHICLE SECURITY HORN	On	0 – 1 V
				Off	9 – 16 V

Is the operation normal?

YES >> GO TO 10.
NO >> GO TO 4.

4. CHECK HORN RELAY CONTROL SIGNAL CIRCUIT

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

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

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E121	23		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".
NO >> Repair or replace harness.

5. CHECK VEHICLE SECURITY HORN RELAY CONTROL SIGNAL

1. Turn ignition switch ON.
2. Select “VEHICLE SECURITY HORN” in “ACTIVE TEST” mode of “THEFT ALM” of “BCM” using CONSULT.
3. Check voltage between IPDM E/R harness connector and ground.

(+)		(–)	Test item		Voltage
IPDM E/R					
Connector	Terminal				
E121	22	Ground	VEHICLE SECURITY HORN	On	0 – 1 V
				Off	9 – 16 V

Is the operation normal?

YES >> GO TO 10.
NO >> GO TO 6.

6. CHECK VEHICLE SECURITY HORN RELAY POWER SUPPLY

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

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

Is the inspection result normal?

YES >> GO TO 7.
NO-1 >> Check 10 A fuse [No. 65 located in the fuse block (J/B)].
NO-2 >> Check harness for open or short between vehicle security horn relay and fuse.

7. CHECK VEHICLE SECURITY HORN CONTROL CIRCUIT

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

IPDM E/R		Vehicle security horn relay		Continuity
Connector	Terminal	Connector	Terminal	
E121	22	E101	2	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E121	22		Not existed

Is the inspection result normal?

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

8.CHECK VEHICLE SECURITY HORN CIRCUIT

1. Disconnect vehicle security horn connector.
2. Check continuity between vehicle security horn relay harness connector and vehicle security horn harness connector.

Vehicle security horn relay		Vehicle security horn		Continuity
Connector	Terminal	Connector	Terminal	
E101	3	E73	1	Existed

3. Check continuity between vehicle security horn relay harness connector and ground.

Vehicle security horn relay		Ground	Continuity
Connector	Terminal		
E101	3		Not existed

4. Check continuity between vehicle security horn harness connector and ground.

Vehicle security horn		Ground	Continuity
Connector	Terminal		
E74	2		Existed

Is the inspection result normal?

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

9.CHECK VEHICLE SECURITY HORN RELAY

Refer to SEC-119, "Component Inspection".

Is the inspection result normal?

YES >> Replace vehicle security horn.
NO >> Replace vehicle security horn relay.

10.CHECK INTERMITTENT INCIDENT

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

>> INSPECTION END

Component Inspection

INFOID:0000000009345992

1.CHECK VEHICLE SECURITY HORN RELAY

1. Turn power switch OFF.
2. Disconnect vehicle security horn relay.
3. Check voltage between vehicle security horn relay terminal and ground under the following conditions.

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

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace vehicle security horn relay.

SYMPTOM DIAGNOSIS

ENGINE DOES NOT START WHEN INTELLIGENT KEY IS INSIDE OF VEHICLE

Description

INFOID:0000000009345993

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

Diagnosis Procedure

INFOID:0000000009345994

1. PERFORM WORK SUPPORT

Perform “INSIDE ANT DIAGNOSIS” in “Work Support” mode of “INTELLIGENT KEY” of “BCM” using CONSULT.
Refer to SEC-27, "INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY)".

>> GO TO 2.

2. PERFORM SELF-DIAGNOSIS RESULT

Select “Self Diagnostic Result” mode of “BCM”, and check whether or not DTC of inside key antenna is detected.

Is DTC detected?

YES >> Perform the trouble diagnosis for detected DTC. Refer to BCS-62, "DTC Index".
NO >> GO TO 3.

3. CHECK PUSH-BUTTON IGNITION SWITCH

Check push-button ignition switch.
Refer to PCS-81, "Component Function Check".

Is the operation normal?

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

4. REPLACE BCM

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

Is the inspection result normal?

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

SECURITY INDICATOR LAMP DOES NOT TURN ON OR BLINK

Description

INFOID:0000000009763869

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

Diagnosis Procedure

INFOID:0000000009763870

1.CHECK SECURITY INDICATOR LAMP

Check security indicator lamp.
Refer to SEC-112, "Component Function Check".

Is the inspection result normal?

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

2.REPLACE BCM

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

Is the inspection result normal?

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

VEHICLE SECURITY SYSTEM CANNOT BE SET

INTELLIGENT KEY

INTELLIGENT KEY : Description

INFOID:0000000009763857

ARMED phase is not activated when door is locked using Intelligent Key.

INTELLIGENT KEY : Diagnosis Procedure

INFOID:0000000009763858

1. CHECK INTELLIGENT KEY SYSTEM (REMOTE KEYLESS ENTRY FUNCTION)

Press the LOCK button of Intelligent Key.

Are all doors LOCKED?

YES >> GO TO 2.
NO >> Check Intelligent Key system (remote keyless entry function). Refer to DLK-146, "Diagnosis Procedure".

2. CHECK HOOD SWITCH

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

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace malfunctioning parts. Refer to SEC-114, "Diagnosis Procedure".

3. CHECK TRUNK ROOM LAMP SWITCH

Check trunk room lamp switch.
Refer to DLK-133, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace malfunctioning parts. Refer to DLK-133, "Diagnosis Procedure".

4. REPLACE BCM

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

Is the inspection result normal?

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

DOOR REQUEST SWITCH

DOOR REQUEST SWITCH : Description

INFOID:0000000009763859

ARMED phase is not activated when door is locked using door request switch.

DOOR REQUEST SWITCH : Diagnosis Procedure

INFOID:0000000009763860

1. CHECK INTELLIGENT KEY SYSTEM (DOOR LOCK FUNCTION)

Carry the Intelligent Key and press the door request switch.

Are all doors LOCKED?

YES >> GO TO 2.
NO >> Check Intelligent Key system (door lock function). Refer to DLK-143, "ALL DOOR REQUEST SWITCHES : Diagnosis Procedure".

2. CHECK HOOD SWITCH

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

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace malfunctioning parts. Refer to SEC-114, "Diagnosis Procedure".

3.CHECK TRUNK ROOM LAMP SWITCH

Check trunk room lamp switch.
Refer to DLK-133, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace malfunctioning parts. Refer to DLK-133, "Diagnosis Procedure".

4.REPLACE BCM

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

Is the inspection result normal?

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

DOOR LOCK AND UNLOCK SWITCH

DOOR LOCK AND UNLOCK SWITCH : Description

INFOID:0000000009763861

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

DOOR LOCK AND UNLOCK SWITCH : Diagnosis Procedure

INFOID:0000000009763862

1.CHECK INTELLIGENT KEY SYSTEM (DOOR LOCK FUNCTION)

Press the LOCK button of door lock and unlock switch.

Are all doors LOCKED?

YES >> GO TO 2.
NO >> Check Intelligent Key system (door lock function). Refer to DLK-139, "ALL DOOR : Diagnosis Procedure".

2.CHECK HOOD SWITCH

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

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace malfunctioning parts. Refer to SEC-114, "Diagnosis Procedure".

3.CHECK TRUNK ROOM LAMP SWITCH

Check trunk room lamp switch.
Refer to DLK-133, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace malfunctioning parts. Refer to DLK-133, "Diagnosis Procedure".

4.REPLACE BCM

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

Is the inspection result normal?

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

DOOR KEY CYLINDER

DOOR KEY CYLINDER : Description

INFOID:0000000009763863

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

DOOR KEY CYLINDER : Diagnosis Procedure

INFOID:0000000009763864

1.CHECK POWER DOOR LOCK SYSTEM

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

Are all doors LOCKED?

YES >> GO TO 2.
NO >> Check power door lock system. Refer to DLK-145, "Diagnosis Procedure".

2. CHECK HOOD SWITCH

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

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace malfunctioning parts. Refer to SEC-114, "Diagnosis Procedure".

3. CHECK TRUNK ROOM LAMP SWITCH

Check trunk room lamp switch.
Refer to DLK-133, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace malfunctioning parts. Refer to DLK-133, "Diagnosis Procedure".

4. REPLACE BCM

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

Is the inspection result normal?

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

VEHICLE SECURITY ALARM DOES NOT ACTIVATE

Description

INFOID:0000000009763867

Alarm does not operate when alarm operating condition is satisfied.

Diagnosis Procedure

INFOID:0000000009763868

1.CHECK DOOR SWITCH

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

Is the inspection result normal?

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

2.CHECK HOOD SWITCH

Check hood switch circuit.
Refer to SEC-114, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace malfunctioning parts. Refer to SEC-114, "Diagnosis Procedure".

3.CHECK HEADLAMP FUNCTION

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

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace malfunctioning parts. Refer to SEC-116, "Diagnosis Procedure".

4.CHECK HORN FUNCTION

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

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace malfunctioning parts. Refer to SEC-117, "Diagnosis Procedure".

5.REPLACE BCM

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

Is the inspection result normal?

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

PANIC ALARM FUNCTION DOES NOT OPERATE

Description

INFOID:0000000009763865

Panic alarm does not operate when press the PANIC ALARM button of Intelligent Key.

Diagnosis Procedure

INFOID:0000000009763866

1.CHECK INTELLIGENT KEY SYSTEM (REMOTE KEYLESS ENTRY FUNCTION)

Press the LOCK button of Intelligent Key.

Are all doors LOCKED?

YES >> GO TO 2.
NO >> Check Intelligent Key system (remote keyless entry function). Refer to DLK-146, "Diagnosis Procedure".

2.CHECK HEADLAMP FUNCTION

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

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace malfunctioning parts. Refer to SEC-116, "Diagnosis Procedure".

3.CHECK HORN FUNCTION

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

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace malfunctioning parts. Refer to SEC-117, "Diagnosis Procedure".

4.REPLACE BCM

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

Is the inspection result normal?

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

REMOVAL AND INSTALLATION

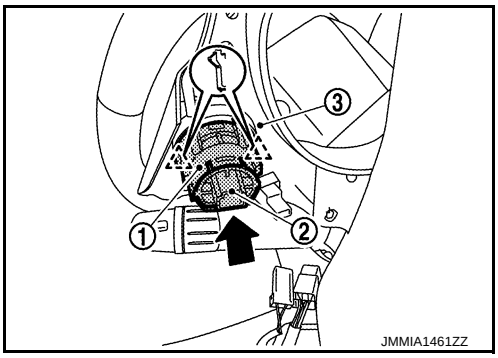
NATS ANTENNA AMP.

Removal and Installation

INFOID:0000000009346005

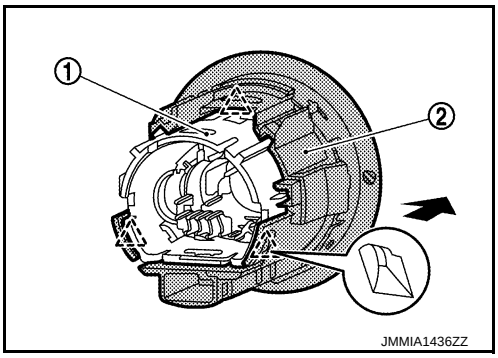
REMOVAL

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



△ : Pawl

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



△ : Pawl

INSTALLATION

Install in the reverse order of removal.