

SECTION **SEC**

SECURITY CONTROL SYSTEM

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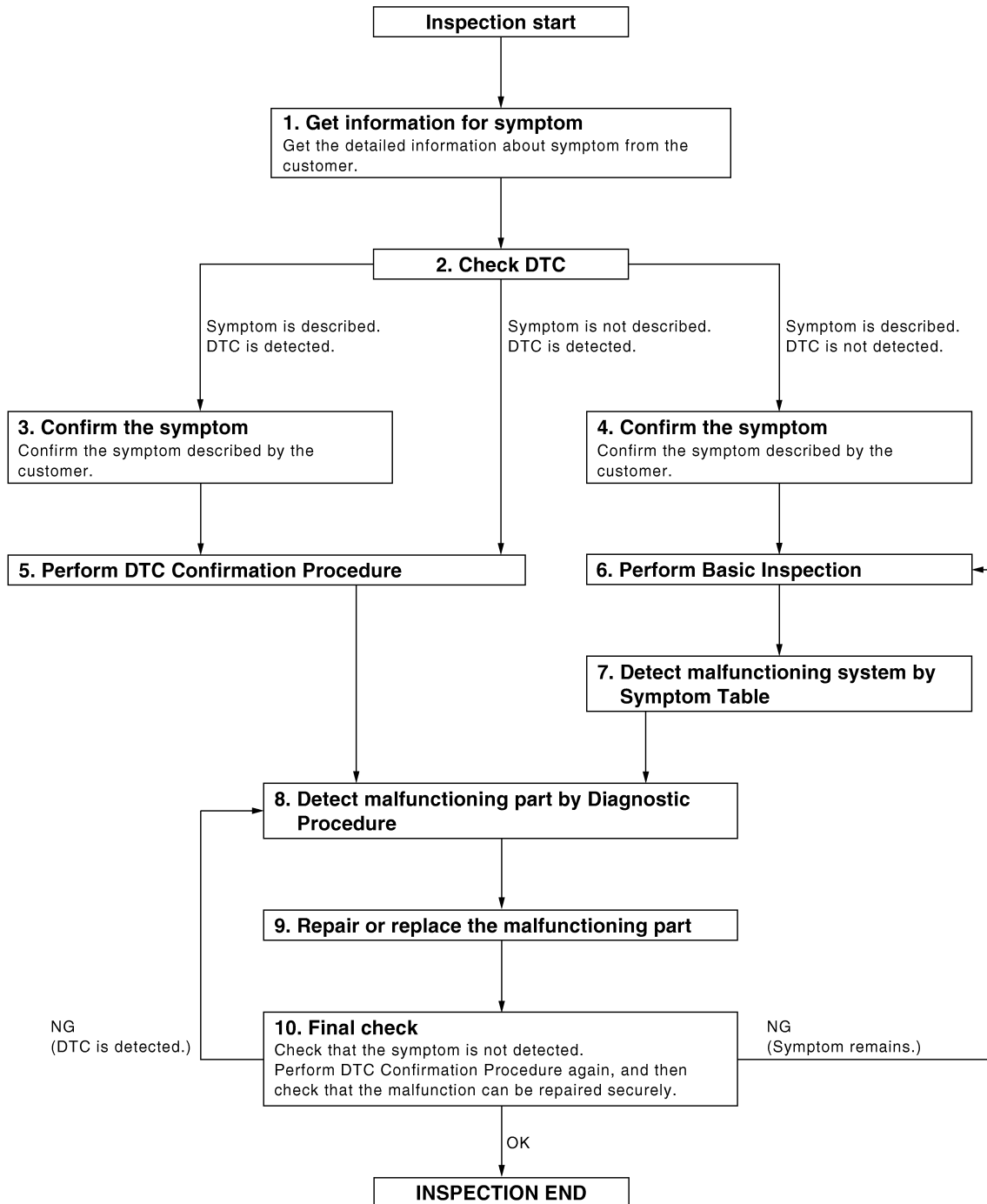
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000000961313

OVERALL SEQUENCE



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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[INTELLIGENT KEY SYSTEM]

1.GET INFORMATION FOR SYMPTOM

Get the detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurred).

>> GO TO 2.

2.CHECK DTC WITH BCM AND IPDM E/R

1. Check "Self Diagnostic Result" with CONSULT-III.
2. Perform the following procedure if DTC is displayed.
 - Record DTC and freeze frame data (Print them out with CONSULT-III.)
 - 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.

Is any symptom described and any DTC detected?

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

3.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.
Connect CONSULT-III to the vehicle in "Data Monitor" mode and check real time diagnosis results.
Verify relation ship between the symptom and the condition when the symptom is detected.

>> GO TO 5.

4.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.
Connect CONSULT-III to the vehicle in "Data Monitor " mode and check real time diagnosis results.
Verify relation ship 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 displayed DTC, and then check that DTC is detected again.
At this time, always keep CONSULT-III connected to the vehicle, and check diagnostic results in real time.
If two or more DTCs are detected, refer to [SEC-166. "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 in 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 8.
- No >> Refer to [GI-39. "Intermittent Incident"](#).

6.PERFORM BASIC INSPECTION

Perform [SEC-204. "Basic Inspection"](#).

Inspection End>>GO TO 7.

7.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

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

- Intelligent Key system/engine start function: [SEC-201. "Symptom Table"](#).
- Vehicle security system: [SEC-202. "Symptom Table"](#).

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[INTELLIGENT KEY SYSTEM]

- Infiniti vehicle immobilizer system-NATS: [SEC-203. "Symptom Table"](#).

>> GO TO 8.

8. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

NOTE:

The Diagnostic Procedure described based on open circuit inspection. A short circuit inspection is also required for the circuit check in the Diagnostic Procedure.

Is malfunctioning part detected?

Yes >> GO TO 9.

No >> Check voltage of related BCM terminals using CONSULT-III.

9. REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 10.

10. FINAL CHECK

When DTC was detected in step 2, perform DTC Confirmation Procedure or Component Function Check again, and then check that the malfunction have been fully repaired.

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

OK or NG

NG (DTC is detected)>>GO TO 8.

NG (Symptom remains)>>GO TO 6.

OK >> **INSPECTION END**

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INSPECTION AND ADJUSTMENT ECM RE-COMMUNICATING FUNCTION

ECM RE-COMMUNICATING FUNCTION : Description

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Performing following procedure can automatically perform re-communication of ECM and BCM, but only when the ECM has been replaced with a new one (*1).

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

(In this step, initialization procedure by CONSULT-III is not necessary)

NOTE:

- When registering new Key IDs or replacing the ECM that is not brand new, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.
- If multiple keys are attached to the key holder, separate them before work.
- Distinguish keys with unregistered key ID from those with registered ID.

ECM RE-COMMUNICATING FUNCTION : Special Repair Requirement

INFOID:000000000961315

1. PERFORM ECM RE-COMMUNICATING FUNCTION

1. Install ECM.
2. Insert the registered Intelligent Key (*2), turn ignition switch to "ON".
*2: To perform this step, use the key that has been used before performing ECM replacement.
3. Maintain ignition switch in "ON" position for at least 5 seconds.
4. Turn ignition switch to "OFF".
5. Start engine.

Can engine be started?

YES >> Procedure is completed.

NO >> Initialize control unit. Refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

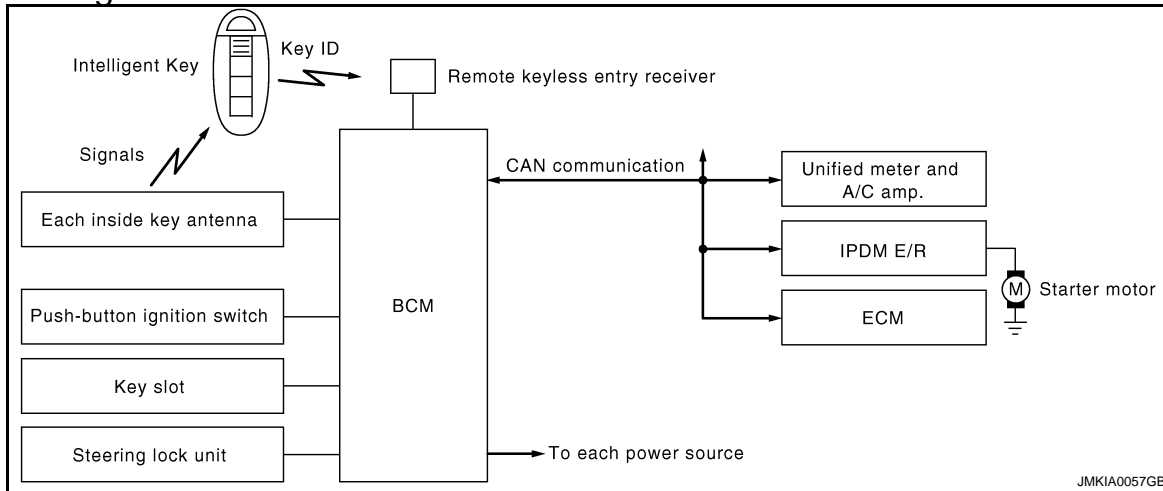
< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

FUNCTION DIAGNOSIS

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

System Diagram



System Description

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INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM function	Actuator
Push-button ignition switch	Push switch	Engine start function	<ul style="list-style-type: none"> Steering lock relay Steering lock unit Starter relay (IPDM E/R) Starter control relay (IPDM E/R) Starter motor KEY warning lamp
AT device (A/T models)	P range		
PNP switch (A/T models)	N, P range		
Clutch interlock switch (M/T models)	Clutch ON/OFF		
Stop lamp switch	Brake ON/OFF		
Each inside key antenna	Request signal		
Remote keyless entry receiver	Key ID		
Each door switch	Door open/close		
ECM	Engine status signal		

SYSTEM DESCRIPTION

- The engine start function of Intelligent Key system is a system that makes it possible to start and stop the engine without removing the key. It verifies the electronic ID using two-way communications when pressing the push-button ignition switch while carrying the Intelligent Key, which operates based on the results of electronic ID verification for Intelligent Key using two-way communications between the Intelligent Key and the vehicle.

NOTE:

- The driver should carry the Intelligent Key at all times.
- Intelligent Key has 2 IDs [for Intelligent Key and for IVIS (NATS)]. It can perform the door lock/unlock operation and the push-button ignition switch operation when the registered Intelligent Key is carried.
- When the Intelligent Key battery is discharged, it can be used as emergency back-up by inserting the Intelligent Key to the key slot. At that time, perform the IVIS (NATS) ID verification. If it is used when the Intelligent Key is carried, perform the Intelligent Key ID verification.
- If the ID is successfully verified, and when push-button ignition switch is pressed, steering lock will be released and initiating the engine will be possible.
- If the door lock/unlock operation is performed when the Intelligent Key battery is discharged, all doors lock/unlock can be performed by operating the driver door key cylinder using the mechanical key set in the Intelligent Key.

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

- Intelligent Key can be registered up to 4 keys (Including the standard Intelligent Key) on request from the owner.

NOTE:

- Refer to [DLK-18, "INTELLIGENT KEY : System Description"](#) for any functions other than engine start function of Intelligent Key system.

PRECAUTIONS FOR INTELLIGENT KEY SYSTEM

- In the Intelligent Key system of model V36, the transponder [the chip for IVIS (NATS) ID verification] is integrated into the Intelligent Key. (For the conventional models, it is integrated into the mechanical key.) Therefore, the mechanical key cannot perform the ID verification, and thus it cannot start the engine. Instead, the IVIS (NATS) ID verification can be performed by inserting the Intelligent Key into the key slot, and then it can start the engine.

OPERATION WHEN INTELLIGENT KEY IS CARRIED

1. When the push-button ignition switch is pressed, the BCM signals 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 via the remote keyless entry receiver.
3. The Intelligent Key receives the Intelligent Key ID signal and verifies it with the registered ID.
4. BCM transmits the steering lock unlock signal to steering lock unit and IPDM E/R if the verification results are OK.
5. IPDM E/R turns the steering lock relay ON and supplies power to the steering lock unit.
6. Release of the steering lock.
7. BCM transmits the power supply stop signal to IPDM E/R when it confirms that the steering lock is in the unlock condition.
8. IPDM E/R turns the steering lock relay OFF and stops power supply to the steering lock unit.
9. BCM turns ACC relay ON and transmits the ignition power supply ON signal to IPDM E/R.
10. IPDM E/R turns the ignition relay ON and starts the ignition power supply.
11. BCM confirms that the shift position is P or N. (A/T models)
12. BCM transmits the starter request signal via CAN communication to IPDM E/R and turns the starter relay in IPDM E/R ON if BCM judges that the engine start condition is satisfied.
13. IPDM E/R turns the starter control relay ON when receiving the starter request signal.
14. Battery power is supplied through the starter relay and the starter control relay to operate the starter motor and to start the cranking.

CAUTION:

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

15. When BCM received feedback signal from ECM acknowledging the engine has been initiated, the BCM transmits a stop signal to IPDM E/R and stops the cranking by turning OFF the starter motor relay. (If the engine initiating has failed, the cranking will stop automatically within 5 seconds.)

CAUTION:

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

*: For the engine start condition, refer to "PUSH-BUTTON IGNITION SWITCH OPERATION PROCEDURE".

OPERATION RANGE

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

OPERATION WHEN KEY SLOT IS USED

When the Intelligent Key battery is discharged, it performs the IVIS (NATS) ID verification between the integrated transponder and BCM by inserting the Intelligent Key into the key slot, and then the engine can be started.

For details relating to starting the engine using key slot, refer to [SEC-17, "System Description"](#).

BATTERY SAVER SYSTEM

When all the following conditions are met for 60 minutes, the battery saver system will cut off the power supply to prevent battery discharge.

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

- The ignition switch is in the ACC position
- All doors are closed
- A/T selector lever is in the P position

Reset Condition of Battery Saver System

AT models

In order to prevent the battery from discharging, the battery saver system will cut off the power supply when all doors are closed, the selector lever is on P position and the ignition switch is left on ACC position for 1 hour. If any of the following conditions are met the battery saver system is released and the steering will change automatically to lock position from OFF position.

- Opening any door
- Operating with request switch on door lock
- Operating with Intelligent Key on door lock

Press push-button ignition switch and ignition switch will change to ACC position from OFF position.

M/T models

If any of the conditions above is met the battery saver system is released but the steering will not lock. In this case, the steering operation OFF to LOCK is prohibited.

STEERING LOCK OPERATION

Steering is locked by steering lock unit when ignition switch is in the OFF position, A/T selector lever is in the P position and any of the following conditions are met.

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

PUSH-BUTTON IGNITION SWITCH OPERATION PROCEDURE

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

NOTE:

- When an Intelligent Key is within the detection area of inside key antenna and when it is inserted to the key slot, it is equivalent to the operations below.
- When starting the engine, the BCM monitors under the engine start conditions,
 - Brake pedal operating condition (A/T models)
 - A/T selector lever position (A/T models)
 - Clutch pedal operating condition (M/T models)
 - Vehicle speed
- Unless each start condition is fulfilled, the engine will not respond regardless of how many times the engine switch is pressed. At that time, illumination repeats the position in the order of LOCK→ACC→ON→OFF.

Power supply position	Engine start/stop condition		Push-button ignition switch operation frequency
	Brake pedal (A/T)/clutch pedal (M/T)	A/T selector lever position	
LOCK → ACC	Not depressed	Any position	1
LOCK → ACC → ON	Not depressed	Any position	2
LOCK → ACC → ON → OFF	Not depressed	Any position	3
LOCK → START ACC → START ON → START (Engine start)	Depressed	P or N position (*1)	1 [If the switch is pressed once, the engine starts from any power supply position (LOCK, ACC, and ON)]
Engine is running → OFF (Engine stop)	—	Any position	1
Engine is running → ACC (Engine stop)	—	Any position other than P (*2)	1
Engine stall return operation while driving	—	N position	1

*1: When the A/T selector lever position is N position, the engine start condition is different according to the vehicle speed.

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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

[INTELLIGENT KEY SYSTEM]

< FUNCTION DIAGNOSIS >

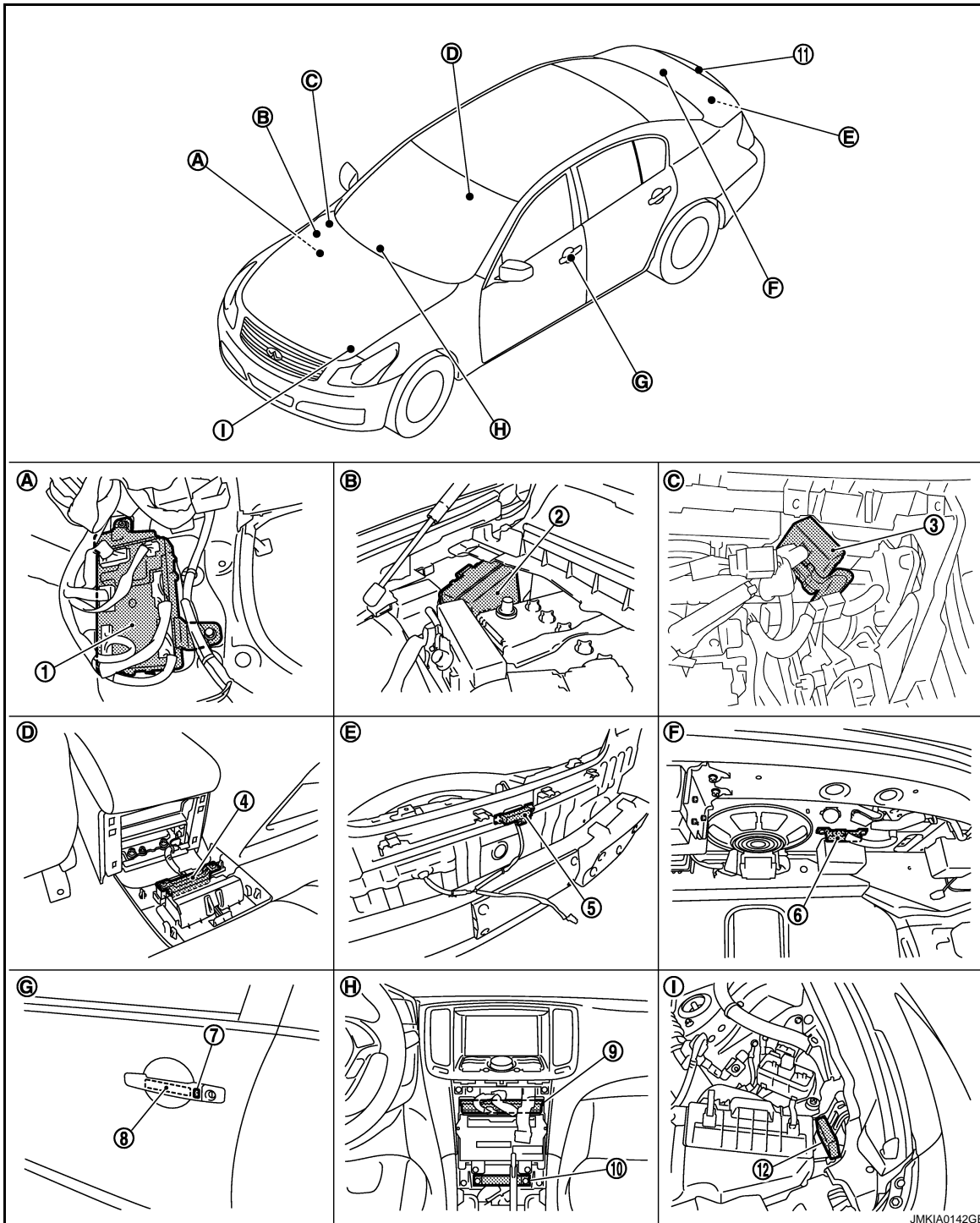
- At vehicle speed of 4 km/h or less, the engine can start only when the brake pedal is depressed.
- At vehicle speed of 4 km/h or more, the engine can start even if the brake pedal is not depressed. (It is the same as "Engine stall return operation while driving".)

*2: When the A/T selector lever position is in any position other than P position and when the vehicle speed is 5 km/h or more, the engine stop condition is different.

- Press and hold the push-button ignition switch for 2 seconds or more. (When the push-button ignition switch is pressed for too short a time, the operation may be invalid, so properly press and hold to prevent an incorrect operation.)
- Press the push-button ignition switch 3 times or more within 1.5 seconds. (Emergency stop operation)

Component Parts Location

INFOID:000000000961318



INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

1. BCM M118, M119, M120, M121, M122, M123	2. IPDM E/R E5, E6	3. Remote keyless entry receiver M104	A
4. Inside key antenna (console) M146	5. Outside key antenna (rear bumper) B63	6. Inside key antenna (trunk room) B49	B
7. Front outside handle LH (request switch) D13	8. Front outside handle LH (outside key antenna) D14	9. Unified meter and A/C AMP M66, M67	B
10. Inside key antenna (instrument center) M131	11. Trunk lid request switch B304	12. Intelligent Key warning buzzer (engine room) E57	C
A. Dash side lower (Passenger side).	B. Engine room dash panel (RH).	C. View with instrument assist lower panel removed.	C
D. View with console rear finisher removed.	E. View with rear bumper removed.	F. View with trunk rear finisher (upper) removed.	D
G. View of front door LH.	H. Behind cluster lid C.	I. View with hood seal assembly removed.	E
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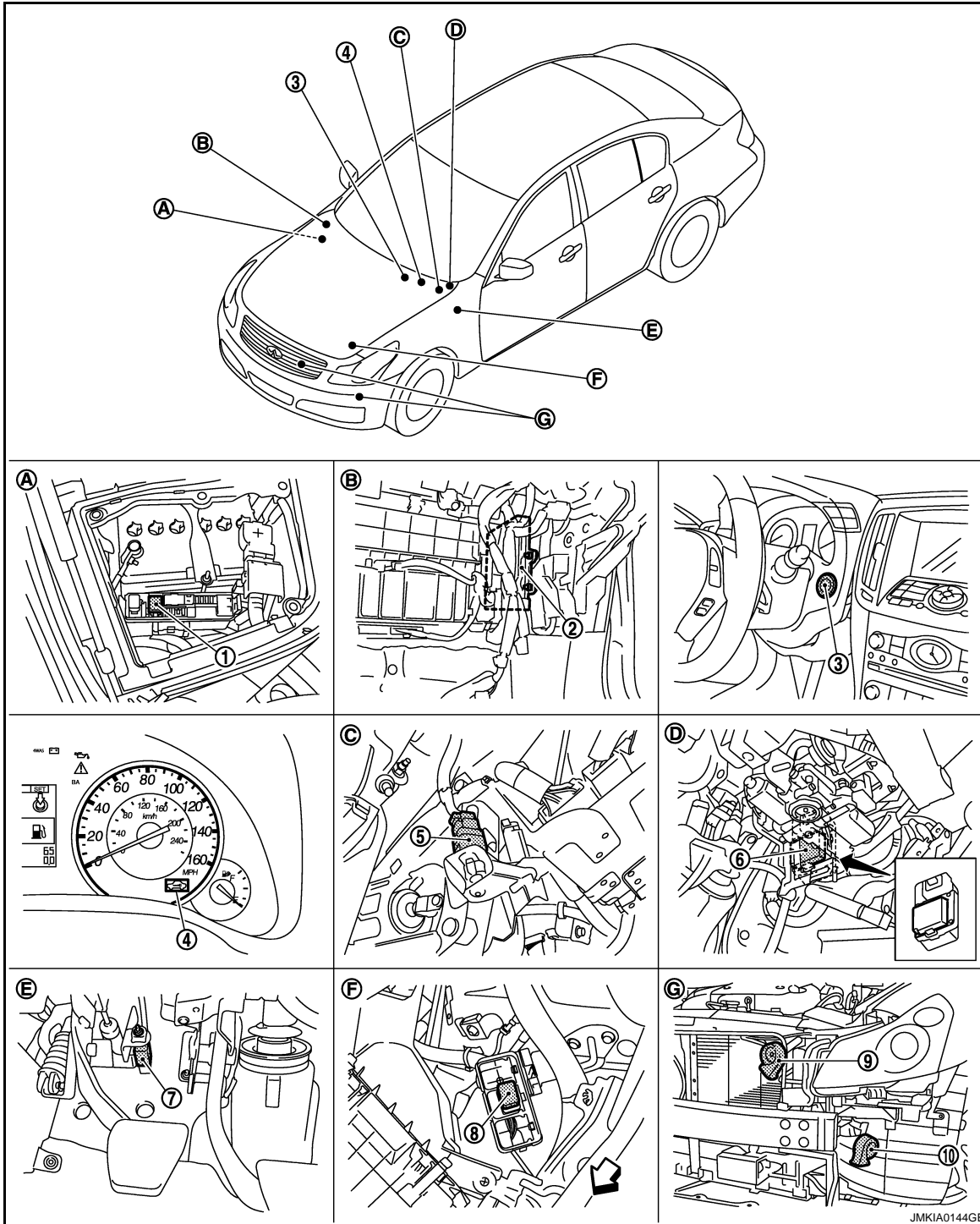
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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

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[INTELLIGENT KEY SYSTEM]

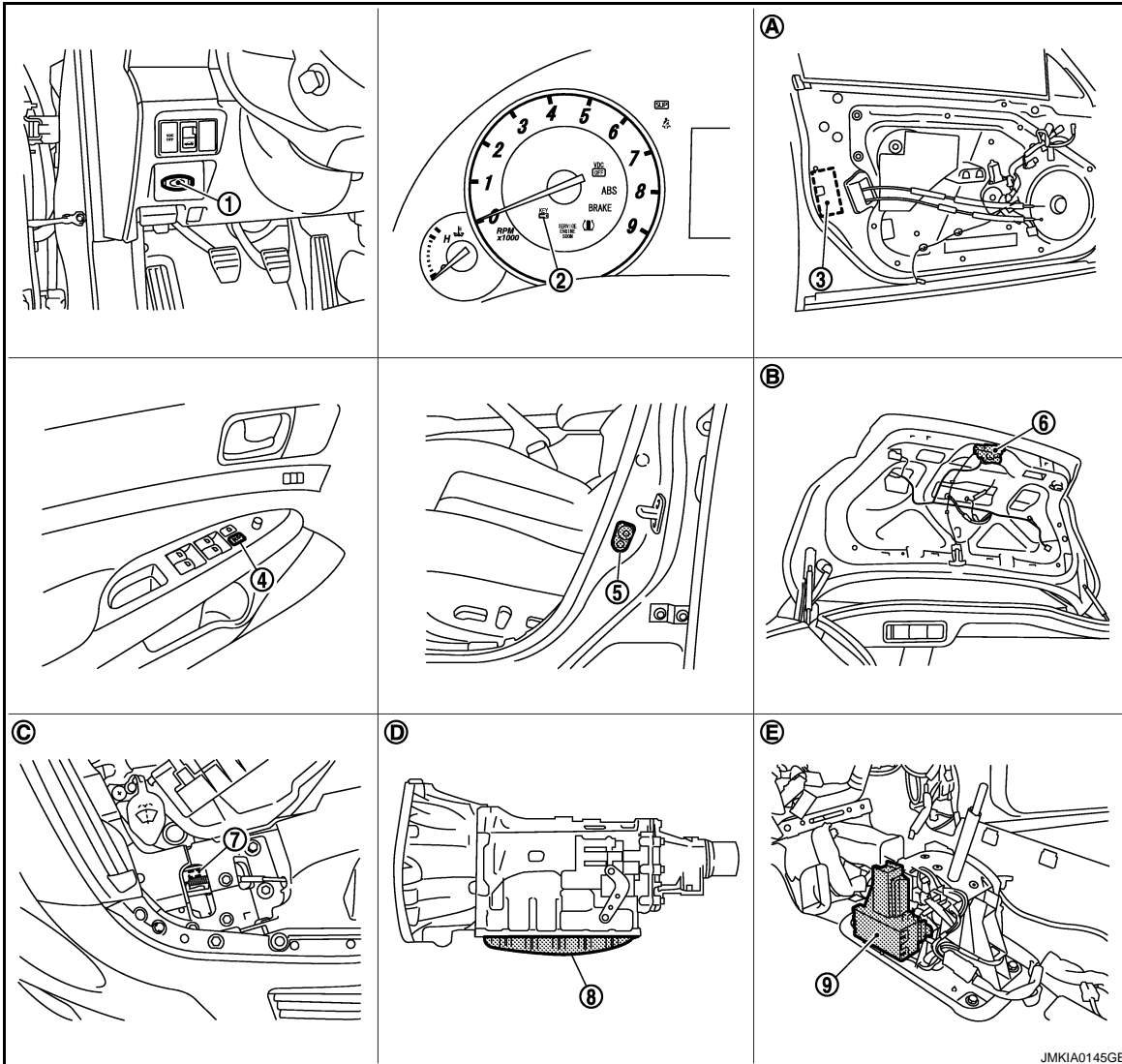


- | | | |
|---|---|---|
| 1. Horn relay E11 | 2. ECM M107 | 3. Push-button ignition switch M50 |
| 4. Combination meter (Security indicator) M53 | 5. Stop lamp switch E110 | 6. Steering lock unit M40 |
| 7. Clutch interlock switch E111 | 8. ICC brake hold relay E51 | 9. Horn (high) E61, E62 |
| 10. Horn (low) E69, E70 | | |
| A. View with battery cover removed. | B. View with instrument assist lower panel removed. | C. View with instrument driver lower cover removed. |
| D. View with instrument driver lower cover removed. | E. View with instrument driver lower cover removed. | F. Left view of engine room. |
| G. View with front bumper removed. | | |

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]



- | | | |
|---|---|--|
| 1. Key slot M22 | 2. Combination meter (Key warning lamp) M53 | 3. Front door lock assembly (driver side) (door key cylinder switch) D15 |
| 4. Power window main switch D8, D9 | 5. Front door switch (driver side) B16 | 6. Trunk lid lock assembly (trunk room lamp switch) B303 |
| 7. Hood switch E30 | 8. TCM F151 | 9. A/T device (detention switch) M137 |
| A. View with front door finisher removed. | B. View with trunk lid finisher removed. | C. View with hood switch incorporated into hood lock (RH). |
| D. Inside of A/T (built into A/T). | E. View with center console assembly removed. | |

Component Description

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Component	Reference
BCM	SEC-85
Steering lock unit	SEC-74
Push-button ignition switch	SEC-86
Door switch	DLK-65
A/T device (detention switch)	SEC-53
Inside key antenna	DLK-58

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Component	Reference
Remote keyless entry receiver	SEC-47
Stop lamp switch	SEC-47
Park/neutral position switch	SEC-61
Clutch switch	SEC-100
Steering lock relay	SEC-65
Starter relay	SEC-68
Starter control relay	SEC-52
Security indicator	SEC-120
Key warning lamp	SEC-119

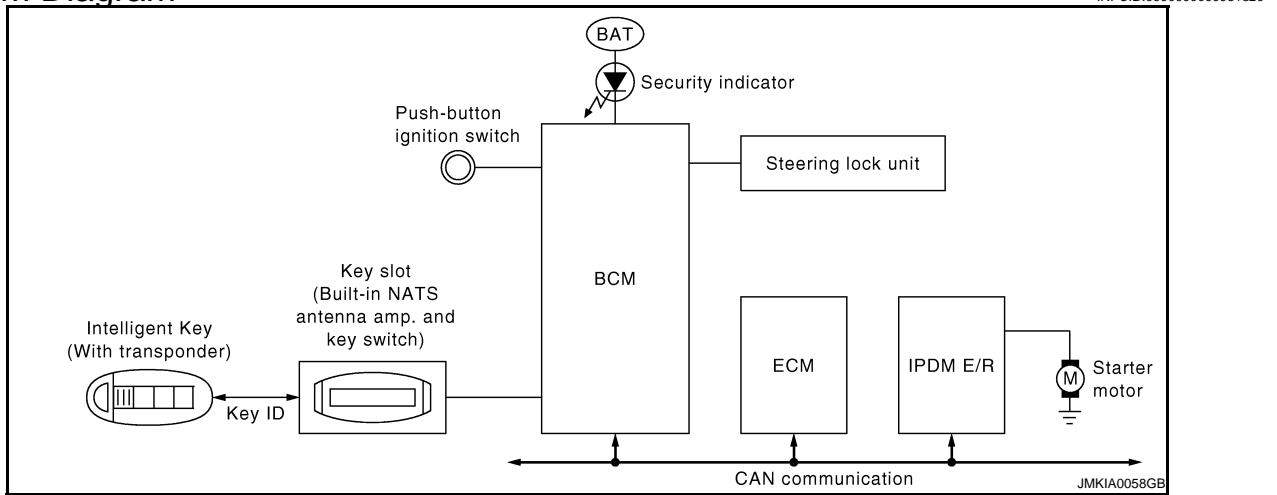
INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS

System Diagram



System Description

INFOID:000000000961321

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM function	Actuator
Push-button ignition switch	Push switch	IVIS (NATS)	<ul style="list-style-type: none"> Steering lock relay Steering lock unit Starter relay (IPDM E/R) Starter control relay (IPDM E/R) Starter motor KEY warning lamp Security indicator lamp
AT device (A/T models)	P range		
PNP switch (A/T models)	N, P range		
Clutch interlock switch (M/T models)	Clutch ON/OFF		
Stop lamp switch	Brake ON/OFF		
Key slot	Key ID		
Each door switch	Door open/close		
ECM	Engine status signal		

SYSTEM DESCRIPTION

- The IVIS (NATS) is an anti-theft system by registering an Intelligent Key ID in to the vehicle and prevents the engine being started by an unregistered Intelligent Key. It has a higher protection against auto thefts that duplicate mechanical key.
- It performs the ID verification when starting the engine in the same way as the Intelligent Key system. But, it performs the IVIS (NATS) ID verification when inserting the Intelligent Key and performs the Intelligent Key ID verification when carrying the Intelligent Key.
- The Intelligent Key system of V36 is not the same as the conventional models. The mechanical key integrated in the Intelligent Key cannot start the engine. When the Intelligent Key battery is discharged, the IVIS (NATS) ID verification memorized to the transponder integrated with Intelligent Key is performed by inserting the Intelligent Key into the key slot. If the verification results are OK, the engine start operation can be performed by the push-button ignition switch operation.
- Locate the security indicator and apply the anti-theft system equipment sticker, forewarn that the IVIS (NATS) is onboard with the model.
- The security indicator always blinks when the Intelligent Key is removed from the key slot and when the power supply position is in LOCK position.
- Intelligent Key can be registered up to 4 keys (Including the standard ignition key) on request from the owner.
- The specified registration is required when replacing ECM, BCM or Intelligent Key. The registrations procedure for IVIS (NATS) and registration procedure for Intelligent Key when installing the BCM, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS

[INTELLIGENT KEY SYSTEM]

< FUNCTION DIAGNOSIS >

- Possible symptom of IVIS (NATS) malfunction is "Engine cannot start". In V36, the engine can be started with the Intelligent Key system and IVIS (NATS). Identify the possible causes according to "Work Flow", Refer to [SEC-5, "Work Flow"](#).
- If ECM other than Genuine NISSAN is installed, the engine cannot be started. For ECM replacement procedure, refer to [SEC-8, "ECM RE-COMMUNICATING FUNCTION : Special Repair Requirement"](#).

PRECAUTIONS FOR KEY REGISTRATION

- The key registration is a procedure that erases the current IVIS (NATS) ID once, and then re-registers a new ID operation. Therefore the registered Intelligent Key is necessary for this procedure. Before starting the registration operation collect all registered Intelligent Keys from the customer
- When registering the Intelligent Key, performs only one procedure to register simultaneously both ID (IVIS "NATS" ID registration and Intelligent Key ID registration).
The IVIS (NATS) ID registration is the procedure that registers the ID stored into the transponder (integrated in intelligent key) to BCM.
The Intelligent key ID registration is the procedure that registers the ID to BCM.
- When performing the Intelligent Key system registration only, the engine cannot be started by inserting the key into the key slot. When performing the IVIS (NATS) registration only, the engine cannot be started by the operation when carrying the key. The registrations of both systems should be performed.

SECURITY INDICATOR

- Warns that the vehicle is equipped with IVIS (NATS).
- The security indicator always blinks when the Intelligent Key is removed from the key slot and when the ignition switch is in LOCK position.

NOTE:

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

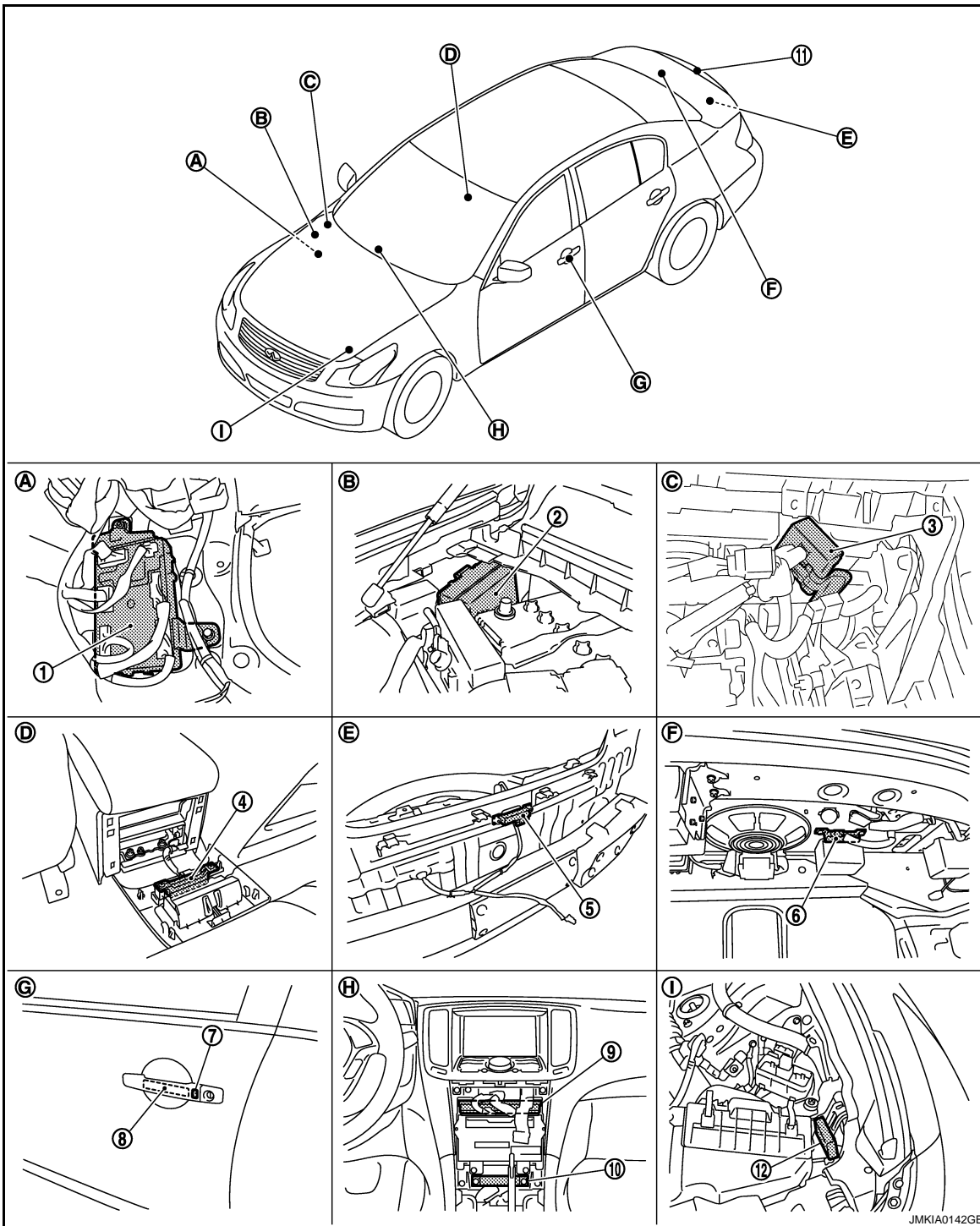
Component Parts Location

INFOID:000000000961322

INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]



- | | | |
|---|--|--|
| 1. BCM M118, M119, M120, M121, M122, M123 | 2. IPDM E/R E5, E6 | 3. Remote keyless entry receiver M104 |
| 4. Inside key antenna (console) M146 | 5. Outside key antenna (rear bumper) B63 | 6. Inside key antenna (trunk room) B49 |
| 7. Front outside handle LH (request switch) D13 | 8. Front outside handle LH (outside key antenna) D14 | 9. Unified meter and A/C AMP M66, M67 |
| 10. Inside key antenna (instrument center) M131 | 11. Trunk lid request switch B304 | 12. Intelligent Key warning buzzer (engine room) E57 |
| A. Dash side lower (Passenger side). | B. Engine room dash panel (RH). | C. View with instrument assist lower panel removed. |

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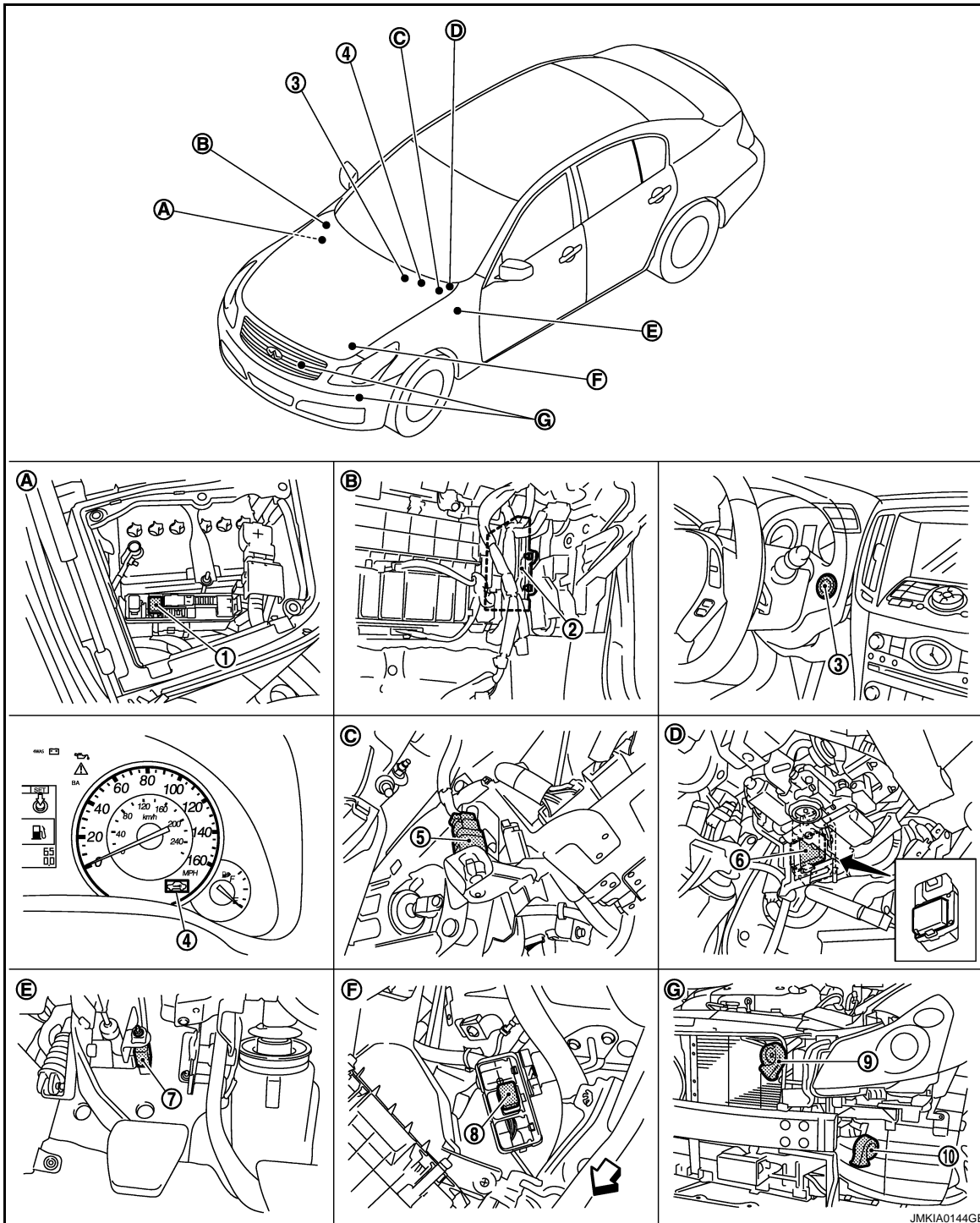
SEC

INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

- D. View with console rear finisher removed. E. View with rear bumper removed. F. View with trunk rear finisher (upper) removed.
- G. View of front door LH. H. Behind cluster lid C. I. View with hood seal assembly removed.



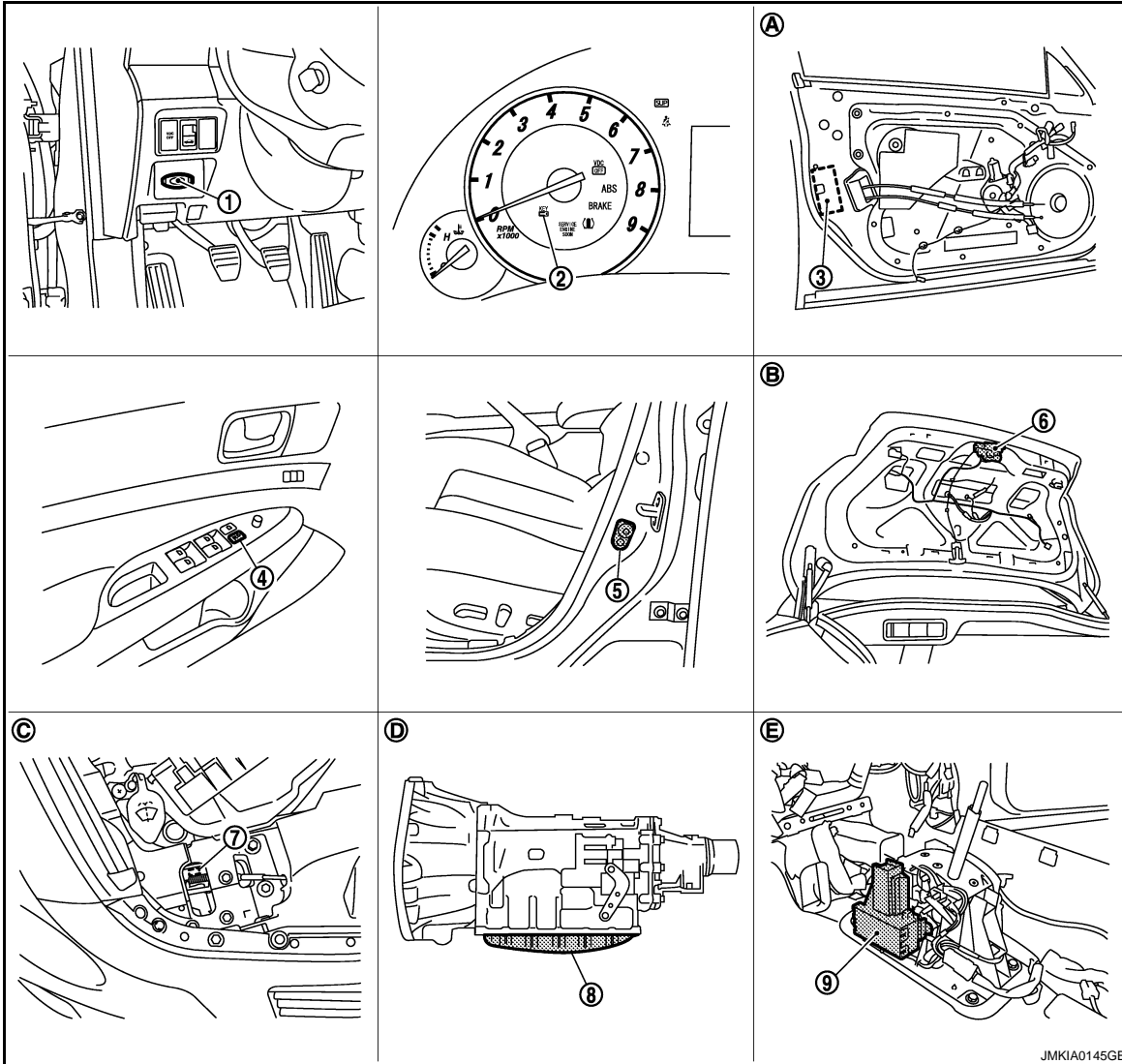
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| 1. Horn relay E11 | 2. ECM M107 | 3. Push-button ignition switch M50 |
| 4. Combination meter (Security indicator) M53 | 5. Stop lamp switch E110 | 6. Steering lock unit M40 |
| 7. Clutch interlock switch E111 | 8. ICC brake hold relay E51 | 9. Horn (high) E61, E62 |
| 10. Horn (low) E69, E70 | | |

INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

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|---|---|---|
| A. View with battery cover removed. | B. View with instrument assist lower panel removed. | C. View with instrument driver lower cover removed. |
| D. View with instrument driver lower cover removed. | E. View with instrument driver lower cover removed. | F. Left view of engine room. |
| G. View with front bumper removed. | | |



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|---|---|--|
| 1. Key slot M22 | 2. Combination meter (Key warning lamp) M53 | 3. Front door lock assembly (driver side) (door key cylinder switch) D15 |
| 4. Power window main switch D8, D9 | 5. Front door switch (driver side) B16 | 6. Trunk lid lock assembly (trunk room lamp switch) B303 |
| 7. Hood switch E30 | 8. TCM F151 | 9. A/T device (detention switch) M137 |
| A. View with front door finisher removed. | B. View with trunk lid finisher removed. | C. View with hood switch incorporated into hood lock (RH). |
| D. Inside of A/T (built into A/T). | E. View with center console assembly removed. | |

Component Description

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SEC

INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Component	Reference
BCM	SEC-85
Steering lock unit	SEC-74
Push-button ignition switch	SEC-86
Door switch	DLK-65
A/T device (detention switch)	SEC-53
Inside key antenna	DLK-58
Remote keyless entry receiver	DLK-104
Stop lamp switch	SEC-47
Park/neutral position switch	SEC-61
Clutch switch	SEC-100
Steering lock relay	SEC-65
Starter relay	SEC-68
Starter control relay	SEC-52
Security indicator	SEC-120
Key warning lamp	SEC-119

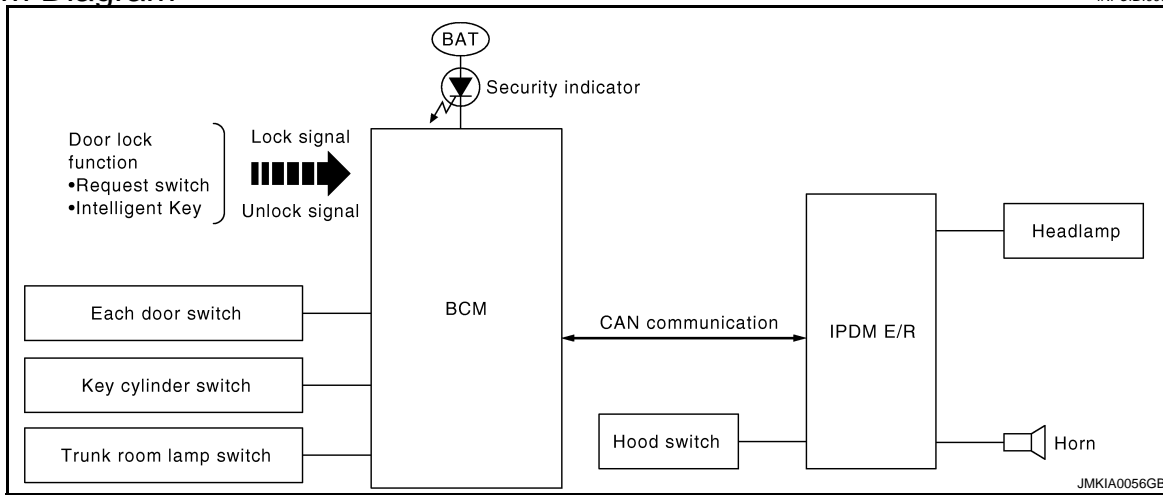
VEHICLE SECURITY SYSTEM

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

VEHICLE SECURITY SYSTEM

System Diagram



System Description

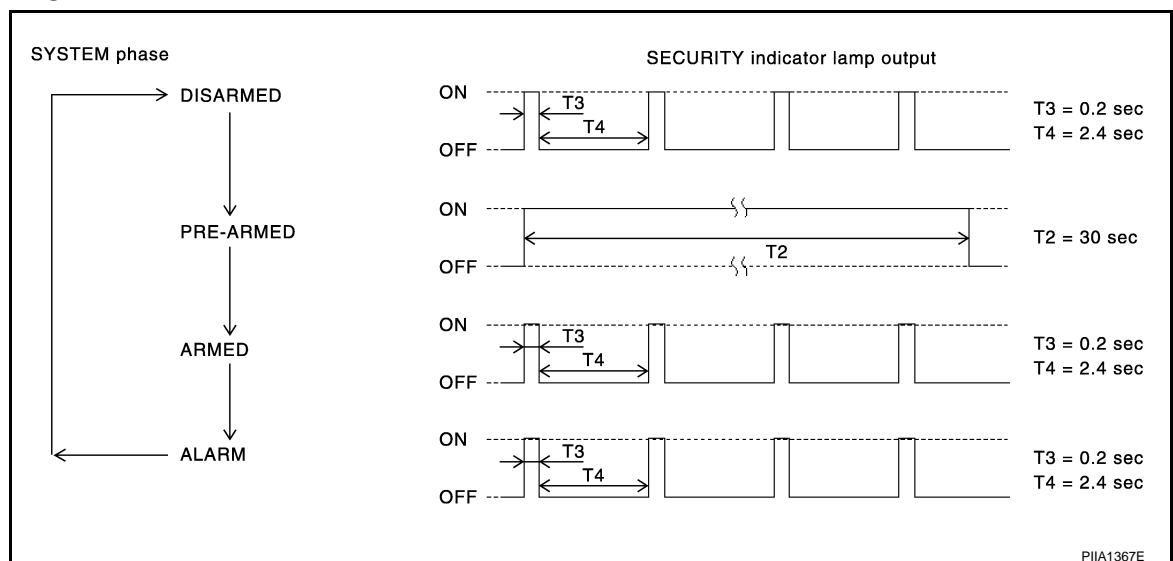
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INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM system	Actuator
All door switch	Open or close	Vehicle security system	<ul style="list-style-type: none"> IPDM E/R Head lamp Horn Security indicator lamp
Trunk room lamp switch			
Hood switch			
Door key cylinder switch	Lock or unlock		
Door lock and unlock switch			
Door request switch			
Intelligent Key	Lock or unlock		
	Panic alarm		

SEC

OPERATION FLOW



SETTING THE VEHICLE SECURITY SYSTEM

Initial Condition

- Ignition switch is in OFF position.

VEHICLE SECURITY SYSTEM

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Disarmed Phase

- When hood, doors or trunk is open, the vehicle security system is set in the disarmed phase on the assumption that the owner is inside or near the vehicle.
- When the vehicle security system is in the disarmed phase, the security indicator lamp blinks every 2.4 seconds.

Pre-armed Phase and Armed Phase

When the following operation 1 or 2 is performed, the vehicle security system turns into the “pre-armed” phase. (The security indicator lamp illuminates.)

1. BCM receives LOCK signal from front door key cylinder switch or Intelligent Key, after hood, trunk and all doors are closed.
2. Hood, trunk and all doors are closed after front doors are locked by key or door lock and unlock switch. The security indicator lamp illuminates for 30 seconds. Then, the system automatically shifts into the “armed” phase.

CANCELING THE SET VEHICLE SECURITY SYSTEM

When one of the following operations is performed, the armed phase is canceled.

1. Unlock the doors with the key or Intelligent Key.
2. Turn ignition switch “ON” or “ACC” position.

CANCELING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM

When unlocking the door with the key or Intelligent Key the alarm operation is canceled.

ACTIVATING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM

Check that the system is in the armed phase. (The security indicator lamp blinks every 2.4 seconds.)

When the following operation 1 or 2 is performed, the system sounds the horns and flashes the headlamps for about 50 seconds.

1. Hood, trunk or any door is opened during armed phase.
2. Disconnecting and connecting the battery connector before canceling armed phase.

PANIC ALARM OPERATION

Intelligent Key system may or may not operate vehicle security system (horn and headlamps) as required.

When the Intelligent Key system is triggered, ground is supplied intermittently to both headlamp relay and horn relay.

When headlamp relay and horn relay are energized, then power is supplied to headlamps (LH and RH) and horns (HIGH and LOW).

The headlamp flashes and the horn sounds intermittently.

The alarm automatically turns off after 50 seconds or when BCM receives any signal from Intelligent Key.

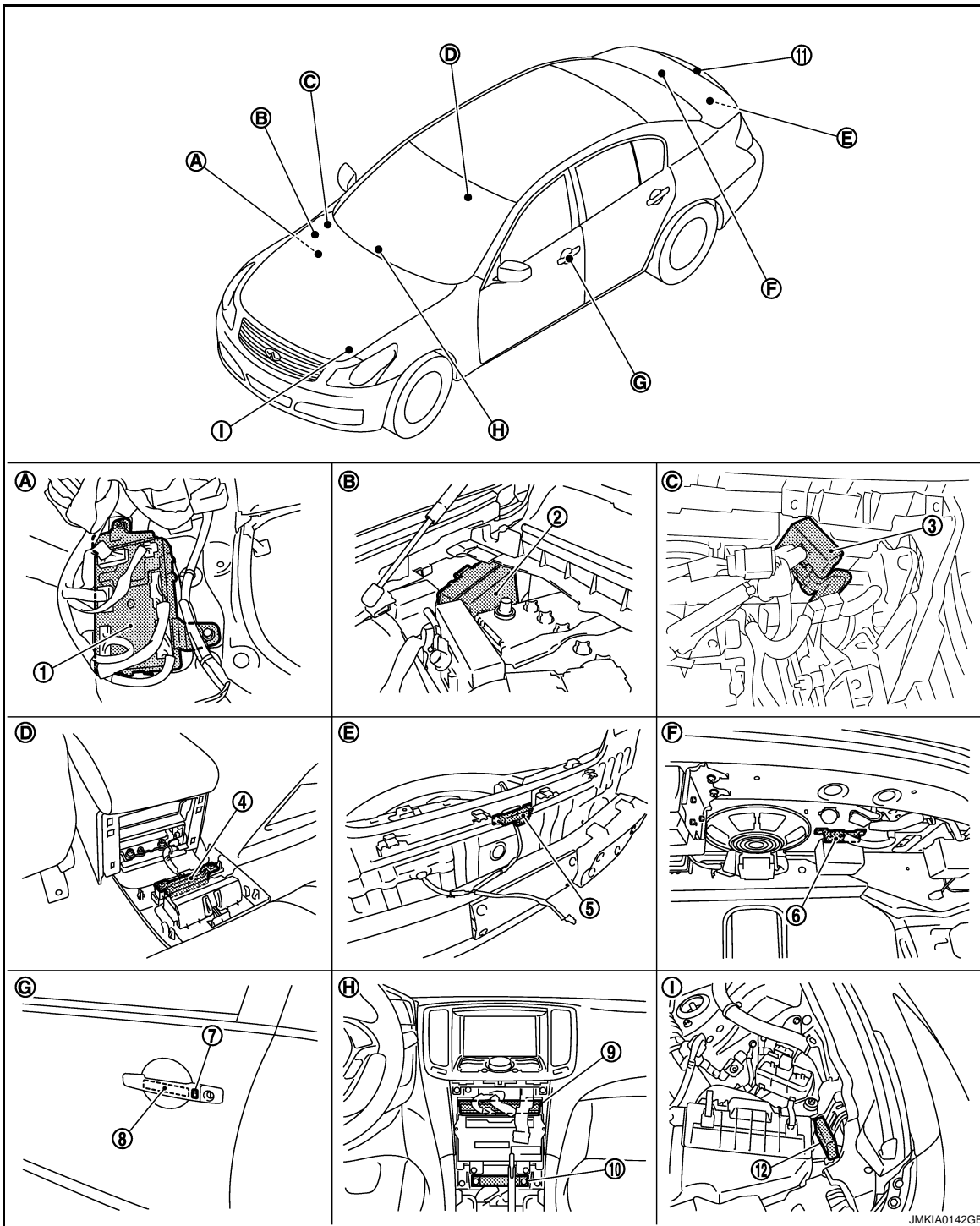
Component Parts Location

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VEHICLE SECURITY SYSTEM

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]



- | | | |
|---|--|--|
| 1. BCM M118, M119, M120, M121, M122, M123 | 2. IPDM E/R E5, E6 | 3. Remote keyless entry receiver M104 |
| 4. Inside key antenna (console) M146 | 5. Outside key antenna (rear bumper) B63 | 6. Inside key antenna (trunk room) B49 |
| 7. Front outside handle LH (request switch) D13 | 8. Front outside handle LH (outside key antenna) D14 | 9. Unified meter and A/C AMP M66, M67 |
| 10. Inside key antenna (instrument center) M131 | 11. Trunk lid request switch B304 | 12. Intelligent Key warning buzzer (engine room) E57 |
| A. Dash side lower (Passenger side). | B. Engine room dash panel (RH). | C. View with instrument assist lower panel removed. |

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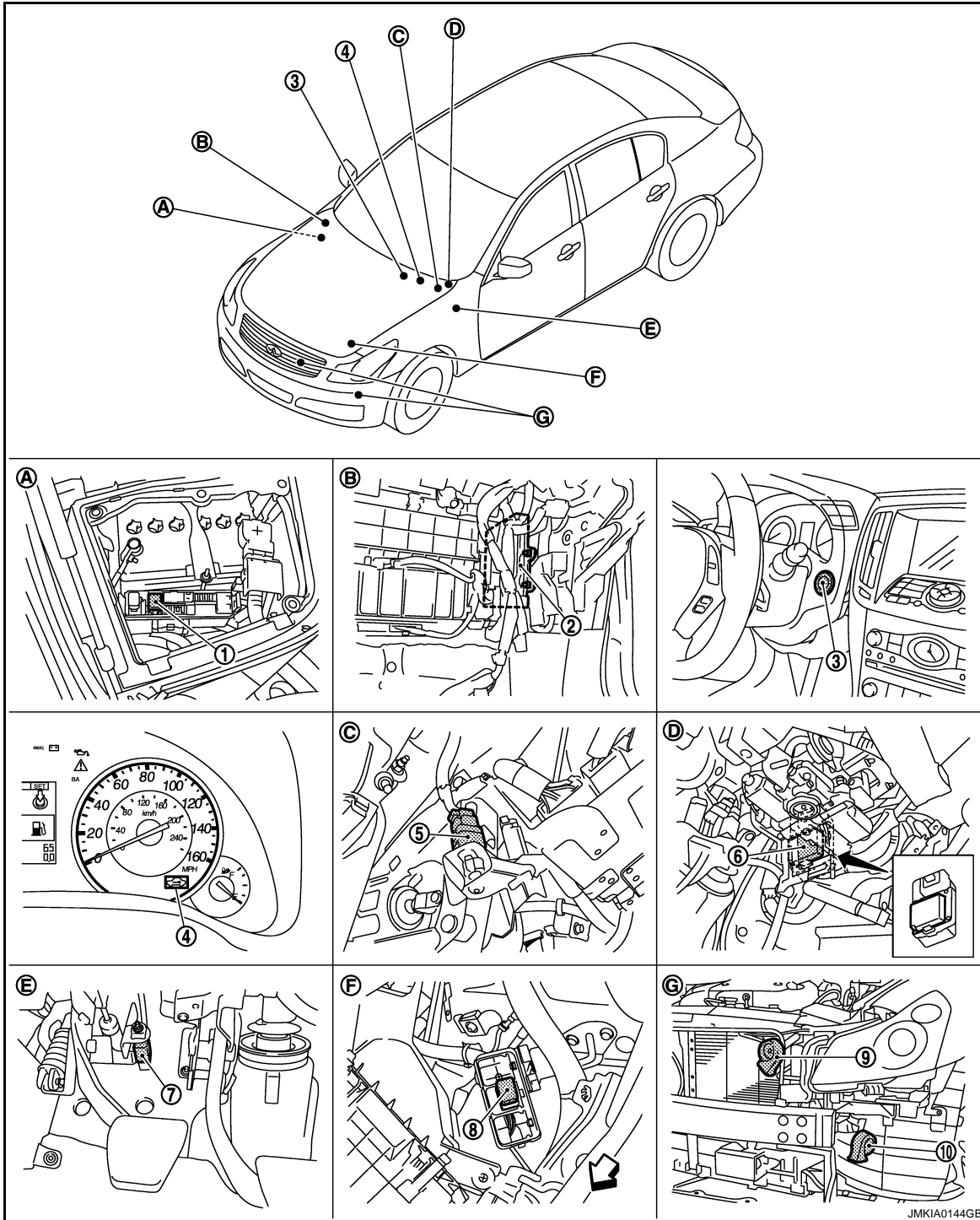
SEC

VEHICLE SECURITY SYSTEM

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

- D. View with console rear finisher removed. E. View with rear bumper removed. F. View with trunk rear finisher (upper) removed.
- G. View of front door LH. H. Behind cluster lid C. I. View with hood seal assembly removed.



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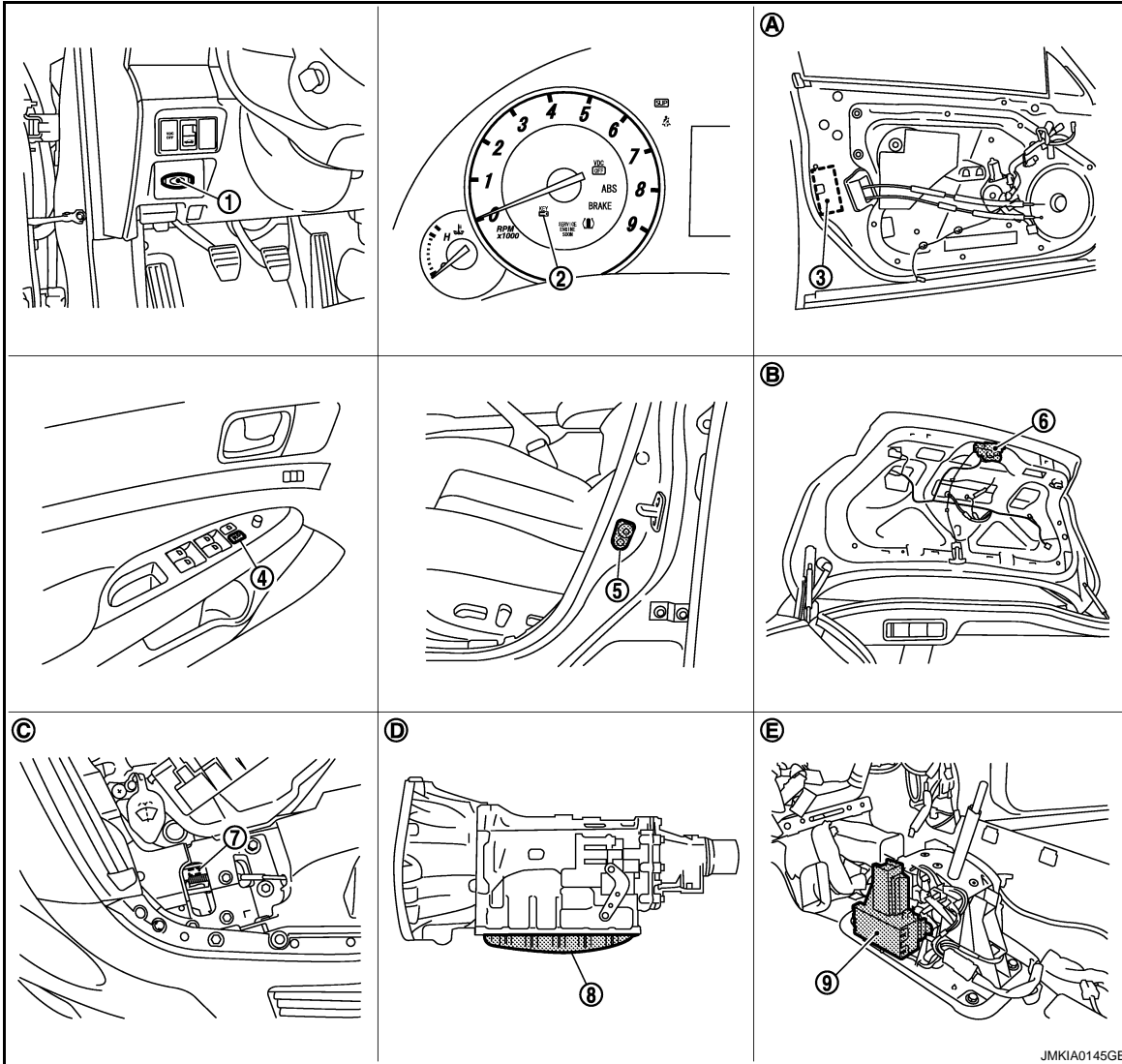
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| 4. Combination meter (Security indicator) M53 | 5. Stop lamp switch E110 | 6. Steering lock unit M40 |
| 7. Clutch interlock switch E111 | 8. ICC brake hold relay E51 | 9. Horn (high) E61, E62 |
| 10. Horn (low) E69, E70 | | |

VEHICLE SECURITY SYSTEM

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

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|---|---|---|
| A. View with battery cover removed. | B. View with instrument assist lower panel removed. | C. View with instrument driver lower cover removed. |
| D. View with instrument driver lower cover removed. | E. View with instrument driver lower cover removed. | F. Left view of engine room. |
| G. View with front bumper removed. | | |



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|---|---|--|
| 1. Key slot M22 | 2. Combination meter (Key warning lamp) M53 | 3. Front door lock assembly (driver side) (door key cylinder switch) D15 |
| 4. Power window main switch D8, D9 | 5. Front door switch (driver side) B16 | 6. Trunk lid lock assembly (trunk room lamp switch) B303 |
| 7. Hood switch E30 | 8. TCM F151 | 9. A/T device (detention switch) M137 |
| A. View with front door finisher removed. | B. View with trunk lid finisher removed. | C. View with hood switch incorporated into hood lock (RH). |
| D. Inside of A/T (built into A/T). | E. View with center console assembly removed. | |

Component Description

INFOID:000000000961327

VEHICLE SECURITY SYSTEM

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Component	Reference
BCM	SEC-23
Horn relay 1	SEC-116
Horn relay 2	SEC-116
Hood switch	SEC-114
Security indicator	SEC-120
Door switch	DLK-65
Door lock actuator	DLK-92
Trunk lid lock assembly	DLK-96
Door key cylinder switch	SEC-112
Door lock and unlock switch	DLK-68

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

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

INFOID:000000000961328

APPLICATION ITEM

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM. Refer to BCS-74, "DTC Index" .
CAN DIAG SUPPORT MNTR	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	This function is not used even though it is displayed.

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.

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 conditioner*	AIR CONDITONER		×	
Intelligent Key system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
BCM	BCM	×		
IVIS - NATS	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Trunk open	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	TPMS (AIR PRESSURE MONI-TOR)	×	×	×

*: This item is displayed, but is not used.

INTELLIGENT KEY

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

INFOID:000000000961329

BCM CONSULT-III FUNCTION

CONSULT-III performs the following functions via CAN communication with BCM.

DIAGNOSIS SYSTEM (BCM)

[INTELLIGENT KEY SYSTEM]

< FUNCTION DIAGNOSIS >

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.

WORK SUPPORT

Monitor item	Description
REMO CONT ID CONFIR	It can be checked whether Intelligent Key ID code is registered or not in this mode.
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch (driver side, passenger side and trunk) mode can be changed to operate (ON) or not operate (OFF) in this mode.
ENGINE START BY I-KEY	Engine start function mode can be changed to operate (ON) or not operate (OFF) with this mode.
TRUNK/GLASS HATCH OPEN	Buzzer reminder function mode by trunk opener request switch can be changed to operate (ON) or not operate (OFF) with this mode.
PANIC ALARM SET	Panic alarm button pressing time on Intelligent Key remote control button can be selected from the following with this mode. <ul style="list-style-type: none"> • 0.5 sec. • 1.5 sec. • OFF: Non-operation
PW DOWN SET	Unlock button pressing time on Intelligent Key button can be selected from the following with this mode. <ul style="list-style-type: none"> • 3 sec. • 5 sec. • OFF: Non-operation
TRUNK OPEN DELAY	Trunk button pressing time on Intelligent Key button can be selected from the following with this mode. <ul style="list-style-type: none"> • 0.5 sec. • 1.5 sec. • OFF: Non-operation
LO- BATT OF KEY FOB WARN	Intelligent Key low battery warning mode can be changed to operate (ON) or not operate (OFF) with this mode.
ANTI KEY LOCK IN FUNCTI	Key reminder function mode can be changed to operate (ON) or not operate (OFF) with this mode.
HORN WITH KEYLESS LOCK	Horn reminder function mode by Intelligent Key button can be changed to operate (ON) or not operate (OFF) with this mode.
HAZARD ANSWER BACK	Hazard reminder function mode can be selected from the following with this mode. <ul style="list-style-type: none"> • LOCK ONLY: Door lock operation only • UNLOCK ONLY: Door unlock operation only • LOCK AND UNLOCK: Lock/unlock operation • OFF: Non operation
ANS BACK I-KEY LOCK	Buzzer reminder function (lock operation) mode by door request switch (driver side and passenger side) can be selected from the following with this mode. <ul style="list-style-type: none"> • HORN CHIRP: Sound horn • BUZZER: Sound Intelligent Key warning buzzer • OFF: Non-operation
ANS BACK I-KEY UNLOCK	Buzzer reminder function (unlock operation) mode by door request switch can be changed to operate (ON) or not operate (OFF) with this mode.
SHORT CRANKING OUTPUT	Starter motor can operate during the times below. <ul style="list-style-type: none"> • 70 msec • 100 msec • 200 msec
INSIDE ANT DIAGNOSIS	This function allows inside key antenna self-diagnosis.

SELF-DIAG RESULT

Refer to [BCS-74, "DTC Index"](#).

DATA MONITOR

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Monitor Item	Condition
REQ SW-DR	Indicates [ON/OFF] condition of door request switch (driver side).
REQ SW-AS	Indicates [ON/OFF] condition of door request switch (passenger side).
REQ SW-BD/TR	Indicates [ON/OFF] condition of trunk opener request switch.
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch.
CLUCH SW	Indicates [ON/OFF] condition of clutch switch.
BRAKE SW 1	Indicates [ON/OFF] condition of brake switch.
DETE/CANCL SW	Indicates [ON/OFF] condition of P position.
SFT PN/N SW	Indicates [ON/OFF] condition of P or N position.
S/L -LOCK	Indicates [ON/OFF] condition of steering lock (LOCK).
S/L -UNLOCK	Indicates [ON/OFF] condition of steering lock (UNLOCK).
S/L RELAY-F/B	Indicates [ON/OFF] condition of ignition switch.
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/START/CRANK/RUN] condition of engine states.
S/L LOCK-IPDM	Indicates [ON/OFF] condition of steering lock (LOCK).
S/L UNLOCK-IPDM	Indicates [ON/OFF] condition of steering lock (UNLOCK).
S/L RELAY-REQ	Indicates [ON/OFF] condition of steering lock relay.
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 CVT by numerical value [Km/h].
DOOR STAT-DR	Indicates [LOCK/READY/UNLK] condition of driver side door status.
DOOR STAT-AS	Indicates [LOCK/READY/UNLK] condition of passenger side door status.
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.
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 lid.
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 button of Intelligent Key.
RKE-P/W OPEN	Indicates [ON/OFF] condition of P/W DOWN signal from Intelligent Key.
RKE-MODE CHG	Indicates [ON/OFF] condition of MODE CHANGE signal from Intelligent Key.

ACTIVE TEST

Test item	Description
BATTERY SAVER	This test is able to check interior room lamp operation. The interior room lamp will be activated after "ON" on CONSULT-III screen is touched.
PW REMOTO DOWN SET	This test is able to check power window down operation. The power window down will be activated after "ON" on CONSULT-III screen is touched.

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Test item	Description
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation. Intelligent Key warning buzzer sounds when "ON" on CONSULT-III screen is touched.
INSIDE BUZZER	This test is able to check warning chime in combination meter operation. <ul style="list-style-type: none"> • Take away warning chime sounds when "TAKE OUT" on CONSULT-III screen is touched. • Key warning chime sounds when "KEY WARN" on CONSULT-III screen is touched. • P position warning chime sounds when "P RNG WARN" on CONSULT-III screen is touched. • ACC warning chime sounds when "ACC WARN" on CONSULT-III screen is touched.
INDICATOR	This test is able to check warning lamp operation. <ul style="list-style-type: none"> • "KEY" Warning lamp illuminates when "KEY IND ON" on CONSULT-III screen is touched. • "KEY" Warning lamp flashes when "KEY IND FSH" on CONSULT-III screen is touched.
INT LAMP	This test is able to check interior room lamp operation. The interior room lamp will be activated after "ON" on CONSULT-III screen is touched.
LCD	This test is able to check meter display information <ul style="list-style-type: none"> • Engine start information displays when "BRAKE/P" on CONSULT-III screen is touched. • Engine start information displays when "BRAKE/P/ON" on CONSULT-III screen is touched. • Key ID warning displays when "KEY ID NG" on CONSULT-III screen is touched. • Steering lock information displays when "STLCK RELES" on CONSULT-III screen is touched. • P position warning displays when "P RNG IND" on CONSULT-III screen is touched. • Intelligent Key insert information displays when "INSERT KEY" on CONSULT-III screen is touched. • Intelligent Key low battery warning displays when "KEY BAT LOW" on CONSULT-III screen is touched. • Take away through window warning displays when "TK AWAY WDW" on CONSULT-III screen is touched. • Take away warning display when "TAKE AWAY" on CONSULT-III screen is touched. • OFF position warning display when "IGN OFF WARN" on CONSULT-III screen is touched.
TRUNK/GLASS HATCH	This test is able to check trunk lid opener actuator open operation. This actuator opens when "ON" on CONSULT-III screen is touched.
FLASHER	This test is able to check security hazard lamp operation. The hazard lamps will be activated after "ON" on CONSULT-III screen is touched.
HORN	This test is able to check horn operation. The horn will be activated after "ON" on CONSULT-III screen is touched.
IGN CONT2	This test is able to check security hazard lamp operation. The hazard lamps will be activated after "ON" on CONSULT-III screen is touched.
P RANGE	This test is able to check A/T device power supply A/T device power is supplied when "ON" on CONSULT-III screen is touched.
ENGINE SW ILLUMI	This test is able to check push-ignition switch illumination operation. Push-ignition switch illumination illuminates when "ON" on CONSULT-III screen is touched.
LOCK INDICATOR	This test is able to check LOCK indicator in push-ignition switch operation. LOCK indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched.
ACC INDICATOR	This test is able to check ACC indicator in push-ignition switch operation. LOCK indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched.
IGNITION ON IND	This test is able to check INGITION ON indicator in push-ignition switch operation. LOCK indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched.
KEY SLOT ILLUMI	This test is able to check key slot illumination operation. Key slot illumination flash when "ON" on CONSULT-III screen is touched.

THEFT ALM

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

INFOID:000000000961330

APPLICATION ITEM

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Diagnosis mode	Function Description
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.

DATA MONITOR

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-BD/TR	Indicates [ON/OFF] condition of trunk 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.
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch RH.
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	This is displayed even when it is not equipped.
CDL LOCK SW	Indicates [ON/OFF] condition of lock signal from door lock/unlock switch LH and RH.
CDL UNLOCK SW	Indicates [ON/OFF] condition of unlock signal from door lock/unlock switch LH and RH.
KEY CYL LK-SW	Indicates [ON/OFF] condition of lock signal from front door key cylinder switch.
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from front door key cylinder switch.
KEY CYL SW-TR	This is displayed even when it is not equipped.
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.
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

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

ACTIVE TEST

Test Item	Description
THEFT IND	This test is able to check security indicator lamp operation. The lamp will be turned on when "ON" on CONSULT-III screen is touched.
VEHICLE SECURITY HORN	This test is able to check vehicle security horn operation. The horns will be activated for 0.5 seconds after "ON" on CONSULT-III screen is touched.
HEADLAMP(HI)	This test is able to check vehicle security lamp operation. The headlamps will be activated for 0.5 seconds after "ON" on CONSULT-III screen is touched.
FLASHER	This test is able to check vehicle security hazard lamp operation. The hazard lamps will be activated after "ON" on CONSULT-III screen is touched.

IMMU

IMMU : CONSULT-III Function (BCM - IMMU)

INFOID:000000000961331

DIAGNOSIS SYSTEM (BCM)

[INTELLIGENT KEY SYSTEM]

< FUNCTION DIAGNOSIS >

APPLICATION ITEM

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.

DATA MONITOR

Monitor item	Content
CONFIRM ID ALL	Indicates [YET] at all time. Switch to [DONE] when a registered Intelligent Key is inserted into the key slot.
CONFIRM ID4	
CONFIRM ID3	
CONFIRM ID2	
CONFIRM ID1	
TP 4	Indicates the number of ID which has been registered.
TP 3	
TP 2	
TP 1	
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch.
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.

ACTIVE TEST

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

COMPONENT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:000000000961332

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Modern vehicle is equipped with many electronic control unit, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H-line, CAN L-line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.
 CAN Communication Signal Chart. Refer to [LAN-28, "CAN Communication Signal Chart"](#).

DTC Logic

INFOID:000000000961333

DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC Detection Condition	Possible cause
U1000	CAN COMM CIRCUIT	When BCM cannot communicate CAN communication signal continuously for 2 seconds or more.	In CAN communication system, any item (or items) of the following listed below is malfunctioning. <ul style="list-style-type: none"> • Transmission • Receiving (ECM) • Receiving (VDC/TCS/ABS) • Receiving (METER/M&A) • Receiving (TCM) • Receiving (MULTI AV) • Receiving (IPDM E/R)

Diagnosis Procedure

INFOID:000000000961334

1. PERFORM SELF DIAGNOSTIC

1. Turn ignition switch ON and wait for 2 second or more.
2. Check "Self Diagnostic Result".

Is "CAN COMM CIRCUIT" displayed?

- YES >> Refer to [LAN-18, "Trouble Diagnosis Flow Chart"](#).
 NO >> Refer to [GI-39, "Intermittent Incident"](#).

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U1010 CONTROL UNIT (CAN)

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:000000000961335

DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC Detection Condition	Possible cause
U1010	CONTROL UNIT (CAN)	BCM detected internal CAN communication circuit malfunction.	BCM

Diagnosis Procedure

INFOID:000000000961336

1.REPLACE BCM

When DTC [U1010] is detected, replace BCM.

>> Replace BCM.

Special Repair Requirement

INFOID:000000000961337

1.REQUIRED WORK WHEN REPLACING BCM

Initialize IVIS by CONSULT-III. For the details of initialization refer to CONSULT-III operation manual NATS-IVIS/NVIS.

>> Work end.

B2190, P1610 NATS ANTENNA AMP

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2190, P1610 NATS ANTENNA AMP

Description

INFOID:000000000961338

Performs ID verification through BCM and Intelligent Key when push-button ignition switch is pressed. Prohibits the release of steering lock or start of engine when an unregistered ID of Intelligent Key is used.

DTC Logic

INFOID:000000000961339

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2190	NATS ANTENNA AMP	Inactive communication between key slot and BCM.	<ul style="list-style-type: none"> • Harness or connectors (The key slot circuit is open or shorted) • Key slot • BCM
P1610			

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Insert Intelligent Key into the key slot.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-37, "Diagnosis Procedure"](#).
 NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE

1. Press the push-button ignition switch.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-37, "Diagnosis Procedure"](#).
 NO >> INSPECTION END.

Diagnosis Procedure

INFOID:000000000961340

SEC

1. INSPECTION START

Check the case in which DTC is detected.

- Case1: It is detected when Intelligent Key is inserted into key slot.
- Case2: It is detected after Intelligent Key is inserted into key slot and push-button ignition switch is pressed.

In which case is DTC detected?

- Case1. >> GO TO 2.
 Case2. >> GO TO 4.

2. CHECK KEY SLOT INPUT SIGNAL

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

Key slot		Ground	Voltage [V] (approx.)
Connector	Terminal		
M22	2	Ground	Battery voltage

Is the inspection result normal?

- YES >> Replace key slot.
 NO >> GO TO 3.

3. CHECK KEY SLOT CIRCUIT

B2190, P1610 NATS ANTENNA AMP

[INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

1. Disconnect BCM harness connector M122.
2. Check continuity between key slot harness connector and BCM harness connector.

Key slot		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M22	2	M122	80	Existed

3. Check continuity between key slot harness connector and ground.

Key slot		Ground	Continuity
Connector	Terminal		
M22	2	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair harness or connector.

4.CHECK PUSH-IGNITION SWITCH OPERATION

Press push-button ignition switch and check if it turns ON.

Does ignition switch turn to ON?

YES >> GO TO 5.

NO >> GO TO 7.

5.CHECK KEY SLOT COMMUNICATION SIGNAL

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

Key slot		Ground	Continuity
Connector	Terminal		
M22	3	Ground	Existed

Is the inspection result normal?

YES >> Replace key slot.

NO >> GO TO 6.

6.CHECK KEY SLOT COMMUNICATION SIGNAL CIRCUIT

1. Disconnect BCM harness connector M122.
2. Check continuity between key slot harness connector and BCM harness connector.

Key slot		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M22	3	M122	81	Existed

3. Check continuity between key slot harness connector and ground.

Key slot		Ground	Continuity
Connector	Terminal		
M22	3	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair harness or connector.

7.CHECK KEY SLOT GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect key slot harness connector.
3. Check continuity between key slot harness connector and ground.

B2190, P1610 NATS ANTENNA AMP

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Key slot		Ground	Continuity
Connector	Terminal		
M22	7	Ground	Existed

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair harness or connector.

8. CHECK INTERMITTENT INCIDENT

Refer to [GI-39. "Intermittent Incident"](#).

>> INSPECTION END.

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B2191, P1615 DIFFERENCE OF KEY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2191, P1615 DIFFERENCE OF KEY

Description

INFOID:000000000961341

Performs ID verification through BCM and Intelligent Key when push-button ignition switch is pressed. Prohibits the release of steering lock or start of engine when an unregistered ID of Intelligent Key is used.

DTC Logic

INFOID:000000000961342

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2191 P1615	DIFFERENCE OF KEY	The ID verification results between BCM and Intelligent Key are NG. The registration is necessary.	<ul style="list-style-type: none">Intelligent Key

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Press the push-button ignition switch
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-40. "Diagnosis Procedure"](#).
NO >> INSPECTION END.

Diagnosis Procedure

INFOID:000000000961343

1. PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Re-register all Intelligent Keys. For initialization and registration of Intelligent Key. Refer to "CONSULT-III Operation Manual NATS-IV/S/ NVIS".

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

- YES >> Intelligent Key was unregistered.
NO >> BCM is malfunctioning.
 - Replace BCM
 - Perform initialization again

B2192, P1611 ID DISCORD, IMMU-ECM

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2192, P1611 ID DISCORD, IMMU-ECM

Description

INFOID:000000000961344

BCM performs the ID verification with ECM that allows the engine to start. Start the engine if the ID is OK. ECM prevents the engine from starting if the ID is not registered. BCM starts the communication with ECM if ignition switch is turned ON.

DTC Logic

INFOID:000000000961345

DTC DETECTION LOGIC

NOTE:

- If DTC B2192 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-35, "DTC Logic"](#).
- If DTC B2192 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-36, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2192	ID DISCORD, IMMU-ECM	The ID verification results between BCM and ECM are NG. The registration is necessary.	<ul style="list-style-type: none">• BCM• ECM
P1611			

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions.
 - A/T selector lever is in the P or N position
 - Do not depress the brake pedal
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-41, "Diagnosis Procedure"](#).
NO >> INSPECTION END.

Diagnosis Procedure

INFOID:000000000961346

1. PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Re-register all Intelligent Keys.

For initialization and registration of Intelligent Key. Refer to "CONSULT-III Operation Manual NATS-IV/S/NVIS".

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

- YES >> ID was unregistered.
NO >> BCM is malfunctioning.
 - Replace BCM
 - Perform initialization again
 - Replace ECM

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B2193, P1612 CHAIN OF ECM-IMMU

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2193, P1612 CHAIN OF ECM-IMMU

Description

INFOID:000000000961347

BCM performs the ID verification with ECM that allows the engine to start. Start the engine if the ID is OK. ECM prevents the engine from starting if the ID is not registered. BCM starts the communication with ECM if ignition switch is turned ON.

DTC Logic

INFOID:000000000961348

DTC DETECTION LOGIC

NOTE:

- If DTC B2193 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-35, "DTC Logic"](#).
- If DTC B2193 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-36, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2193	CHAIN OF ECM-IMMU	Inactive communication between ECM and BCM	<ul style="list-style-type: none">• Harness or connectors (The CAN communication line is open or shorted)• BCM• ECM
P1612			

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions.
 - A/T selector lever is in the P or N position.
 - Do not depress brake pedal.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-42, "Diagnosis Procedure"](#).
NO >> INSPECTION END.

Diagnosis Procedure

INFOID:000000000961349

1. REPLACE BCM

1. Replace BCM.
2. Perform initialization with CONSULT-III.
For initialization, refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".

Does the engine start?

- YES >> BCM is malfunctioning.
 - Replace BCM.
 - Perform initialization again.
- NO >> ECM is malfunctioning.
 - Replace ECM.
 - Perform ECM re-communicating function.

B2013 ID DISCORD, IMMU-STRG

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2013 ID DISCORD, IMMU-STRG

Description

INFOID:000000000961350

BCM performs the ID verification with the steering lock unit and releases the steering lock if both BCM and steering lock unit ID are same. BCM starts the communication with the steering lock unit when Intelligent Key is carried into the passenger compartment and the push-button ignition switch is pressed.

DTC Logic

INFOID:000000000961351

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2013	ID DISCORD, IMMU-STRG	The ID verification results between BCM and steering control unit are NG. The registration is necessary.	<ul style="list-style-type: none">Steering wheel lock unit

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Lock steering.
2. Press the push-button ignition switch
3. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-43, "Diagnosis Procedure"](#).
NO >> INSPECTION END.

Diagnosis Procedure

INFOID:000000000961352

1. PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Re-register all Intelligent Keys. For initialization and registration of Intelligent Key. Refer to "CONSULT-III Operation Manual NATS-IV/S/NVIS".

Can the system be initialized and can steering lock be released with re-registered Intelligent Key?

- YES >> Steering lock unit was unregistered.
NO >> BCM is malfunctioning.
- Replace BCM
 - Perform initialization again

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B2014 CHAIN OF STRG-IMMU

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2014 CHAIN OF STRG-IMMU

Description

INFOID:000000000961353

BCM performs the ID verification with the steering lock unit to release the steering. BCM starts the communication with the steering lock unit when Intelligent Key is carried into the passenger compartment and the push-button ignition switch is pressed.

DTC Logic

INFOID:000000000961354

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2014	CHAIN OF STRG-IMMU	Inactive communication between steering control unit and BCM	<ul style="list-style-type: none"> • Harness or connectors (steering lock unit circuit is open or shorted) • Steering lock unit • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Lock steering.
2. Press the push-button ignition switch.
3. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-44. "Diagnosis Procedure"](#).
 NO >> INSPECTION END.

Diagnosis Procedure

INFOID:000000000961355

1.CHECK STEERING LOCK UNIT POWER SUPPLY

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

Steering lock unit		Ground	Ignition switch position	Voltage [V]
Connector	Terminal			
M40	7	Ground	OFF or ACC	Battery voltage
			ON	0

Is the inspection normal?

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

2.CHECK STEERING LOCK UNIT POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM harness connector M122.
3. Check continuity between steering lock unit harness connector and BCM harness connector.

Steering lock unit		BCM		Continuity
Connector	Terminal	connector	Terminal	
M40	7	M122	106	Existed

4. Check continuity between steering lock unit harness connector and ground.

B2014 CHAIN OF STRG-IMMU

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	7	Ground	Not existed

Is the inspection normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

3.CHECK STEERING LOCK UNIT GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between steering lock unit and ground.

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	5	Ground	Existed
	6		

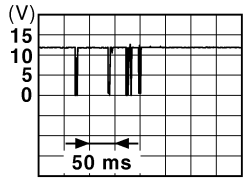
Is the inspection normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

4.CHECK STEERING LOCK UNIT COMMUNICATION SIGNAL

1. Connect steering lock unit harness connector.
2. Read voltage signal between steering lock unit harness connector and ground.

Steering lock unit		Ground	Steering lock unit condition	Value
Connector	Terminal			
M40	2	Ground	Lock	Battery voltage
			Lock or unlock	 <p style="text-align: right; font-size: small;">JMKIA0066GB</p>
			For 15 seconds after unlock	Battery voltage
			15 seconds or later after unlock.	0 V

Steering is locked : Opening the door when ignition switch is ON to OFF.

Steering is unlocked : Ignition switch is OFF to ACC.

Is the inspection normal?

YES >> Replace steering lock unit.

NO >> GO TO 5.

5.CHECK STEERING LOCK UNIT COMMUNICATION CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM harness connector M122.
3. Check continuity between steering lock unit harness connector and BCM harness connector.

Steering lock unit		BCM		Continuity
Connector	Terminal	connector	Terminal	
M40	2	M122	111	Existed

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B2014 CHAIN OF STRG-IMMU

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

4. Check continuity between steering lock unit harness connector and ground.

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	2	Ground	Not existed

Is the inspection normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

6. CHECK INTERMITTENT INCIDENT

Refer to [GI-39. "Intermittent Incident"](#).

>> INSPECTION END.

B2555 STOP LAMP

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2555 STOP LAMP

Description

INFOID:000000000961356

BCM detects the stop lamp status and confirms the stop lamp switch ON/OFF status. BCM confirms the engine start condition according to the stop lamp switch ON/OFF status.

DTC Logic

INFOID:000000000961357

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2555	STOP LAMP	BCM makes a comparison between the upper voltage and lower voltage of stop lamp switch. It judges from their values to detect the malfunctioning circuit.	<ul style="list-style-type: none">• Harness or connectors (stop lamp switch circuit is open or shorted)• Stop lamp switch• Fuse

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Depress the brake pedal and wait for at least 1 second.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-47, "Diagnosis Procedure"](#).
NO >> INSPECTION END.

Diagnosis Procedure

INFOID:000000000961358

1. CHECK STOP LAMP SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect BCM harness connector M123.
3. Check voltage between BCM harness connector and ground.

BCM		Ground	Voltage [V]
Connector	Terminal		
M123	116	Ground	Battery voltage

Is the inspection normal?

- YES >> GO TO 2.
NO >> Check the following.
 - 10A fuse [No. 7, located in the fuse block (J/B)]
 - Harness for open or short between BCM and fuse.

2. CHECK STOP LAMP SWITCH POWER SUPPLY CIRCUIT

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

Stop lamp switch		Ground	Voltage [V]
Connector	Terminal		
M110	1	Ground	Battery voltage

Is the inspection result normal?

- YES >> GO TO 3.
NO >> Check harness for open or short between stop lamp switch and fuse.

3. CHECK STOP LAMP SWITCH CIRCUIT

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

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SEC

B2555 STOP LAMP

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Stop lamp switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E110	2	M123	118	Existed

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

Stop lamp switch		Ground	Continuity
Connector	Terminal		
E110	2	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

4.CHECK STOP LAMP SWITCH

Refer to [SEC-48. "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace stop lamp switch.

5.CHECK INTERMITTENT INCIDENT

Refer to [GI-39. "Intermittent Incident"](#).

>> INSPECTION END.

Component Inspection

INFOID:000000000961359

1.CHECK STOP LAMP SWITCH

1. Turn ignition switch OFF.
2. Disconnect stop lamp switch harness connector.
3. Check continuity between stop lamp switch terminals under the following conditions.

Stop lamp switch			Condition	Continuity	
Connector	Terminal				
E110	1	2	Brake pedal	Not depressed	Not existed
				Depressed	Existed

Is the inspection result normal?

YES >> INSPECTION END.

NO >> Replace stop lamp switch.

B2556 PUSH-BUTTON IGNITION SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2556 PUSH-BUTTON IGNITION SWITCH

Description

INFOID:000000000961360

The switch that changes the power supply position. BCM maintains the power supply position status. BCM changes the power supply position with the operation of the push-button ignition switch.

DTC Logic

INFOID:000000000961361

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2556	PUSH-BUTTON IGNITION SWITCH	BCM detects the push-button ignition switch stuck to ON for 100 seconds or more	<ul style="list-style-type: none">• Harness or connectors (Push-button ignition switch circuit is shorted.)• Push-button ignition switch

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine and wait for at least 100 seconds.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-49, "Diagnosis Procedure"](#).
NO >> INSPECTION END.

Diagnosis Procedure

INFOID:000000000961362

1. CHECK PUSH-BUTTON IGNITION SWITCH INPUT SIGNAL

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

Push-button ignition switch		Ground	Voltage [V]
Connector	Terminal		
M50	4	Ground	Battery voltage

Is the inspection normal?

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

2. CHECK PUSH-BUTTON IGNITION SWITCH

Refer to [SEC-50, "Component Inspection"](#).

Is the inspection normal?

- YES >> GO TO 3.
NO >> Replace push-button ignition switch. Refer to [SEC-207, "Removal and Installation"](#).

3. CHECK INTERMITTENT INCIDENT

Refer to [GI-39, "Intermittent Incident"](#).

>> INSPECTION END.

4. CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT FOR SHORT

1. Disconnect BCM harness connector M122 and IPDM E/R harness connector E5.
2. Check continuity between push-button ignition switch harness connector and ground.

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B2556 PUSH-BUTTON IGNITION SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Push-button ignition switch		Ground	Continuity
Connector	Terminal		
M50	4	Ground	Not existed

Is the inspection normal?

- YES >> Replace BCM. Refer to [BCS-79, "Removal and Installation"](#).
NO >> Repair harness or connector.

Component Inspection

INFOID:000000000961363

1. CHECK PUSH-BUTTON IGNITION SWITCH

1. Turn ignition switch OFF.
2. Disconnect push-button ignition switch harness connector.
3. Check continuity between push-button ignition switch terminals under the following conditions.

Push-button ignition switch			Condition	Continuity
Connector	Terminal			
M50	1	4	Pressed	Existed
			Not pressed	Not existed

Is the inspection result normal?

- YES >> INSPECTION END.
NO >> Replace push-button ignition switch.

B2557 VEHICLE SPEED

Description

INFOID:000000000961364

BCM receives the 2 vehicle speed signals via CAN communication. 1 signal is transmitted by the “unified meter and A/C amp.” Another signal is transmitted by “ABS actuator and electric unit (control unit)”. BCM compares both signals to detect the vehicle speed.

DTC Logic

INFOID:000000000961365

DTC DETECTION LOGIC

NOTE:

- If DTC B2557 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-35, "DTC Logic"](#).
- If DTC B2557 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-36, "DTC Logic"](#).

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B2557	VEHICLE SPEED	BCM detects the following difference between the vehicle speed from “unified meter and A/C amp” and the one from “ABS actuator and electric unit” for 10 seconds continuously • One is 10km/h or more and the other is 4km/h or less.	• Wheel sensor • Unified meter and A/C amp. • ABS actuator and electric unit (control unit)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Drive the vehicle at the vehicle speed of 10 km/h or more and wait for at least 10 seconds.
2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000000961366

1. CHECK DTC WITH “ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)”

Check “Self diagnostic result” with CONSULT-III. Refer to [BRC-87, "DTC No. Index"](#).

Is the inspection result normal?

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

2. CHECK DTC WITH “UNIFIED METER AND A/C AMP.”

Check “Self diagnostic result” with CONSULT-III. Refer to [MWI-97, "DTC Index"](#).

>> INSPECTION END.

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B2560 STARTER CONTROL RELAY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2560 STARTER CONTROL RELAY

Description

INFOID:000000000961367

Starter control relay, integrated in IPDM E/R, permits the starter relay operation when in N or P position and the steering is locked or unlocked. It is installed in parallel with the starter relay.

DTC Logic

INFOID:000000000961368

DTC DETECTION LOGIC

NOTE:

- If DTC B2560 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-35, "DTC Logic"](#).
- If DTC B2560 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-36, "DTC Logic"](#).

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B2560	STARTER CONTROL RELAY	BCM detects a mismatch between the OFF request of starter control relay to IPDM E/R and the feedback. (The feedback is ON instead of OFF.)	• IPDM E/R

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions and wait for at least 2 seconds.
 - A/T selector lever is in the P position
 - Depress the brake pedal
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000000961369

1. CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III. Refer to [PCS-31, "DTC Index"](#).

Is the inspection result normal?

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

2. CHECK INTERMITTENT INCIDENT

Refer to [GI-39, "Intermittent Incident"](#).

>> INSPECTION END.

B2601 SHIFT POSITION

Description

INFOID:000000000961370

BCM confirms the shift position with the following 4 signals.

- AT selector lever
- P/N position switch
- P position signal from IPDM E/R (CAN)
- P position signal from TCM (CAN)

DTC Logic

INFOID:000000000961371

DTC DETECTION LOGIC

NOTE:

- If DTC B2601 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-35, "DTC Logic"](#).
- If DTC B2601 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-36, "DTC Logic"](#).
- If DTC B2601 is displayed with DTC B2605, first perform the trouble diagnosis for DTC B2605. Refer to [SEC-63, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2601	SHIFT POSITION	BCM detects when a difference between the shift P input signal and the shift position signal received from IPDM E/R via CAN communication continues for 2 seconds or more	<ul style="list-style-type: none"> • Harness or connectors (AT device circuit is open or shorted.) • AT device (detention switch)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions, and wait for at least 2 seconds.
 - A/T selector lever is in the P or N position.
 - Do not depress the brake pedal.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000000961372

1. CHECK A/T DEVICE POWER SUPPLY

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

A/T device (detention switch)		Ground	Voltage [V]
Connector	Terminal		
M137	10	Ground	Battery voltage

Is the inspection result normal?

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

2. CHECK A/T DEVICE POWER SUPPLY CIRCUIT

1. Disconnect BCM harness connector M122.
2. Check continuity between A/T device (detention switch) harness connector and BCM harness connector.

B2601 SHIFT POSITION

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

A/T device (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M137	10	M122	96	Existed

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

A/T device (detention switch)		Ground	Continuity
Connector	Terminal		
M137	10	Ground	Not existed

Is the inspection result normal?

YES >> Replace BCM.

NO >> Repair harness or connector.

3.CHECK A/T DEVICE CIRCUIT (BCM)

1. Disconnect BCM harness connector M122 and IPDM E/R harness connector E6.
2. Check continuity between A/T device (detention switch) harness connector and BCM harness connector.

A/T device (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M137	11	M122	99	Existed

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

A/T device (detention switch)		Ground	Continuity
Connector	Terminal		
M137	11	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

4.CHECK A/T DEVICE CIRCUIT (IPDM E/R)

1. Disconnect BCM harness connector M122.
2. Check continuity between A/A device (detention switch) harness connector and IPDM E/R harness connector.

A/T device (detention switch)		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M137	11	E6	43	Existed

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

A/T device (detention switch)		Ground	Continuity
Connector	Terminal		
M137	11	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair harness or connector.

5.CHECK A/T DEVICE

Refer to [SEC-55. "Component Inspection"](#).

Is the inspection result normal?

B2601 SHIFT POSITION

[INTELLIGENT KEY SYSTEM]

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YES >> GO TO 6.

NO >> Replace A/T device. Refer to [TM-232, "2WD : Removal and Installation"](#) (2WD models) [TM-234, "AWD : Removal and Installation"](#) (AWD models)

6.CHECK INTERMITTENT INCIDENT

Refer to [GI-39, "Intermittent Incident"](#).

>> INSPECTION END.

Component Inspection

INFOID:000000000961373

1.CHECK A/T DEVICE (DETENTION SWITCH)

1. Turn ignition switch OFF.
2. Disconnect A/T device (detention switch) harness connector.
3. Check continuity between A/T device (detention switch) terminals as follows.

A/T device (detention switch)		Condition	Continuity		
Connector	Terminal				
M137	10	11	A/T selector lever	P position	Not existed
				Other than above	Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace A/T device. Refer to [TM-232, "2WD : Removal and Installation"](#) (2WD models) [TM-234, "AWD : Removal and Installation"](#) (AWD models)

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B2602 SHIFT POSITION

Description

INFOID:000000000961374

BCM confirms the shift position with the following 4 signals.

- AT selector lever
- P/N position switch
- P position signal from IPDM E/R (CAN)
- P position signal from TCM (CAN)

DTC Logic

INFOID:000000000961375

DTC DETECTION LOGIC

NOTE:

- If DTC B2602 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-35. "DTC Logic"](#).
- If DTC B2602 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-36. "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2602	SHIFT POSITION	BCM detects the following status for 10 seconds. <ul style="list-style-type: none"> • Shift position is in P position • Vehicle speed is 4km/h or more • Ignition switch is in the ON position 	<ul style="list-style-type: none"> • Harness or connectors (A/T drive circuit is open or shorted) • A/T device (detention switch) • ABS actuator and electric unit (control unit)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine under the following conditions and wait for at least 10 seconds.
 - A/T selector lever is in the P or N position
 - Depress the brake pedal.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000000961376

1. CHECK DTC WITH "ABS ACTUATOR AND ELECTRIC UNIT"

Check "Self diagnostic result" with CONSULT-III. Refer to [BRC-87. "DTC No. Index"](#).

Is the inspection result normal?

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

2. CHECK A/T DEVICE POWER SUPPLY

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

A/T device (detention switch)		Ground	Voltage [V]
Connector	Terminal		
M137	10	Ground	Battery voltage

Is the inspection result normal?

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

B2602 SHIFT POSITION

[INTELLIGENT KEY SYSTEM]

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3. CHECK A/T DEVICE POWER SUPPLY CIRCUIT

1. Disconnect BCM harness connector M122.
2. Check continuity between A/T device (detention switch) harness connector and BCM harness connector.

A/T device (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M137	10	M122	96	Existed

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

A/T device (detention switch)		Ground	Continuity
Connector	Terminal		
M137	10	Ground	No existed

Is the inspection result normal?

YES >> Replace BCM.

NO >> Repair harness or connector.

4. CHECK A/T DEVICE CIRCUIT

1. Disconnect BCM harness connector M122.
2. Check continuity between A/T device (detention switch) harness connector and BCM harness connector.

A/T device (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M137	11	M122	99	Existed

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

A/T device (detention switch)		Ground	Continuity
Connector	Terminal		
M137	11	Ground	No existed

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair harness or connector.

5. CHECK A/T DEVICE

Refer to [SEC-55, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace A/T device. Refer to [TM-232, "2WD : Removal and Installation"](#) (2WD models) [TM-234, "AWD : Removal and Installation"](#) (AWD models)

6. CHECK INTERMITTENT INCIDENT

Refer to [GI-39, "Intermittent Incident"](#).

>> INSPECTION END.

B2603 SHIFT POSITION STATUS

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2603 SHIFT POSITION STATUS

Description

INFOID:000000000961377

BCM confirms the shift position with the following 4 signals.

- AT selector lever
- P/N position switch
- P position signal from IPDM E/R (CAN)
- P position signal from TCM (CAN)

DTC Logic

INFOID:000000000961378

DTC DETECTION LOGIC

NOTE:

- If DTC B2603 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-35. "DTC Logic"](#).
- If DTC B2603 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-36. "DTC Logic"](#).

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B2603	SHIFT POSITION STATUS	BCM detects the followings status for 500 ms or more when shift is in P position and, ignition switch is in ON position. <ul style="list-style-type: none">• Park/neutral position (PNP) switch: approx. 0V• A/T device (detention switch): approx 0V	<ul style="list-style-type: none">• Harness or connector (A/T device circuit is open or shorted.)• Harness or connectors [Park/neutral position (PNP) switch circuit is open or shorted.]• AT device (detention switch)• Park/neutral position (PNP) switch

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine under the following conditions and wait for at least 1 second.
 - A/T selector lever is in the P or N position.
 - Do not depress the brake pedal.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000000961379

1. CHECK DTC WITH TCM

Check "Self diagnostic result" with CONSULT-III. Refer to [TM-189. "DTC Index"](#).

Is the inspection result normal?

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

2. CHECK PNP SWITCH CIRCUIT

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

A/T assembly		BCM		Continuity
Connector	Terminal	Connector	Terminal	
F51	9	M23	140	Existed

B2603 SHIFT POSITION STATUS

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[INTELLIGENT KEY SYSTEM]

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

A/T assembly		Ground	Continuity
Connector	Terminal		
F51	9	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3.CHECK A/T DEVICE POWER SUPPLY

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

A/T device (detention switch)		Ground	Voltage [V]
Connector	Terminal		
M137	10	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4.CHECK A/T DEVICE POWER SUPPLY CIRCUIT

1. Disconnect BCM harness connector M122.
2. Check continuity between A/T device (detention switch) harness connector and BCM harness connector.

A/T device (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M137	10	M122	96	Existed

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

A/T device (detention switch)		Ground	Continuity
Connector	Terminal		
M137	10	Ground	Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-79. "Removal and Installation"](#).

NO >> Repair harness or connector.

5.CHECK A/T DEVICE CIRCUIT

1. Disconnect BCM harness connector M122.
2. Check continuity between A/T device (detention switch) harness connector and BCM harness connector.

A/T device (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M137	11	M122	99	Existed

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

A/T device (detention switch)		Ground	Continuity
Connector	Terminal		
M137	11	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

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B2603 SHIFT POSITION STATUS

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[INTELLIGENT KEY SYSTEM]

6. CHECK A/T DEVICE

Refer to [SEC-55. "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 7.

NO >> Replace A/T device. Refer to [TM-232. "2WD : Removal and Installation"](#) (2WD models) [TM-234. "AWD : Removal and Installation"](#) (AWD models)

7. CHECK INTERMITTENT INCIDENT

Refer to [GI-39. "Intermittent Incident"](#).

>> INSPECTION END.

B2604 PNP SWITCH

Description

INFOID:000000000961380

BCM confirms the shift position with the following 4 signals.

- AT selector lever
- P/N position switch
- P position signal from IPDM E/R (CAN)
- P position signal from TCM (CAN)

DTC Logic

INFOID:000000000961381

DTC DETECTION LOGIC

NOTE:

- If DTC B2604 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-35. "DTC Logic"](#).
- If DTC B2604 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-36. "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2604	PNP SWITCH	BCM detects the following status for 500 ms or more when the ignition switch is in the ON position. <ul style="list-style-type: none"> • N position input signal exists. Shift position signal from TCM does not exist. • N position input signal does not exist. Shift position signal from TCM exists. 	<ul style="list-style-type: none"> • Harness or connectors [The park/neutral position (PNP) switch circuit is open or shorted.] • Park/ neutral position (PNP) switch

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine under the following conditions and wait for at least 1 seconds.
 - A/T selector lever is in the P or N position
 - Do not depress the brake pedal
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [EC-137. "Diagnosis Procedure"](#).
 NO >> INSPECTION END.

Diagnosis Procedure

INFOID:000000000961382

1. CHECK DTC WITH TCM

Check "Self diagnostic result" with CONSULT-III. Refer to [TM-189. "DTC Index"](#).

Is the inspection result normal?

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

2. CHECK PNP SWITCH CIRCUIT

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

A/T assembly		BCM		Continuity
Connector	Terminal	Connector	Terminal	
F51	9	M23	140	Existed

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

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B2604 PNP SWITCH

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A/T assembly		Ground	Continuity
Connector	Terminal		
F51	9	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-39. "Intermittent Incident"](#).

>> INSPECTION END.

B2605 PNP SWITCH

Description

INFOID:000000000961383

BCM confirms the shift position with the following 4 signals.

- AT selector lever
- P/N position switch
- P position signal from IPDM E/R (CAN)
- P position signal from TCM (CAN)

DTC Logic

INFOID:000000000961384

DTC DETECTION LOGIC

NOTE:

- If DTC B2605 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-35. "DTC Logic"](#).
- If DTC B2605 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-36. "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2605	PNP SWITCH	BCM detects the following status for 500 ms or more when the ignition switch is in ON position <ul style="list-style-type: none"> • N position input signal exists. Shift position signal from IPDM E/R does not exist. • N position input signal does not exist. Shift position signal from IPDM E/R exists. 	<ul style="list-style-type: none"> • Harness or connectors [The park/neutral position (PNP) switch circuit is open or shorted.] • Park/neutral position (PNP) switch • IPDM E/R

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions and wait for at least 1 seconds.
 - A/T selector lever is in the P or N position
 - Do not depress the brake pedal.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000000961385

1. CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III. Refer to [PCS-31. "DTC Index"](#).

Is the inspection result normal?

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

2. CHECK PNP SWITCH CIRCUIT

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

A/T assembly		BCM		Continuity
Connector	Terminal	Connector	Terminal	
F51	9	M123	140	Existed

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

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B2605 PNP SWITCH

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[INTELLIGENT KEY SYSTEM]

A/T assembly		Ground	Continuity
Connector	Terminal		
F51	9	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-39. "Intermittent Incident"](#).

>> INSPECTION END.

B2606 STEERING LOCK RELAY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2606 STEERING LOCK RELAY

Description

INFOID:000000000961386

The steering lock relay ON signal is transmitted to IPDM E/R by BCM via CAN communication. IPDM E/R turns the steering lock relay ON and transmits the release of the steering to BCM.

DTC Logic

INFOID:000000000961387

DTC DETECTION LOGIC

NOTE:

- If DTC B2606 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-35, "DTC Logic"](#).
- If DTC B2606 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-36, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2606	STEERING LOCK RELAY	BCM detects that there is a mismatch between the following statuses. <ul style="list-style-type: none">• Steering lock unit ON signal transmitted by IPDM E/R• The steering lock unit status feedback	<ul style="list-style-type: none">• Steering lock relay (in IPDM E/R)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Press the push-button ignition switch under the following conditions.
 - A/T selector lever is in the P or N position.
 - Do not depress the brake pedal.
2. Steering is locked.
3. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000000961388

1. CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III. Refer to [PCS-31, "DTC Index"](#).

Is the inspection result normal?

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

2. INTERMITTENT INCIDENT

Refer to [GI-39, "Intermittent Incident"](#).

>> INSPECTION END.

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B2607 STEERING LOCK RELAY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2607 STEERING LOCK RELAY

Description

INFOID:000000000961389

BCM requests to IPDM E/R to supply power to steering lock unit. After receiving the power, the steering lock unit transmits an ON signal to BCM.

DTC Logic

INFOID:000000000961390

DTC DETECTION LOGIC

NOTE:

- If DTC B2607 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-35, "DTC Logic"](#).
- If DTC B2607 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-36, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2607	STEERING LOCK RELAY	BCM detects that there is a difference between the following statuses. <ul style="list-style-type: none">• Steering lock unit ON signal transmitted by IPDM E/R• The steering lock unit status feedback	<ul style="list-style-type: none">• Harness or connectors (steering lock unit power supply circuit is open or shorted)• Steering lock relay (in IPDM E/R)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Press the push-button ignition switch under the following conditions.
 - A/T selector lever is in the P or N position
 - Do not depress brake pedal
2. Steering lock is locked.
3. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000000961391

1. CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III. Refer to [PCS-31, "DTC Index"](#).

Is the inspection result normal?

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

2. CHECK STEERING LOCK UNIT POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect steering lock unit harness connector.
3. Check voltage between steering lock unit and ground under the following conditions.

Steering lock unit		Ground	Condition	Voltage (V)
Connector	Terminal			
M40	1	Ground	Press push-button ignition switch when steering lock is in lock condition.	Battery voltage

Is the inspection result normal?

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

3. CHECK STEERING LOCK UNIT POWER SUPPLY CIRCUIT

B2607 STEERING LOCK RELAY

[INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

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

Steering lock unit		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M40	1	E5	11	Existed

4. Check continuity between steering lock unit and ground.

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	1	Ground	Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-33, "Removal and Installation"](#).

NO >> Repair harness or connector.

4. CHECK INTERMITTENT INCIDENT

Refer to [GI-39, "Intermittent Incident"](#).

>> INSPECTION END.

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B2608 STARTER RELAY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2608 STARTER RELAY

Description

INFOID:000000000961392

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

DTC Logic

INFOID:000000000961393

DTC DETECTION LOGIC

NOTE:

- If DTC B2608 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-35, "DTC Logic"](#).
- If DTC B2608 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-36, "DTC Logic"](#).

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

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Press the push-button ignition switch under the following conditions.
 - A/T selector lever is in the P or N position.
 - Depress the brake pedal.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000000961394

1. CHECK STARTER RELAY

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

BCM		Ground	Condition		Voltage (V)
Connector	Terminal				
M121	52	Ground	A/T selector lever	N or P position	Battery voltage
				Other than above	0
			Clutch pedal	Not depressed	0
				Depressed	Battery voltage

Is the measurement value within the specification?

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

2. CHECK STARTER RELAY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM harness connector M121 and IPDM E/R harness connector E6.
3. Check continuity between IPDM E/R harness connector and BCM harness connector.

B2608 STARTER RELAY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

IPDM E/R		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E6	46	M121	52	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E6	46	Ground	Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-33, "Removal and Installation"](#).

NO >> Repair harness or connector.

3. CHECK INTERMITTENT INCIDENT

Refer to [GI-39, "Intermittent Incident"](#).

>> INSPECTION END.

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B2609 STEERING STATUS

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2609 STEERING STATUS

Description

INFOID:000000000961395

There are 2 switches in the steering lock unit (steering lock/unlock switch 1 and 2). BCM compares those two switches conditions to judge the present steering status.

DTC Logic

INFOID:000000000961396

DTC DETECTION LOGIC

NOTE:

- If DTC B2609 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-35, "DTC Logic"](#).
- If DTC B2609 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-36, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2609	STEERING STATUS	BCM detects the malfunction of steering lock unit switches for 1 second.	<ul style="list-style-type: none">• Harness or connectors [steering lock unit circuit (BCM side) is open or shorted]• Harness or connectors [steering lock unit circuit (IPDM E/R side) is open or shorted.]• Steering lock unit• IPDM E/R

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE 1

1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.
 - A/T selector lever is in the P or N position.
 - Do not depress brake pedal
 - Steering is locked
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-70, "Diagnosis Procedure"](#).
NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE 2

1. Turn ignition switch ON.
2. Turn ignition switch OFF.
3. Press door switch.
4. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-70, "Diagnosis Procedure"](#).
NO >> INSPECTION END.

Diagnosis Procedure

INFOID:000000000961397

1. INSPECTION START

Check the case in which DTC is detected.

- Case1: It is detected after ignition switch is changed from ON to OFF and door switch is pressed
- Case2: It is detected after ignition switch is changed from ON to OFF

In which case is DTC detected?

- Case1 >> GO TO 2.
Case2 >> GO TO 7.

2. CHECK BCM OUTPUT SIGNAL

B2609 STEERING STATUS

[INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

1. Turn ignition switch OFF.
2. Disconnect steering lock unit harness connector and IPDM E/R harness connector E5.
3. Check voltage between steering lock unit harness connector and ground.

Steering lock unit		Ground	Voltage [V]
Connector	Terminal		
M40	3	Ground	Battery voltage

Is the inspection result normal?

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

3.CHECK STEERING LOCK UNIT CIRCUIT-I

1. Disconnect BCM harness connector M122.
2. Check continuity between steering lock unit harness connector and BCM harness connector.

Steering lock unit		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M40	3	M122	97	Existed

3. Check continuity between steering lock unit harness connector and ground.

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	3	Ground	Not existed

Is the inspection result normal?

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

4.CHECK IPDM E/R OUTPUT SIGNAL

1. Connect IPDM E/R harness connector E5.
2. Disconnect BCM harness connector M122.
3. Check voltage between steering lock unit harness connector and ground.

Steering lock unit		Ground	Voltage [V]
Connector	Terminal		
M40	3	Ground	Battery voltage

Is the inspection result normal?

- YES >> Replace steering lock unit.
NO >> GO TO 5.

5.CHECK STEERING LOCK UNIT CIRCUIT-II

1. Check continuity between steering lock unit harness connector and IPDM E/R harness connector.

Steering lock unit		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M40	3	E5	32	Existed

2. Check continuity between steering lock unit harness connector and ground.

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	3	Ground	Not existed

Is the inspection result normal?

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

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B2609 STEERING STATUS

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

6. CHECK INTERMITTENT INCIDENT

Refer to [GI-39. "Intermittent Incident"](#).

>> INSPECTION END

7. CHECK BCM OUTPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect steering lock unit harness connector and IPDM E/R harness connector E5.
3. Check voltage between steering lock unit harness connector and ground.

Steering lock unit		Ground	Voltage [V]
Connector	Terminal		
M40	8	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 9.

NO >> GO TO 8.

8. CHECK STEERING LOCK UNIT CIRCUIT-I

1. Disconnect BCM harness connector M122.
2. Check continuity between steering lock unit harness connector and BCM harness connector.

Steering lock unit		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M40	8	M122	98	Existed

3. Check continuity between steering lock unit harness connector and ground.

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	8	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 11.

NO >> Repair harness or connector.

9. CHECK IPDM E/R OUTPUT SIGNAL

1. Connect IPDM E/R harness connector E5.
2. Disconnect BCM harness connector M122.
3. Check voltage between steering lock unit harness connector and ground.

Steering lock unit		Ground	Voltage [V]
Connector	Terminal		
M40	8	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace steering lock unit.

NO >> GO TO 10.

10. CHECK STEERING LOCK UNIT CIRCUIT-II

1. Check continuity between steering lock unit harness connector and IPDM E/R harness connector.

Steering lock unit		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M40	8	E5	33	Existed

2. Check continuity between steering lock unit harness connector and ground.

B2609 STEERING STATUS

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	8	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 11.

NO >> Repair harness or connector.

11.CHECK INTERMITTENT INCIDENT

Refer to [GI-39. "Intermittent Incident"](#).

>> INSPECTION END

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SEC

B260B STEERING LOCK UNIT

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B260B STEERING LOCK UNIT

Description

INFOID:000000000961398

The steering lock unit performs the check by itself according to the steering status.

DTC Logic

INFOID:000000000961399

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260B	STEERING LOCK UNIT	BCM detects malfunctioning of steering lock unit before steering unlocking.	<ul style="list-style-type: none">Steering lock unit

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Press the push-button ignition switch, when steering is locked.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000000961400

1. INSPECTION START

1. Turn ignition switch ON.
2. Check "Self diagnostic result" with CONSULT-III.
3. Touch "ERASE".
4. **Perform DTC Confirmation Procedure.**
See [SEC-74. "DTC Logic"](#).

Is the DTC B260B displayed again?

- YES >> Replace steering lock unit.
NO >> INSPECTION END.

B260C STEERING LOCK UNIT

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B260C STEERING LOCK UNIT

Description

INFOID:000000000961401

The steering lock unit performs the check by itself according to the steering status.

DTC Logic

INFOID:000000000961402

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260C	STEERING LOCK UNIT	BCM detects malfunctioning of steering lock unit before steering locking.	<ul style="list-style-type: none">Steering lock unit

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Turn ignition switch OFF.
3. Press door switch.
4. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000000961403

1. INSPECTION START

1. Turn ignition switch ON.
2. Check "Self diagnostic result" with CONSULT-III.
3. Touch "ERASE".
4. **Perform DTC Confirmation Procedure.**
See [SEC-75. "DTC Logic"](#).

Is the DTC B260C displayed again?

- YES >> Replace steering lock unit.
NO >> INSPECTION END.

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B260D STEERING LOCK UNIT

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B260D STEERING LOCK UNIT

Description

INFOID:000000000961404

The steering lock unit performs the check by itself according to the steering lock status (before lock, after lock and unlock).

DTC Logic

INFOID:000000000961405

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260D	STEERING LOCK UNIT	BCM detects malfunctioning of steering lock unit after steering locking.	<ul style="list-style-type: none">Steering lock unit

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Turn ignition switch OFF.
3. Press door switch.
4. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-76, "Diagnosis Procedure"](#).
NO >> INSPECTION END.

Diagnosis Procedure

INFOID:000000000961406

1. INSPECTION START

1. Turn ignition switch ON.
2. Check "Self diagnostic result" with CONSULT-III.
3. Touch "ERASE".
4. **Perform DTC Confirmation Procedure.**
See [SEC-76, "DTC Logic"](#).

Is the DTC B260D displayed again?

- YES >> Replace steering lock unit.
NO >> INSPECTION END.

B260F ENGINE STATUS

Description

INFOID:000000000961407

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

DTC Logic

INFOID:000000000961408

DTC DETECTION LOGIC

NOTE:

- If DTC B260F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-33, "DTC Logic"](#).
- If DTC B260F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-34, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260F	INTERRUPTION OF ENGINE STATUS SIGNAL	BCM is not yet received the engine status signal from ECM when ignition switch is in ON position	• ECM

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions.
 - A/T selector lever is in the P or N position.
 - Do not depress the brake pedal.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000000961409

1. INSPECTION START

1. Turn ignition switch ON.
2. Check "Self diagnostic result" with CONSULT-III.
3. Touch "ERASE".
4. **Perform DTC Confirmation Procedure.**
See [SEC-77, "DTC Logic"](#).

Is the DTC B260F displayed again?

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

2. REPLACE ECM

1. Replace ECM.
2. Go to [EC-15, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).

>> INSPECTION END.

B26E1 NO RECEPTION OF ENGINE STATUS SIGNAL

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B26E1 NO RECEPTION OF ENGINE STATUS SIGNAL

Description

INFOID:000000000961410

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

DTC Logic

INFOID:000000000961411

DTC DETECTION LOGIC

NOTE:

- If DTC B26E1 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-35, "DTC Logic"](#).
- If DTC B26E1 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-36, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260F	NO RECEPTION OF ENGINE STATUS SIGNAL	BCM does not receive the engine status signal from ECM when ignition switch is in the ON position	• ECM

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions.
 - A/T selector lever is in the P or N position.
 - Do not depress the brake pedal.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000000961412

1. INSPECTION START

1. Turn ignition switch ON.
2. Check "Self diagnostic result" with CONSULT-III.
3. Touch "ERASE".
4. **Perform DTC Confirmation Procedure.**
See [SEC-78, "DTC Logic"](#).

Is the DTC B26E1 displayed again?

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

2. REPLACE ECM

1. Replace ECM.
2. Go to [EC-15, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).

>> INSPECTION END.

B2612 STEERING STATUS

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2612 STEERING STATUS

Description

INFOID:000000000961413

There are 2 switches in the steering unit. IPDM E/R compares those 2 switches conditions to judge the present steering status and transmit the result to BCM via CAN communication.

DTC Logic

INFOID:000000000961414

DTC DETECTION LOGIC

NOTE:

- If DTC B2612 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-35, "DTC Logic"](#).
- If DTC B2612 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-36, "DTC Logic"](#).

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B2612	STEERING STATUS	BCM detects the mismatch between the following status for 1 second <ul style="list-style-type: none">• Steering lock or unlock• Feedback of steering lock status from IPDM E/R (CAN)	<ul style="list-style-type: none">• Harness or connectors [steering lock unit circuit (BCM side) is open or shorted]• Harness or connectors [steering lock unit circuit (IPDM E/R side) is open or shorted.]• Steering lock unit• IPDM E/R

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE 1

1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.
 - A/T selector lever is in the P or N position.
 - Do not depress brake pedal.
 - Steering is locked.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-79, "Diagnosis Procedure"](#).
NO >> GO TO 2.

2. PERFORM DTC CONFIRMATION PROCEDURE 2

1. Turn ignition switch ON.
2. Turn ignition switch OFF.
3. Press door switch.
4. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-79, "Diagnosis Procedure"](#).
NO >> INSPECTION END.

Diagnosis Procedure

INFOID:000000000961415

1. INSPECTION START

Check the case in which DTC is detected.

- Case1: It is detected after ignition switch is changed from ON to OFF and door switch is pressed.
- Case2: It is detected after ignition switch is changed from ON to OFF

In which case is DTC detected?

- Case1 >> GO TO 2.
Case2 >> GO TO 7.

2. CHECK BCM OUTPUT SIGNAL

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B2612 STEERING STATUS

[INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

1. Turn ignition switch OFF.
2. Disconnect steering lock unit harness connector and IPDM E/R harness connector E5.
3. Check voltage between steering lock unit harness connector and ground.

Steering lock unit		Ground	Voltage [V]
Connector	Terminal		
M40	3	Ground	Battery voltage

Is the inspection result normal?

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

3.CHECK STEERING LOCK UNIT CIRCUIT-I

1. Disconnect BCM harness connector M122.
2. Check continuity between steering lock unit harness connector and BCM harness connector.

Steering lock unit		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M40	3	M122	97	Existed

3. Check continuity between steering lock unit harness connector and ground.

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	3	Ground	Not existed

Is the inspection result normal?

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

4.CHECK IPDM E/R OUTPUT SIGNAL

1. Connect IPDM E/R harness connector E5.
2. Disconnect BCM harness connector M122.
3. Check voltage between steering lock unit harness connector and ground.

Steering lock unit		Ground	Voltage [V]
Connector	Terminal		
M40	3	Ground	Battery voltage

Is the inspection result normal?

- YES >> Replace steering lock unit.
NO >> GO TO 5.

5.CHECK STEERING LOCK UNIT CIRCUIT-II

1. Check continuity between steering lock unit harness connector and IPDM E/R harness connector.

Steering lock unit		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M40	3	E5	32	Existed

2. Check continuity between steering lock unit harness connector and ground.

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	3	Ground	Not existed

Is the inspection result normal?

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

B2612 STEERING STATUS

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

6. CHECK INTERMITTENT INCIDENT

Refer to [GI-39. "Intermittent Incident"](#).

>> INSPECTION END.

7. CHECK BCM OUTPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect steering lock unit harness connector and IPDM E/R harness connector E5.
3. Check voltage between steering lock unit harness connector and ground.

Steering lock unit		Ground	Voltage [V]
Connector	Terminal		
M40	8	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 9.

NO >> GO TO 8.

8. CHECK STEERING LOCK UNIT CIRCUIT-I

1. Disconnect BCM harness connector M122.
2. Check continuity between steering lock unit harness connector and BCM harness connector.

Steering lock unit		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M40	8	M122	98	Existed

3. Check continuity between steering lock unit harness connector and ground.

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	8	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 11.

NO >> Repair harness or connector.

9. CHECK IPDM E/R OUTPUT SIGNAL

1. Connect IPDM E/R harness connector E5.
2. Disconnect BCM harness connector M122.
3. Check voltage between steering lock unit harness connector and ground.

Steering lock unit		Ground	Voltage [V]
Connector	Terminal		
M40	8	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace steering lock unit.

NO >> GO TO 10.

10. CHECK STEERING LOCK UNIT CIRCUIT-II

1. Check continuity between steering lock unit harness connector and IPDM E/R harness connector.

Steering lock unit		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M40	8	E5	33	Existed

2. Check continuity between steering lock unit harness connector and ground.

B2612 STEERING STATUS

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	8	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 11.

NO >> Repair harness or connector.

11.CHECK INTERMITTENT INCIDENT

Refer to [GI-39. "Intermittent Incident"](#).

>> INSPECTION END.

B2617 STARTER RELAY CIRCUIT

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2617 STARTER RELAY CIRCUIT

Description

INFOID:000000000961416

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

DTC Logic

INFOID:000000000961417

DTC DETECTION LOGIC

NOTE:

- If DTC B2617 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-35, "DTC Logic"](#).
- If DTC B2617 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-36, "DTC Logic"](#).
- If DTC B2617 is displayed with DTC B2611, first perform the trouble diagnosis for DTC B2611. Refer to [PCS-52, "DTC Logic"](#).
- If DTC B2617 is displayed with DTC B210E, first perform the trouble diagnosis for DTC B210E. Refer to [SEC-98, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2617	STARTER RELAY CIRCUIT	An immediate operation of starter relay is requested by BCM, but there is no response for more than 1 second	<ul style="list-style-type: none"> • Harness or connectors (Starter relay circuit is open or shorted.) • IPDM E/R

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions and wait for at least 1 second.
 - A/T selector lever is in the P or N position.
 - Do not depress the brake pedal.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000000961418

1. CHECK STARTER RELAY

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

BCM		Ground	Condition	Voltage (V)	
Connector	Terminal				
M121	52	Ground	A/T selector lever	N or P position	Battery voltage
				Other than above	0
			Clutch pedal	Not depressed	0
				Depressed	Battery voltage

Is the measurement value within the specification.

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

2. CHECK STARTER RELAY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM harness connector M121 and IPDM E/R harness connector E6.

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B2617 STARTER RELAY CIRCUIT

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

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

IPDM E/R		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E6	46	M121	52	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E6	46	Ground	Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-33, "Removal and Installation"](#).

NO >> Repair harness or connector.

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-39, "Intermittent Incident"](#).

>> INSPECTION END.

B2619 BCM

Description

INFOID:000000000961419

BCM requests IPDM E/R to supply power to steering lock unit. After receiving the power, the steering lock unit transmits an ON signal to BCM.

DTC Logic

INFOID:000000000961420

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2619	BCM	BCM detects a mismatch between the power supplied to the steering lock unit and the feedback for one second or more.	<ul style="list-style-type: none"> • BCM

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.
 - A/T selector lever is in the P or N position
 - Do not depress brake pedal
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000000961421

1. INSPECTION START

1. Turn ignition switch ON.
2. Check "Self diagnostic result" with CONSULT-III.
3. Touch "ERASE".
4. **Perform DTC Confirmation Procedure.**
See [SEC-85, "DTC Logic"](#).

Is the DTC B2619 displayed again?

- YES >> Replace BCM. Refer to [BCS-79, "Removal and Installation"](#).
- NO >> INSPECTION END

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B261A PUSH-BUTTON IGNITION SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B261A PUSH-BUTTON IGNITION SWITCH

Description

INFOID:000000000961422

BCM transmits the change in the power supply position with the push-button ignition switch to IPDM E/R via the CAN communication. IPDM E/R transmits the power supply position status via CAN communication to BCM.

DTC Logic

INFOID:000000000961423

DTC DETECTION LOGIC

NOTE:

- If DTC B261A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-35, "DTC Logic"](#).
- If DTC B261A is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-36, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B261A	PUSH-BUTTON IGNITION SWITCH	BCM detects the mismatch between the following for 1 second or more <ul style="list-style-type: none"> • Power supply position with push-button ignition switch • Power supply position from IPDM E/R (CAN) 	<ul style="list-style-type: none"> • Harness or connectors (Push-button ignition switch circuit is open or shorted) • Between BCM and push-button ignition switch • Between IPDM E/R and push-button ignition switch

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.
 - A/T selector lever is in the P or N position
 - Do not depress brake pedal.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-86, "Diagnosis Procedure"](#).
 NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000000961424

1. INSPECTION START

Check the case in which DTC is detected.

- Case1: It is detected when push-button ignition switch is pressed for 1 second
- Case2: It is detected after Intelligent Key is inserted into key slot and push-button ignition switch is pressed

In which case is DTC detected?

- Case1 >> GO TO 2.
 Case2 >> GO TO 4.

2. CHECK PUSH-BUTTON IGNITION SWITCH OUTPUT SIGNAL 1

1. Turn ignition switch OFF.
2. Disconnect push-button ignition switch harness connector and IPDM E/R harness connector E5.
3. Check voltage between push-button ignition switch harness connector and ground.

Push-button ignition switch		Ground	Voltage (V)
Connector	Terminal		
M50	4	Ground	Battery voltage

Is the inspection result normal?

- YES >> GO TO 6.

B261A PUSH-BUTTON IGNITION SWITCH

[INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

NO >> GO TO 3.

3.CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT

1. Disconnect BCM harness 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	
M50	4	M122	89	Existed

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

Push-button ignition switch		Ground	Continuity
Connector	Terminal		
M50	4	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

4.CHECK PUSH-BUTTON IGNITION SWITCH OUTPUT SIGNAL 2

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

Push-button ignition switch		Ground	Voltage (V)
Connector	Terminal		
M50	4	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 5.

5.CHECK PUSH-BUTTON IGNITION SWITCH

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

Push-button ignition switch		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M50	4	E5	28	Existed

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

Push-button ignition switch		Ground	Continuity
Connector	Terminal		
M50	4	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

6.CHECK INTERMITTENT INCIDENT

Refer to [GI-39. "Intermittent Incident"](#).

>> INSPECTION END

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B261E VEHICLE TYPE

Description

INFOID:000000000961425

There are two types of vehicle.

- HEV
- Conventional

DTC Logic

INFOID:000000000961426

DTC DETECTION LOGIC

NOTE:

- If DTC B261E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-35, "DTC Logic"](#).
- If DTC B261E is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-36, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B261E	VEHICLE TYPE	Difference of BCM configuration	<ul style="list-style-type: none"> • BCM

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000000961427

1. INSPECTION START

1. Turn ignition switch ON.
2. Check "Self diagnostic result" with CONSULT-III.
3. Touch "ERASE".
4. **Perform DTC Confirmation Procedure.**
See [SEC-88, "DTC Logic"](#).

Is the 1st trip DTC B261E displayed again?

- YES >> Replace BCM. Refer to [BCS-79, "Removal and Installation"](#).
 NO >> INSPECTION END

B2108 STEERING LOCK RELAY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2108 STEERING LOCK RELAY

Description

INFOID:000000000961428

The steering lock relay ON signal is transmitted to IPDM E/R by BCM via CAN communication. IPDM E/R turns the steering lock relay ON and transmits the release of the steering to BCM.

DTC Logic

INFOID:000000000961429

DTC DETECTION LOGIC

NOTE:

- If DTC B2108 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-35, "DTC Logic"](#).
- If DTC B2108 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-36, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2108	STRG LCK RELAY ON	IPDM E/R detects that the relay is stuck at ON position for about 1 second even if the IPDM E/R receives steering lock relay ON/OFF signal from BCM.	<ul style="list-style-type: none">• IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.
 - A/T selector lever is in the P or N position
 - Do not depress the brake pedal.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-89, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000000961430

1.CHECK FUSE

1. Turn ignition switch OFF.
2. Check 10A fuse (No. 48, located in IPDM E/R).

Is the inspection normal?

- YES >> Replace IPDM E/R. Refer to [PCS-33, "Removal and Installation"](#).
NO >> Check the following.
 - Harness for open or short between IPDM E/R and battery
 - Fuse

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B2109 STEERING LOCK RELAY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2109 STEERING LOCK RELAY

Description

INFOID:000000000961431

The steering lock relay ON signal is transmitted to IPDM E/R by BCM via CAN communication. IPDM E/R turns the steering lock relay ON and transmits the release of the steering to BCM.

DTC Logic

INFOID:000000000961432

DTC DETECTION LOGIC

NOTE:

- If DTC B2109 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-35, "DTC Logic"](#).
- If DTC B2109 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-36, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2109	STRG LCK RELAY OFF	IPDM E/R detects that the relay is stuck at OFF position for about 1 second even if the IPDM E/R receives steering lock relay ON/OFF signal from BCM.	<ul style="list-style-type: none">• IPDM E/R

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.
 - A/T selector lever is in the P or N position
 - Do not depress the brake pedal
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-70, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000000961433

1. CHECK FUSE

1. Turn ignition switch OFF.
2. Check 10A fuse (No. 48, located in IPDM E/R).

Is the inspection normal?

- YES >> Replace IPDM E/R. Refer to [PCS-33, "Removal and Installation"](#).
NO >> Check the following.
 - Harness for open or short between IPDM E/R and battery
 - Fuse

B210A STEERING LOCK CONDITION SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B210A STEERING LOCK CONDITION SWITCH

Description

INFOID:000000000961434

There are 2 switches in the steering unit. IPDM E/R compares those 2 switches conditions to judge the present steering status and transmit the result to BCM via CAN communication.

DTC Logic

INFOID:000000000961435

DTC DETECTION LOGIC

NOTE:

- If DTC B210A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-35, "DTC Logic"](#).
- If DTC B210A is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-36, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210A	STRG LCK STATE SW	BCM detects the mismatch between the following for 1 second <ul style="list-style-type: none">• Steering lock or unlock• Feedback of steering lock status from IPDM E/R (CAN)	<ul style="list-style-type: none">• Harness or connectors [steering lock unit circuit (BCM side) is open or shorted]• Harness or connectors [steering lock unit circuit (IPDM E/R side) is open or shorted.]• Steering lock unit• IPDM E/R

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.
 - A/T selector lever is in the P or N position
 - Do not depress the brake pedal
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000000961436

1. INSPECTION START

Check the case in which DTC is detected.

- Case1: It is detected after ignition switch is changed from ON to OFF and door switch is pressed
- Case2: It is detected after ignition switch is changed from ON to OFF

In which case is DTC detected?

- Case1 >> GO TO 2.
Case2 >> GO TO 7.

2. CHECK BCM OUTPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect steering lock unit harness connector and IPDM E/R harness connector E5.
3. Check voltage between steering lock unit harness connector and ground.

Steering lock unit		Ground	Voltage [V]
Connector	Terminal		
M40	3	Ground	Battery voltage

Is the inspection result normal?

- YES >> GO TO 4.

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B210A STEERING LOCK CONDITION SWITCH

[INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

NO >> GO TO 3.

3.CHECK STEERING LOCK UNIT CIRCUIT-I

1. Disconnect BCM harness connector M122.
2. Check continuity between steering lock unit harness connector and BCM harness connector.

Steering lock unit		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M40	3	M122	97	Existed

3. Check continuity between steering lock unit harness connector and ground.

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	3	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

4.CHECK IPDM E/R OUTPUT SIGNAL

1. Connect IPDM E/R harness connector E5.
2. Disconnect BCM harness connector M122.
3. Check voltage between steering lock unit harness connector and ground.

Steering lock unit		Ground	Voltage [V]
Connector	Terminal		
M40	3	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace steering lock unit.

NO >> GO TO 5.

5.CHECK STEERING LOCK UNIT CIRCUIT-II

1. Check continuity between steering lock unit harness connector and IPDM E/R harness connector.

Steering lock unit		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M40	3	E5	32	Existed

2. Check continuity between steering lock unit harness connector and ground.

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	3	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

6.CHECK INTERMITTENT INCIDENT

Refer to [GI-39, "Intermittent Incident"](#).

>> INSPECTION END

7.CHECK BCM OUTPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect steering lock unit harness connector and IPDM E/R harness connector E5.
3. Check voltage between steering lock unit harness connector and ground.

B210A STEERING LOCK CONDITION SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Steering lock unit		Ground	Voltage [V]
Connector	Terminal		
M40	8	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 9.

NO >> GO TO 8.

8.CHECK STEERING LOCK UNIT CIRCUIT-I

1. Disconnect BCM harness connector M122.
2. Check continuity between steering lock unit harness connector and BCM harness connector.

Steering lock unit		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M40	8	M122	98	Existed

3. Check continuity between steering lock unit harness connector and ground.

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	8	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 11.

NO >> Repair harness or connector.

9.CHECK IPDM E/R OUTPUT SIGNAL

1. Connect IPDM E/R harness connector E5.
2. Disconnect BCM harness connector M122.
3. Check voltage between steering lock unit harness connector and ground.

Steering lock unit		Ground	Voltage [V]
Connector	Terminal		
M40	8	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace steering lock unit.

NO >> GO TO 10.

10.CHECK STEERING LOCK UNIT CIRCUIT-II

1. Check continuity between steering lock unit harness connector and IPDM E/R harness connector.

Steering lock unit		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M40	8	E5	33	Existed

2. Check continuity between steering lock unit harness connector and ground.

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	8	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 11.

NO >> Repair harness or connector.

11.CHECK INTERMITTENT INCIDENT

Refer to [GI-39, "Intermittent Incident"](#).

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B210A STEERING LOCK CONDITION SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

>> INSPECTION END

B210B STARTER CONTROL RELAY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B210B STARTER CONTROL RELAY

Description

INFOID:000000000961437

Starter control relay, integrated in IPDM E/R, permits the starter relay operation when in N or P position and the steering is locked or unlocked. It is installed in parallel with the starter relay.

DTC Logic

INFOID:000000000961438

DTC DETECTION LOGIC

NOTE:

- If DTC B210B is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-35, "DTC Logic"](#).
- If DTC B210B is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-36, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210B	START CONT RLY ON	IPDM E/R detects that the relay is stuck at ON position even if the followings condition are met for about 1 second. <ul style="list-style-type: none">• Starter control relay ON/OFF signal from BCM• Clutch interlock or shift park neutral position (PNP) switch input signal	<ul style="list-style-type: none">• IPDM E/R

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn the power supply position to start under the following conditions and wait for at least 1 second.
 - A/T selector lever is in the P or N position.
 - Depress the brake pedal
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000000961439

1. INSPECTION START

1. Turn ignition switch ON.
2. Check "Self diagnostic result" with CONSULT-III.
3. Touch "ERASE".
4. **Perform DTC Confirmation Procedure.**
See [PCS-31, "DTC Index"](#).

Is the DTC B210B displayed again?

- YES >> Replace IPDM E/R. Refer [PCS-33, "Removal and Installation"](#).
NO >> INSPECTION END

B210C STARTER CONTROL RELAY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B210C STARTER CONTROL RELAY

Description

INFOID:000000000961440

Starter control relay, integrated in IPDM E/R, permits the starter relay operation when in N or P position and the steering is locked or unlocked. It is installed in parallel with the starter relay.

DTC Logic

INFOID:000000000961441

DTC DETECTION LOGIC

NOTE:

- If DTC B210C is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to XXX. [SEC-35. "DTC Logic"](#).
- If DTC B210C is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to XXX. [SEC-36. "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210C	START CONT RLY OFF	IPDM E/R detects that the relay is stuck at ON position even if the followings condition are met for about 1 second. <ul style="list-style-type: none">• Starter control relay ON/OFF signal from BCM• Clutch interlock or shift park neutral position (PNP) switch input signal	<ul style="list-style-type: none">• IPDM E/R

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn the power supply position to start under the following conditions and wait for at least 1 second.
 - A/T selector lever is in the P or N position.
 - Depress the brake pedal
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000000961442

1. INSPECTION START

1. Turn ignition switch ON.
2. Check "Self diagnostic result" with CONSULT-III.
3. Touch "ERASE".
4. **Perform DTC Confirmation Procedure.**
See [PCS-31. "DTC Index"](#).

Is the DTC B210C displayed again?

- YES >> Replace IPDM E/R. Refer to [PCS-33. "Removal and Installation"](#).
NO >> INSPECTION END

B210D STARTER RELAY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B210D STARTER RELAY

Description

INFOID:000000000961443

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

DTC Logic

INFOID:000000000961444

DTC DETECTION LOGIC

NOTE:

- If DTC B210D is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-35, "DTC Logic"](#).
- If DTC B210D is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-36, "DTC Logic"](#).
- If DTC B210D is displayed with DTC B2617, first perform the trouble diagnosis for DTC B2617. Refer to [SEC-83, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210D	STARTER RELAY ON	IPDM E/R detects that the relay is stuck at ON position even if the followings condition are met for about 1 second. <ul style="list-style-type: none"> • Starter control relay ON/OFF signal from BCM • Clutch interlock or shift park neutral position (PNP) switch input 	<ul style="list-style-type: none"> • IPDM E/R

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Ignition switch ON under the following conditions and wait for at least 1 second.
 - A/T selector lever is P or N position
 - Do not depress the brake pedal
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000000961445

1. CHECK STARTER RELAY POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R harness connector E5.
3. Check voltage between IPDM E/R harness connector and ground.

IPDM E/R		Ground	Voltage (V)
Connector	Terminal		
E5	36	Ground	Battery voltage

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-33, "Removal and Installation"](#).
- NO >> Check harness for open or short between IPDM E/R and battery.

B210E STARTER RELAY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B210E STARTER RELAY

Description

INFOID:000000000961446

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

DTC Logic

INFOID:000000000961447

DTC DETECTION LOGIC

NOTE:

- If DTC B210E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-35, "DTC Logic"](#).
- If DTC B210E is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-36, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210E	STARTER RELAY OFF	IPDM E/R detects that the relay is stuck at ON position even if the followings condition are met for about 1 second. <ul style="list-style-type: none"> • Starter control relay ON/OFF signal from BCM • Clutch interlock or shift park neutral position (PNP) switch input 	<ul style="list-style-type: none"> • IPDM E/R

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions and wait for at least 1 second.
 - A/T selector lever is in the P or N position
 - Do not depress the brake pedal
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-98, "Diagnosis Procedure"](#).
NO >> INSPECTION END.

Diagnosis Procedure

INFOID:000000000961448

1. INSPECTION START

Check which type of transmission the vehicle is equipped with.

Which type of transmission

- A/T >> GO TO 2.
M/T >> GO TO 3.

2. CHECK STARTER RELAY OUTPUT SIGNAL/A/T MODELS

1. Turn ignition switch OFF.
2. Disconnect BCM harness connector M121.
3. Check voltage between BCM harness connector and ground.

BCM connector		Ground	Condition			Voltage (V)
Connector	Terminal		Ignition switch	Brake pedal	A/T selector lever	
M121	52	Ground	ON	Slightly depressed	P or N	Battery voltage
					Other than above	0

Is the inspection result normal?

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

B210E STARTER RELAY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

3. CHECK STARTER RELAY OUTPUT SIGNAL / M/T MODELS

1. Turn ignition switch OFF.
2. Disconnect BCM harness connector M121.
3. Check voltage between BCM harness connector and ground.

BCM connector		Ground	Condition		Voltage (V)
Connector	Terminal		Ignition switch	Clutch pedal	
M121	52	Ground	OFF	Not depressed	0
				Depressed	Battery voltage

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4. CHECK STARTER RELAY OUTPUT SIGNAL CIRCUIT

1. Disconnect IPDM E/R harness connector E6.
2. Check continuity between BCM harness connector and IPDM E/R harness connector.

BCM		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M121	52	E6	46	Existed

3. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M121	52	Ground	Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-33. "Removal and Installation"](#).

NO >> Repair harness connector.

5. CHECK STARTER RELAY POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R harness connector E5.
3. Check voltage between IPDM E/R harness connector and ground.

IPDM E/R		Ground	Voltage (V)
Connector	Terminal		
E5	36	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-33. "Removal and Installation"](#).

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

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B210F PNP/CLUTCH INTERLOCK SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B210F PNP/CLUTCH INTERLOCK SWITCH

Description

INFOID:000000000961449

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

- Park/neutral position (PNP) switch (A/T models)
- Clutch inter lock switch (M/T models)
- Shift position signal from BCM (CAN)

DTC Logic

INFOID:000000000961450

DTC DETECTION LOGIC

NOTE:

- If DTC B210F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-35, "DTC Logic"](#)
- If DTC B210F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-36, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210F	INTER LOCK/PNP SW ON	IPDM E/R detects a mismatch between the signals below for 1 second or more. <ul style="list-style-type: none">• Clutch interlock input signal (M/T models)• Shift NP switch input signal (A/T models)• Shift position signal from BCM (CAN)	<ul style="list-style-type: none">• Harness or connectors [Park/neutral position (PNP) switch circuit is open or shorted (A/T models)] or (Clutch interlock switch circuit is open or shorted.)• Clutch interlock switch (M/T models)• Park/neutral position (PNP) switch (A/T models)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions and wait for at least 1 second.
 - A/T selector lever is in the P or N position
 - Do not depress the brake pedal
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [EC-137, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000000961451

1. INSPECTION START

Check which type of transmission the vehicle is equipped with.

Which type of transmission

- A/T >> GO TO 2.
M/T >> GO TO 5.

2. CHECK DTC WITH BCM

Refer to [SEC-167, "DTC Index"](#).

Is the inspection result normal?

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

3. CHECK PNP SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R harness connector E5.
3. Turn ignition switch ON.
4. Check voltage between IPDM E/R harness connector and ground under following condition.

B210F PNP/CLUTCH INTERLOCK SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

IPDM E/R		Ground	Condition		Voltage (V)
Connector	Terminal				
E5	30	Ground	A/T selector lever	P or N	0
				Other than above	Battery voltage

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-33, "Removal and Installation"](#).

NO >> GO TO 4.

4.CHECK PNP SWITCH CIRCUIT

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

IPDM E/R		A/T assembly		Continuity
Connector	Terminal	Connector	Terminal	
E5	30	F51	9	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E5	30	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair harness or connector.

5.CHECK CLUTCH INTERLOCK SWITCH INPUT SIGNAL (BCM)

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

BCM		Ground	Condition		Voltage (V)
Connector	Terminal				
M123	114	Ground	Clutch pedal	Not depressed	0
				Depressed	Battery voltage

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 11.

6.CHECK CLUTCH INTERLOCK SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R harness connector E5.
3. Check voltage between IPDM E/R harness connector and ground.

IPDM E/R		Ground	Condition		Voltage (V)
Connector	Terminal				
E5	30	Ground	Clutch pedal	Not depressed	0
				Depressed	Battery voltage

Is the inspection result normal?

YES >> Replace IPDM E/R.

NO >> GO TO 7.

7.CHECK CLUTCH INTERLOCK SWITCH POWER SUPPLY

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B210F PNP/CLUTCH INTERLOCK SWITCH

[INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

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

Clutch interlock switch		Ground	Voltage (V)
Connector	Terminal		
E111	1	Ground	Battery voltage

Is the inspection result normal?

- YES >> GO TO 8.
NO >> Check harness for open or short between clutch interlock switch and fuse.

8. CHECK CLUTCH INTERLOCK SWITCH CIRCUIT

1. Check continuity between IPDM E/R harness connector and clutch interlock switch harness connector.

IPDM E/R		Clutch interlock switch		Continuity
Connector	Terminal	Connector	Terminal	
E5	30	E111	1	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E5	30	Ground	Not existed

Is the inspection result normal?

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

9. CHECK CLUTCH INTERLOCK SWITCH

Refer to [SEC-102. "Component Inspection"](#).

Is the inspection result normal?

- YES >> GO TO 11.
NO >> Replace clutch interlock switch.

10. CHECK CLUTCH INTERLOCK SWITCH INPUT SIGNAL CIRCUIT

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

BCM		Clutch interlock switch		Continuity
Connector	Terminal	Connector	Terminal	
M123	114	E111	2	Existed

3. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M123	114	Ground	Not existed

Is the inspection result normal?

- YES >> GO TO 11.
NO >> Repair harness or connector.

11. CHECK INTERMITTENT INCIDENT

Refer to [GI-39. "Intermittent Incident"](#).

>> INSPECTION END

Component Inspection

INFOID:000000000961452

B210F PNP/CLUTCH INTERLOCK SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

1. CHECK CLUTCH INTERLOCK SWITCH

1. Turn ignition switch OFF.
2. Disconnect clutch interlock switch harness connector.
3. Check continuity between clutch interlock switch under the following conditions.

Clutch interlock switch			Condition	Continuity	
Connector	Terminal				
E111	1	2	Clutch pedal	Not depressed	Not existed
				Depressed	Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace clutch interlock switch.

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B2110 PNP/CLUTCH INTERLOCK SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2110 PNP/CLUTCH INTERLOCK SWITCH

Description

INFOID:000000000961453

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

- Park/neutral position (PNP) switch (A/T models)
- Clutch inter lock switch (M/T models)
- Shift position signal from BCM (CAN)

DTC Logic

INFOID:000000000961454

DTC DETECTION LOGIC

NOTE:

- If DTC B2110 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-35, "DTC Logic"](#).
- If DTC B2110 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-36, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2110	INTER LOCK/PNP SW	IPDM E/R detects mismatch between the signals below for 1 second or more. <ul style="list-style-type: none">• Clutch interlock input signal (M/T models)• Shift NP switch input signal (A/T models)	<ul style="list-style-type: none">• Harness or connectors [Park/neutral position (PNP) switch circuit is open or shorted (A/T models)] or (Clutch interlock switch circuit is open or shorted.)• Clutch inter lock switch (MT models)• Park/neutral position (PNP) switch (AT models)

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn the ignition switch ON under the following conditions and wait for at least 1 second.
 - A/T selector lever is in the P or N position
 - Do not depress the brake pedal
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [EC-137, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000000961455

1. INSPECTION START

Check which type of transmission the vehicle is equipped with.

Which type of transmission is equipped?

- A/T >> GO TO 2.
M/T >> GO TO 5.

2. CHECK DTC WITH TCM

Refer to [TM-189, "DTC Index"](#).

Is the inspection result normal?

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

3. CHECK PNP SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R harness connector E5.
3. Turn ignition switch ON.
4. Check voltage between IPDM E/R harness connector and ground under following condition.

B2110 PNP/CLUTCH INTERLOCK SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

IPDM E/R		Ground	Condition		Voltage (V)
Connector	Terminal				
E5	30	Ground	A/T selector lever	P or N	0
				Other than above	Battery voltage

Is the inspection result normal?

YES >> Replace IPDM E/R.

NO >> GO TO 4.

4.CHECK PNP SWITCH CIRCUIT

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

IPDM E/R		A/T assembly		Continuity
Connector	Terminal	Connector	Terminal	
E5	30	F51	9	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E5	30	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair harness or connector.

5.CHECK CLUTCH INTERLOCK SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R harness connector E5.
3. Check voltage between IPDM E/R harness connector and ground.

IPDM E/R		Ground	Condition		Voltage (V)
Connector	Terminal				
E5	30	Ground	Clutch pedal	Not depressed	0
				Depressed	Battery voltage

Is the inspection result normal?

YES >> Replace IPDM E/R.

NO >> GO TO 6.

6.CHECK CLUTCH INTERLOCK SWITCH POWER SUPPLY

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

Clutch interlock switch		Ground	Voltage (V)
Connector	Terminal		
E111	1	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 7.

NO >> Check harness for open or short between clutch interlock switch and fuse.

7.CHECK CLUTCH INTERLOCK SWITCH CIRCUIT

1. Check continuity between IPDM E/R harness connector and clutch interlock switch harness connector.

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B2110 PNP/CLUTCH INTERLOCK SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

IPDM E/R		Clutch interlock switch		Continuity
Connector	Terminal	Connector	Terminal	
E5	30	E111	1	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E5	30	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair harness or connector.

8. CHECK CLUTCH INTERLOCK SWITCH

Refer to [SEC-106. "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 9.

NO >> Replace clutch interlock switch.

9. CHECK INTERMITTENT INCIDENT

Refer to [GI-39. "Intermittent Incident"](#).

>> INSPECTION END

Component Inspection

INFOID:000000000961456

1. CHECK CLUTCH INTERLOCK SWITCH

1. Turn ignition switch OFF.
2. Disconnect clutch interlock switch harness connector.
3. Check continuity between clutch interlock switch under the following conditions.

Clutch interlock switch			Condition	Continuity	
Connector	Terminal				
E111	1	2	Clutch pedal	Not depressed	Not existed
				Depressed	Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace clutch interlock switch.

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM : Diagnosis Procedure

INFOID:000000000961457

1. CHECK FUSE AND FUSIBLE LINK

Check that the following fuse and fusible link are not blown.

Terminal No.	Signal name	Fuse and fusible link No.
1	Battery power supply	K
11		10

Is the fuse fusing?

- YES >> Replace the blown fuse or fusible link after repairing the affected circuit if a fuse or fusible link is blown.
NO >> GO TO 2.

2. CHECK POWER SUPPLY CIRCUIT

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

Terminals		Voltage (Approx.)
(+)	(-)	
BCM		Ground Battery voltage
Connector	Terminal	
M118	1	
M119	11	

Is the measurement value normal?

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

3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M119	13		Existed

Does continuity exist?

- YES >> INSPECTION END
NO >> Repair harness or connector.

BCM : Special Repair Requirement

INFOID:000000000961458

1. REQUIRED WORK WHEN REPLACING BCM

Initialize IVIS by CONSULT-III. For the details of initialization refer to CONSULT-III operation manual NATS-IVIS/NVIS.

>> Work end.

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) : Diagnosis Procedure

INFOID:000000000961459

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POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

1. CHECK FUSES AND FUSIBLE LINK

Check that the following IPDM E/R fuses or fusible links are not blown.

Terminal No.	Signal name	Fuses and fusible link No.
1	Battery power supply	C
—		50
—		51

Is the fuse fusing?

YES >> Replace the blown fuse or fusible link after repairing the affected circuit if a fuse or fusible link is blown.

NO >> GO TO 2.

2. CHECK POWER SUPPLY CIRCUIT

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

Terminals		Voltage (Approx.)
(+)	(-)	
IPDM E/R		Battery voltage
Connector	Terminal	
E4	1	
	2	

Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3. CHECK GROUND CIRCUIT

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E5	12		Existed
E6	41		

Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.

KEY SLOT

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

KEY SLOT

Diagnosis Procedure

INFOID:000000000961460

1. CHECK KEY SLOT POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect key slot connector.
3. Check voltage between slot connector and ground.

Key slot		Ground	Voltage (V) (Approx.)
Connector	Terminal		
M22	1	Ground	Battery voltage
	5		

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace key slot power supply circuit.

2. CHECK KEY SLOT GROUND CIRCUIT

Check continuity between key slot connector and ground.

Key slot		Ground	Continuity
Connector	Terminal		
M22	7	Ground	Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace key slot ground circuit.

3. CHECK INTERMITTENT INCIDENT

Refer to [GI-39. "Intermittent Incident"](#).

>> INSPECTION END .

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KEY SLOT ILLUMINATION

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

KEY SLOT ILLUMINATION

Description

INFOID:000000000961461

Blinks when Intelligent Key insertion is required.

Component Function Check

INFOID:000000000961462

1.CHECK FUNCTION

With CONSULT-III

Check key slot illumination ("KEY SLOT ILLUMI") Active Test mode.

Is the inspection result normal?

YES >> Key slot function is OK.

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

Diagnosis Procedure

INFOID:000000000961463

1.CHECK KEY SLOT ILLUMINATION OUTPUT SIGNAL

Check voltage between key slot connector and ground.

Terminals		Condition	Key slot illumination	Voltage (V) (Approx.)	
(+)					(-)
Key slot connector	Terminal				
M22	6	Ground	Intelligent Key inserted	OFF	Battery voltage
			Intelligent Key removed	ON	0

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 2.

2.CHECK KEY SLOT POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect key slot connector.
3. Check voltage between slot connector and ground.

Terminals		Voltage (V) (Approx.)	
(+)			(-)
Key slot connector	Terminal		
M22	1	Ground	Battery voltage
	5		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace key slot power supply circuit.

3.CHECK KEY SLOT GROUND CIRCUIT

Check continuity between key slot connector and ground.

Key slot connector	Terminal	Ground	Continuity
M22	7		Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace key slot ground circuit.

KEY SLOT ILLUMINATION

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

4.CHECK KEY SLOT CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM and key slot connector.
3. Check continuity between BCM connector and key slot connector.

BCM connector	Terminal	Key slot connector	Terminal	Continuity
M122	92	M22	6	Existed

4. Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
M122	92		Not existed

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness between BCM and key slot.

5.CHECK KEY SLOT

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

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace key slot. Refer to [DLK-223. "Removal and Installation"](#).

6.CHECK INTERMITTENT INCIDENT

Refer to [GI-39. "Intermittent Incident"](#).

>> INSPECTION END.

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SEC

KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

KEY CYLINDER SWITCH

Description

INFOID:000000000961464

Power window main switch detects condition of the door key cylinder switch and transmits to BCM as the LOCK or UNLOCK signals.

Component Function Check

INFOID:000000000961465

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

Check ("KEY CYL LK-SW", "KEY CYL UN-SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT-III. Refer to [DLK-50. "DOOR LOCK : CONSULT-III Function \(BCM - DOOR LOCK\)".](#)

Monitor item	Condition
KEY CYL LK-SW	Lock : ON
	Neutral / Unlock : OFF
KEY CYL UN-SW	Unlock : ON
	Neutral / Lock : OFF

Is the inspection result normal?

- YES >> Key cylinder switch is OK.
NO >> Refer to [SEC-112. "Diagnosis Procedure".](#)

Diagnosis Procedure

INFOID:000000000961466

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

1. Turn ignition switch ON.
2. Check voltage between power window main switch connector and ground.

Terminals		Key position	Voltage (V) (Approx.)	
(+)	(-)			
Power window main switch connector	Terminal	Ground	Lock	0
			Neutral / Unlock	5
D8	4		Unlock	0
			Neutral / Lock	5

Is the inspection result normal?

- YES >> Replace power window main switch. Refer to [PWC-126. "Removal and Installation".](#) After that, Refer to [PWC-16. "POWER WINDOW MAIN SWITCH : Special Repair Requirement".](#)
NO >> GO TO 2.

2. CHECK DOOR KEY CYLINDER SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect power window main switch connector and front door key lock assembly (driver side) (key cylinder switch) connector.
3. Check continuity between power window main switch connector and front door lock assembly (driver side) (key cylinder switch) connector.

Power window main switch connector	Terminal	Front door lock assembly (driver side) (key cylinder switch) connector	Terminal	Continuity
D8	4	D15	6	Existed
	6		5	

4. Check continuity between power window main switch connector and ground.

KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Power window main switch connector	Terminal	Ground	Continuity	
D8	4			Not existed
	6			

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK DOOR KEY CYLINDER SWITCH GROUND CIRCUIT

Check continuity between front door lock assembly (driver side) connector and ground.

Front door lock assembly (driver side) connector	Terminal	Ground	Continuity
D15	4		

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4.CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch.

Refer to [SEC-113. "Component Inspection"](#).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-39. "Intermittent Incident"](#).

NO >> Replace front door lock assembly (driver side) (key cylinder switch). Refer to [DLK-207. "FRONT DOOR LOCK : Removal and Installation"](#). After that, Refer to [PWC-41. "Special Repair Requirement"](#).

Component Inspection

INFOID:000000000961467

COMPONENT INSPECTION

1.CHECK DOOR KEY CYLINDER SWITCH

Check front door lock assembly (driver side) (key cylinder switch).

Terminal		Key position	Continuity
Front door lock assembly (driver side) (key cylinder switch) connector			
5	4	Unlock	Existed
		Neutral / Lock	Not existed
6		Lock	Existed
		Neutral / Unlock	Not existed

Is the inspection result normal?

YES >> Key cylinder switch is OK.

NO >> Replace front door lock assembly (driver side) (key cylinder switch). Refer to [DLK-207. "FRONT DOOR LOCK : Removal and Installation"](#). After that, Refer to [PWC-41. "Special Repair Requirement"](#).

HOOD SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

HOOD SWITCH

Description

INFOID:000000000961468

Hood switch is built into hood lock (RH) and connected to IPDM E/R which detects the open/close condition of hood.

Component Function Check

INFOID:000000000961469

1.CHECK FUNCTION

1. Select "HOOD SW" in "Data Monitor" mode with CONSULT-III.
2. Check the hood switch signal under the following condition.

Test item	Condition		Status
HOOD SW	Hood	Open	ON
		Close	OFF

Is the indication normal?

YES >> INSPECTION END.

NO >> Go to [SEC-114, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000000961470

1.CHECK HOOD SWITCH SIGNAL

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

IPDM E/R		Ground	Condition		Voltage (V) (Approx.)
Connector	Terminal				
E9	60	Ground	Hood	Open	0
				Close	Battery voltage

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

2.CHECK HOOD SWITCH CIRCUIT

1. Disconnect IPDM E/R and hood switch 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	
E9	11	E44	2	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E9	11	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK IPDM E/R OUTPUT

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

HOOD SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

IPDM E/R		Ground	Voltage (V) (Approx.)
Connector	Terminal		
E9	60	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace IPDM E/R. Refer to [PCS-33, "Removal and Installation"](#).

4.CHECK HOOD SWITCH

Refer to [SEC-115, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace hood switch. Refer to [DLK-193, "HOOD LOCK CONTROL : Removal and Installation"](#).

5.CHECK INTERMITTENT INCIDENT

Refer to [GI-39, "Intermittent Incident"](#).

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-33, "Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

Component Inspection

INFOID:000000000961471

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	Hood switch	Push	Not existed
			Release	Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace hood switch.

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SEC

HORN

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

HORN

Description

INFOID:000000000961472

Horn (high/low) is located inside of front bumper and operates when theft warning system is in alarm phase.

Component Function Check

INFOID:000000000961473

1.CHECK FUNCTION

1. Select "HORN" in "ACTIVE TEST" mode with CONSULT-III.
2. Check the horn (high/low) operation.

Test item		Description	
HORN	ON	Horn relay 1 and 2	ON (for 20 ms)

Is the operation normal?

- YES >> INSPECTION END.
NO >> Go to [SEC-116, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000000961474

1.CHECK HORN FUNCTION

Check horn function with horn switch

Do the horns sound?

- YES >> GO TO 2.
NO >> Go to [HRN-3, "Wiring Diagram - HORN -"](#).

2.CHECK HORN RELAY POWER SUPPLY

1. Turn ignition switch ON.
2. Perform "ACTIVE TEST" ("HORN") with CONSULT-III.
3. Check voltage between horn relay 1 and 2 harness connector and ground.

Horn relay1/2		Ground	Test item	Voltage (V) (Applox.)	
Connector	Terminal				
E11	1	Ground	HORN	ON	0 → Battery voltage →0
			Other than above	0	
E18	3		HORN	ON	0 → Battery voltage →0
			Other than above	0	

Is the inspection result normal?

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

3.CHECK HORN RELAY CIRCUIT

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

IPDM E/R		Horn relay 1 and 2		Continuity
Connector	Terminal	Connector	Terminal	
E46	44	E11	1	Existed
	45	E10	3	

4. Check continuity between driver seat control unit harness connector and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		

HORN

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

E46	44	Ground	Not existed
	45		

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to [GI-39. "Intermittent Incident"](#).

Is the inspection result normal?

YES >> Replace IPDM E/R.Refer to [PCS-33. "Removal and Installation"](#).

NO >> Repair or replace the malfunctioning parts.

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SEC

HEADLAMP

Description

INFOID:000000000961475

Headlamp lighting when theft warning system is alarm phase.

Component Function Check

INFOID:000000000961476

1.CHECK HEADLAMP OPERATION

Check if headlamp operate by lighting switch.

Does headlamp come on when turning switch "ON"?

YES >> Headlamp circuit is OK.

NO >> Check headlamp system. Refer to [EXL-69, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000000961477

1.CHECK HEADLAMP OPERATION

Refer to [EXL-69, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace.

2.CHECK INTER MITTENT INCIDENT

Refer to [GI-39, "Intermittent Incident"](#).

Is the inspection result normal?

>> INSPECTION END.

WARNING LAMP

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

WARNING LAMP

Description

INFOID:000000000961478

- Warning lamp is built in combination meter.
- Intelligent Key system malfunction is reported to the driver by the warning lamp illumination.

Component Function Check

INFOID:000000000961479

1. CHECK FUNCTION

1. Perform "INDICATOR" in the "Active Test" mode with CONSULT-III.
2. Check warning lamp operation.

Test item		Description	
INDICATOR	ON	Warning lamp	ON
	OFF		OFF

Is the inspection result normal?

- YES >> INSPECTION END.
NO >> Go to [SEC-119, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000000961480

1. CHECK DTC WITH "UNIFIED METER AND A/C AMP."

Perform self diagnosis for unified meter and A/C amp. Refer to [MWI-37, "CONSULT-III Function \(METER/M&A\)"](#).

Is the inspection result is normal?

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

2. CHECK INTERMITTENT INCIDENT

Refer to [GI-39, "Intermittent Incident"](#).

>> INSPECTION END.

SEC

VEHICLE SECURITY INDICATOR

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

VEHICLE SECURITY INDICATOR

Description

INFOID:000000000961481

- Vehicle security indicator is built in combination meter.
- IVIS (Infinity Vehicle Immobilizer System-NATS) and vehicle security system conditions are indicated by blink or illumination of vehicle security indicator.

Component Function Check

INFOID:000000000961482

1. CHECK FUNCTION

1. Perform "THEFT IND" in the "ACTIVE TEST" mode with CONSULT-III.
2. Check vehicle security indicator operation.

Test item		Description	
THEFT IND	ON	Vehicle security indicator	ON
	OFF		OFF

Is the inspection result normal?

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

Diagnosis Procedure

INFOID:000000000961483

1. CHECK DTC WITH "UNIFIED METER AND A/C AMP."

Perform "Self Diagnostic Result" for unified meter and A/C amp. Refer to [MWI-37, "CONSULT-III Function \(METER/M&A\)"](#).

Is the inspection result is normal?

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

2. CHECK INTERMITTENT INCIDENT

Refer to [GI-39, "Intermittent Incident"](#).

>> INSPECTION END.

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000000961484

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
FR WIPER HI	Other than front wiper switch HI	OFF
	Front wiper switch HI	ON
FR WIPER LOW	Other than front wiper switch LO	OFF
	Front wiper switch LO	ON
FR WASHER SW	Front washer switch OFF	OFF
	Front washer switch ON	ON
FR WIPER INT	Other than front wiper switch INT	OFF
	Front wiper switch INT	ON
FR WIPER STOP	Front wiper is not in STOP position	OFF
	Front wiper is in STOP position	ON
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position
TURN SIGNAL R	Other than turn signal switch RH	OFF
	Turn signal switch RH	ON
TURN SIGNAL L	Other than turn signal switch LH	OFF
	Turn signal switch LH	ON
TAIL LAMP SW	Other than lighting switch 1ST and 2ND	OFF
	Lighting switch 1ST or 2ND	ON
HI BEAM SW	Other than lighting switch HI	OFF
	Lighting switch HI	ON
HEAD LAMP SW 1	Other than lighting switch 2ND	OFF
	Lighting switch 2ND	ON
HEAD LAMP SW 2	Other than lighting switch 2ND	OFF
	Lighting switch 2ND	ON
PASSING SW	Other than lighting switch PASS	OFF
	Lighting switch PASS	ON
AUTO LIGHT SW	Other than lighting switch AUTO	OFF
	Lighting switch AUTO	ON
FR FOG SW	Front fog lamp switch OFF	OFF
	Front fog lamp switch ON	ON
RR FOG SW	NOTE: The item is indicated, but not monitored.	OFF
DOOR SW-DR	Driver door closed	OFF
	Driver door opened	ON
DOOR SW-AS	Passenger door closed	OFF
	Passenger door opened	ON
DOOR SW-RR	Rear RH door closed	OFF
	Rear RH door opened	ON

BCM (BODY CONTROL MODULE)

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[INTELLIGENT KEY SYSTEM]

Monitor Item	Condition	Value/Status
DOOR SW-RL	Rear LH door closed	OFF
	Rear LH door opened	ON
DOOR SW-BK	NOTE: The item is indicated, but not monitored.	OFF
CDL LOCK SW	Other than power door lock switch LOCK	OFF
	Power door lock switch LOCK	ON
CDL UNLOCK SW	Other than power door lock switch UNLOCK	OFF
	Power door lock switch UNLOCK	ON
KEY CYL LK-SW	Other than driver door key cylinder LOCK position	OFF
	Driver door key cylinder LOCK position	ON
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK position	OFF
	Driver door key cylinder UNLOCK position	ON
KEY CYL SW-TR	NOTE: The item is indicated, but not monitored.	OFF
HAZARD SW	Hazard switch is not pressed	OFF
	Hazard switch is pressed	ON
REAR DEF SW	NOTE: The item is indicated, but not monitored.	OFF
H/L WASH SW	NOTE: The item is indicated, but not monitored.	OFF
TR CANCEL SW	Trunk lid opener cancel switch OFF	OFF
	Trunk lid opener cancel switch ON	ON
TR/BD OPEN SW	Trunk lid opener switch OFF	OFF
	While the trunk lid opener switch is turned ON	ON
TRNK/HAT MNTR	Trunk lid closed	OFF
	Trunk lid opened	ON
RKE-LOCK	LOCK button of Intelligent Key is not pressed	OFF
	LOCK button of Intelligent Key is pressed	ON
RKE-UNLOCK	UNLOCK button of Intelligent Key is not pressed	OFF
	UNLOCK button of Intelligent Key is pressed	ON
RKE-TR/BD	TRUNK OPEN button of Intelligent Key is not pressed	OFF
	TRUNK OPEN button of Intelligent Key is pressed	ON
RKE-PANIC	PANIC button of Intelligent Key is not pressed	OFF
	PANIC button of Intelligent Key is pressed	ON
RKE-P/W OPEN	UNLOCK button of Intelligent Key is not pressed	OFF
	UNLOCK button of Intelligent Key is pressed and held	ON
RKE-MODE CHG	LOCK/UNLOCK button of Intelligent Key is not pressed and held simultaneously	OFF
	LOCK/UNLOCK button of Intelligent Key is pressed and held simultaneously	ON
OPTICAL SENSOR	Outside of the vehicle bright	Close to 5 V
	Outside of the vehicle dark	Close to 0 V
REQ SW-DR	Driver door request switch is not pressed	OFF
	Driver door request switch is pressed	ON
REQ SW-AS	Passenger door request switch is not pressed	OFF
	Passenger door request switch is pressed	ON

BCM (BODY CONTROL MODULE)

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[INTELLIGENT KEY SYSTEM]

Monitor Item	Condition	Value/Status	
REQ SW-BD/TR	Trunk request switch is not pressed	OFF	A
	Trunk request switch is pressed	ON	
PUSH SW	Push-button ignition switch (push switch) is not pressed	OFF	B
	Push-button ignition switch (push switch) is pressed	ON	
IGN RLY2 -F/B	Ignition switch in OFF or ACC position	OFF	C
	Ignition switch in ON position	ON	
ACC RLY -F/B	Ignition switch in OFF position	OFF	D
	Ignition switch in ACC or ON position	ON	
CLUCH SW	The clutch pedal is not depressed	OFF	E
	The clutch pedal is depressed	ON	
BRAKE SW 1	The brake pedal is not depressed	ON	F
	The brake pedal is depressed	OFF	
DETE/CANCL SW	Selector lever in P position	OFF	G
	Selector lever in any position other than P	ON	
SFT PN/N SW	Selector lever in any position other than P and N	OFF	H
	Selector lever in P or N position	ON	
S/L -LOCK	Steering is locked	OFF	I
	Steering is unlocked	ON	
S/L -UNLOCK	Steering is unlocked	OFF	J
	Steering is locked	ON	
S/L RELAY-F/B	Ignition switch is OFF or ACC position	OFF	
	Ignition switch is ON position	ON	
UNLK SEN-DR	Driver door is unlocked	OFF	
	Driver door is locked	ON	
PUSH SW -IPDM	Push-button ignition switch (push-switch) is not pressed	OFF	
	Push-button ignition switch (push-switch) is pressed	ON	SEC
IGN RLY1 -F/B	Ignition switch is OFF or ACC position	OFF	
	Ignition switch is ON position	ON	
DETE SW -IPDM	Selector lever in P position	OFF	L
	Selector lever in any position other than P	ON	
SFT PN -IPDM	Selector lever in any position other than P and N	OFF	M
	Selector lever in P or N position	ON	
SFT P -MET	Selector lever in any position other than P	OFF	N
	Selector lever in P position	ON	
SFT N -MET	Selector lever in any position other than N	OFF	O
	Selector lever in N position	ON	
ENGINE STATE	Engine stopped	STOP	
	While the engine stalls	STALL	
	At engine cranking	CRANK	P
	Engine running	RUN	
S/L LOCK-IPDM	Steering is locked	OFF	
	Steering is unlocked	ON	
S/L UNLK-IPDM	Steering is unlocked	OFF	
	Steering is locked	ON	

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

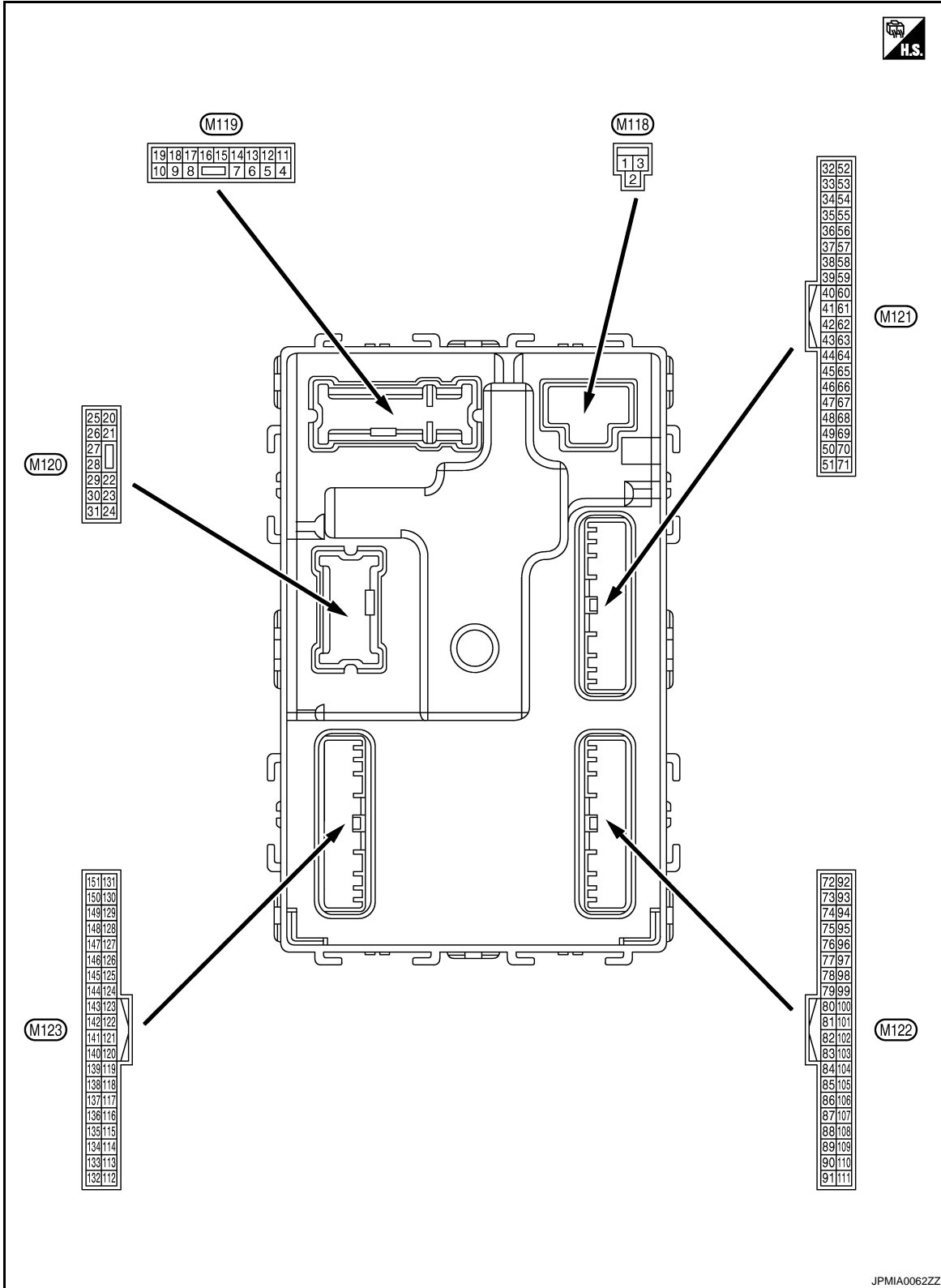
Monitor Item	Condition	Value/Status
S/L RELAY-REQ	Ignition switch in OFF or ACC position	OFF
	Ignition switch in ON position	ON
VEH SPEED 1	While driving	Equivalent to speedometer reading
VEH SPEED 2	While driving	Equivalent to speedometer reading
DOOR STAT-DR	Driver door is locked	LOCK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door is unlocked	UNLK
DOOR STAT-AS	Passenger door is locked	LOCK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door is unlocked	UNLK
ID OK FLAG	Ignition switch in ACC or ON position	RESET
	Ignition switch in OFF position	SET
PRMT ENG STRT	The engine start is prohibited	RESET
	The engine start is permitted	SET
PRMT RKE STRT	NOTE: The item is indicated, but not monitored.	RESET
KEY SW -SLOT	Intelligent Key is not inserted into key slot	OFF
	Intelligent Key is inserted into key slot	ON
RKE OPE COUN1	During the operation of Intelligent Key	Operation frequency of Intelligent Key
RKE OPE COUN2	NOTE: The item is indicated, but not monitored.	—
AIR PRESS FL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear LH tire
ID REGST FL1	ID of front LH tire transmitter is registered	DONE
	ID of front LH tire transmitter is not registered	YET
ID REGST FR1	ID of front RH tire transmitter is registered	DONE
	ID of front RH tire transmitter is not registered	YET
ID REGST RR1	ID of rear RH tire transmitter is registered	DONE
	ID of rear RH tire transmitter is not registered	YET
ID REGST RL1	ID of rear LH tire transmitter is registered	DONE
	ID of rear LH tire transmitter is not registered	YET
WARNING LAMP	Tire pressure indicator OFF	OFF
	Tire pressure indicator ON	ON
BUZZER	Tire pressure warning alarm is not sounding	OFF
	Tire pressure warning alarm is sounding	ON

BCM (BODY CONTROL MODULE)

[INTELLIGENT KEY SYSTEM]

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TERMINAL LAYOUT



PHYSICAL VALUES

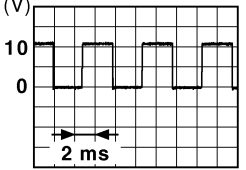
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SEC

BCM (BODY CONTROL MODULE)

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[INTELLIGENT KEY SYSTEM]

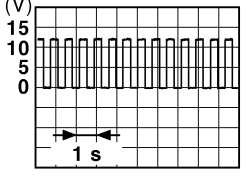
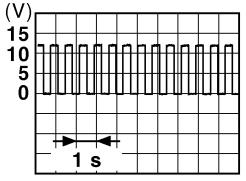
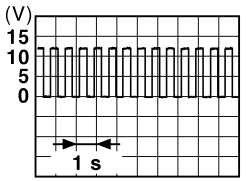
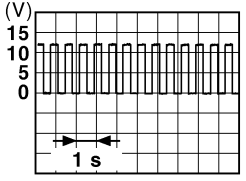
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
1 (W)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (Y)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF		Battery voltage
3 (O)	Ground	P/W power supply (RAP)	Output	Ignition switch ON		Battery voltage
4 (LG)	Ground	Interior room lamp power supply	Output	After passing the interior room lamp battery saver operation time		0 V
				Any other time after passing the interior room lamp battery saver operation time		Battery voltage
5 (V)	Ground	Passenger door UN- LOCK	Output	Passenger door	UNLOCK (Actuator is activated)	Battery voltage
					Other than UNLOCK (Actuator is not activated)	0 V
7 (Y)	Ground	Step lamp	Output	Step lamp	ON	0 V
					OFF	Battery voltage
8 (V)	Ground	All doors, fuel lid LOCK	Output	All doors, fuel lid	LOCK (Actuator is activated)	Battery voltage
					Other than LOCK (Actuator is not activated)	0 V
9 (G)	Ground	Driver door, fuel lid UNLOCK	Output	Driver door, fuel lid	UNLOCK (Actuator is activated)	Battery voltage
					Other than UNLOCK (Actuator is not activated)	0 V
10 (BR)	Ground	Rear RH door and rear LH door UN- LOCK	Output	Rear RH door and rear LH door	UNLOCK (Actuator is activated)	Battery voltage
					Other than UNLOCK (Actuator is not activated)	0 V
11 (R)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
13 (B)	Ground	Ground	—	Ignition switch ON		0 V
14 (W)	Ground	Push-button ignition switch illumination ground	Output	Tail lamp	OFF	0 V
					ON	NOTE: When the illumination brightening/dimming level is in the neutral position 
15 (Y)	Ground	ACC indicator lamp	Output	Ignition switch	OFF	Battery voltage
					ACC or ON	0 V

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BCM (BODY CONTROL MODULE)

[INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
17 (W)	Ground	Turn signal (front RH)	Output			Ignition switch ON
				Turn signal switch RH	 <p style="text-align: center;">6.5 V</p>	
18 (O)	Ground	Turn signal (front LH)	Output	Ignition switch ON	Turn signal switch OFF	0 V
				Turn signal switch LH	 <p style="text-align: center;">6.5 V</p>	
19 (V)	Ground	Room lamp timer control	Output	Interior room lamp	OFF	Battery voltage
				ON	0 V	
20 (V)	Ground	Turn signal (rear RH)	Output	Ignition switch ON	Turn signal switch OFF	0 V
				Turn signal switch RH	 <p style="text-align: center;">6.5 V</p>	
23 (G)	Ground	Trunk lid opening.	Output	Trunk lid	Open (Trunk lid opener ac- tuator is activated)	Battery voltage
				Close (Trunk lid opener ac- tuator is not activated)	0 V	
25 (G)	Ground	Turn signal (rear LH)	Output	Ignition switch ON	Turn signal switch OFF	0 V
				Turn signal switch LH	 <p style="text-align: center;">6.5 V</p>	
30 (R)	Ground	Trunk room lamp	Output	Trunk room lamp	ON	0 V
				OFF	Battery voltage	

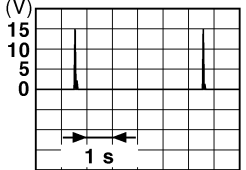
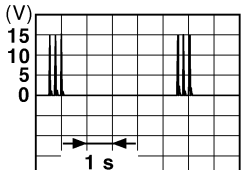
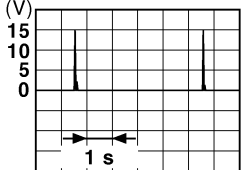
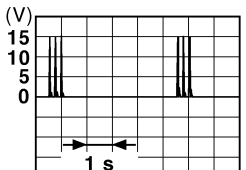
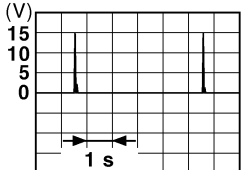
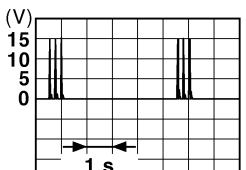
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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
34 (SB)	Ground	Trunk room antenna 1 (-)	Output	Ignition switch OFF	 <p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				When Intelligent Key is not in the passenger compart- ment	 <p style="text-align: right; font-size: small;">JMKIA0063GB</p>
35 (V)	Ground	Trunk room antenna 1 (+)	Output	Ignition switch OFF	 <p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				When Intelligent Key is not in the passenger compart- ment	 <p style="text-align: right; font-size: small;">JMKIA0063GB</p>
38 (B)	Ground	Rear bumper anten- na (-)	Output	When the trunk lid request switch is operated with ignition switch OFF	 <p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				When Intelligent Key is not in the antenna detection area	 <p style="text-align: right; font-size: small;">JMKIA0063GB</p>

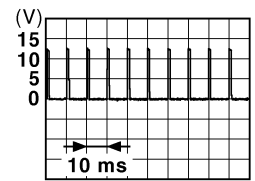
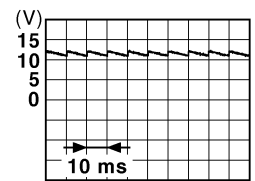
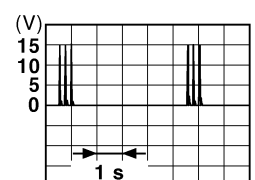
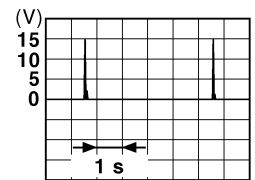
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
		Signal name	Input/ Output		
+	-				
39 (W)	Ground	Rear bumper antenna (+)	Output	When the trunk lid request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area
				When Intelligent Key is not in the antenna detection area	When Intelligent Key is not in the antenna detection area
47 (Y)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC Battery voltage
				ON	0 V
50 (R)	Ground	Trunk room lamp switch	Input	Trunk room lamp switch	OFF (Trunk is closed)
				ON (Trunk is open)	0 V
52 (SB)	Ground	Starter relay control	Output	Ignition switch OFF (M/T models)	When the clutch pedal is depressed Battery voltage
				Ignition switch ON (A/T models)	When the clutch pedal is not depressed 0 V
				Ignition switch ON (A/T models)	When selector lever is in P or N position and the brake is depressed Battery voltage
				Ignition switch ON (A/T models)	When selector lever is in P or N position and the brake is not depressed 0 V
61 (W)	Ground	Trunk request switch	Input	Trunk request switch	ON (Pressed) 0 V
				OFF (Not pressed)	OFF (Not pressed)
64 (V)	Ground	Request switch buzzer	Output	Request switch buzzer	Sounding 0 V
				Request switch buzzer	Not sounding Battery voltage

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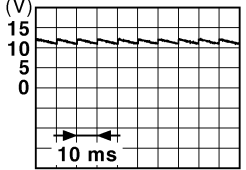
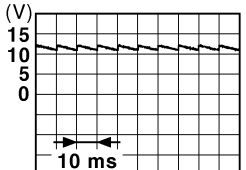
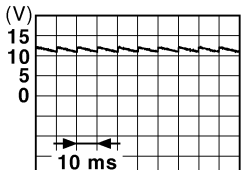
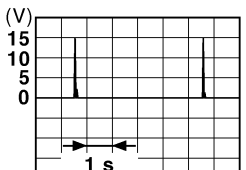
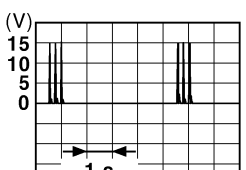


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BCM (BODY CONTROL MODULE)

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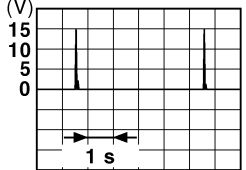
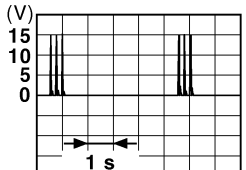
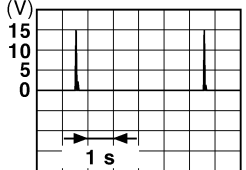
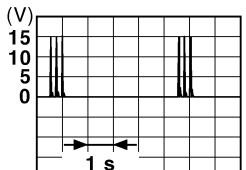
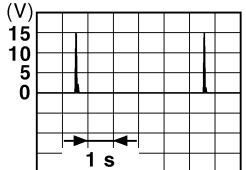
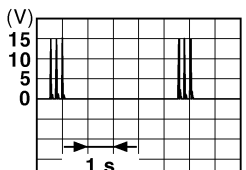
[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
67 (GR)	Ground	Trunk lid opener switch	Input	Trunk lid opener switch	Pressed	0 V
				Not pressed	 <p style="text-align: right; font-size: small;">JPMIA0011GB</p>	
68 (BR)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (When rear RH door closes)	 <p style="text-align: right; font-size: small;">JPMIA0011GB</p>
				ON (When rear RH door opens)	0 V	
69 (R)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (When rear LH door closes)	 <p style="text-align: right; font-size: small;">JPMIA0011GB</p>
				ON (When rear LH door opens)	0 V	
72 (R)	Ground	Room antenna 2 (-) (center console)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	 <p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				When Intelligent Key is not in the passenger compart- ment	 <p style="text-align: right; font-size: small;">JMKIA0063GB</p>	

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
		Signal name	Input/ Output		
+	-				
73 (G)	Ground	Room antenna 2 (+) (center console)	Output	Ignition switch OFF	 <p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				When Intelligent Key is not in the passenger compart- ment	 <p style="text-align: right; font-size: small;">JMKIA0063GB</p>
74 (SB)	Ground	Passenger door an- tenna (-)	Output	When the pas- senger door re- quest switch is operated with ig- nition switch OFF	 <p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				When Intelligent Key is not in the antenna detection area	 <p style="text-align: right; font-size: small;">JMKIA0063GB</p>
75 (BR)	Ground	Passenger door an- tenna (+)	Output	When the pas- senger door re- quest switch is operated with ig- nition switch OFF	 <p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				When Intelligent Key is not in the antenna detection area	 <p style="text-align: right; font-size: small;">JMKIA0063GB</p>

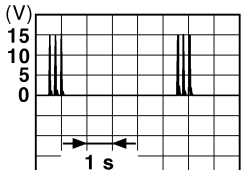
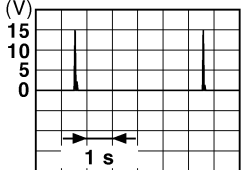
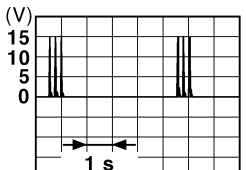
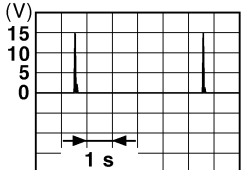
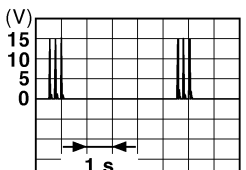
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BCM (BODY CONTROL MODULE)

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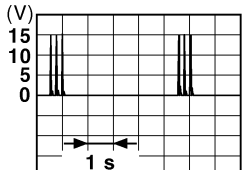
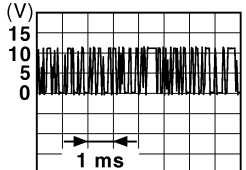
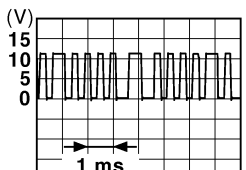
[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
76 (V)	Ground	Driver door antenna (-)	Output		
				When Intelligent Key is not in the antenna detection area	 <p style="text-align: right; font-size: small;">JMKIA0063GB</p>
77 (LG)	Ground	Driver door antenna (+)	Output	When the driver door request switch is operated with ignition switch OFF	 <p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				When Intelligent Key is not in the antenna detection area	 <p style="text-align: right; font-size: small;">JMKIA0063GB</p>
78 (Y)	Ground	Room antenna (-) (instrument panel)	Output	Ignition switch OFF	 <p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				When Intelligent Key is not in the passenger compartment	 <p style="text-align: right; font-size: small;">JMKIA0063GB</p>

BCM (BODY CONTROL MODULE)

[INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
				When Intelligent Key is not in the passenger compart- ment	 <p style="text-align: right; font-size: small;">JMKIA0063GB</p>
79 (BR)	Ground	Room antenna (+) (instrument panel)	Output	Ignition switch OFF	
80 (GR)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelli- gent Key into the key slot. Just after pressing ignition switch. Pointer of tester should move.
81 (W)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelli- gent Key into the key slot. Just after pressing ignition switch. Pointer of tester should move.
82 (R)	Ground	Ignition relay (relay box) control	Output	Ignition switch	OFF or ACC 0 V ON Battery voltage
				During waiting	 <p style="text-align: right; font-size: small;">JMKIA0064GB</p>
83 (Y)	Ground	Remote keyless entry receiver signal	Input/ Output	When operating either button on Intelligent Key	 <p style="text-align: right; font-size: small;">JMKIA0065GB</p>

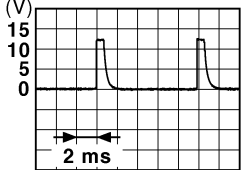

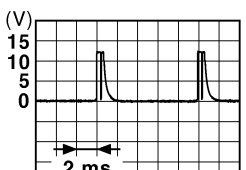
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BCM (BODY CONTROL MODULE)

[INTELLIGENT KEY SYSTEM]

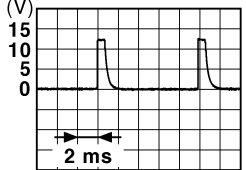
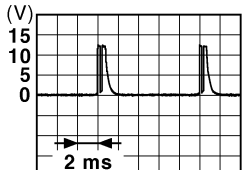

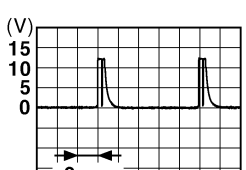
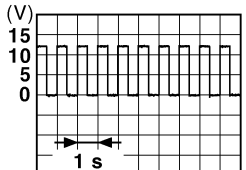
< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
87 (BR)	Ground	Combination switch INPUT 5	Input	All switch OFF (Wiper intermittent dial 4)	 <small>JPMIA0041GB</small> 1.4 V
				Front fog lamp switch ON (Wiper intermittent dial 4)	 <small>JPMIA0037GB</small> 1.3 V
				Any of the conditions below with all switch OFF <ul style="list-style-type: none"> • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7 	 <small>JPMIA0040GB</small> 1.3 V

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
		Signal name	Input/ Output			
+	-					
88 (V)	Ground	Combination switch INPUT 3	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 <small>JPMIA0041GB</small> 1.4 V
					Lighting switch HI (Wiper intermittent dial 4)	 <small>JPMIA0036GB</small> 1.3 V
					Lighting switch 2ND (Wiper intermittent dial 4)	 <small>JPMIA0037GB</small> 1.3 V
					Any of the conditions below with all switches OFF <ul style="list-style-type: none"> • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3 	 <small>JPMIA0040GB</small> 1.3 V
89 (BR)	Ground	Push-button ignition switch (push switch)	Input	Push-button igni- tion switch (push switch)	Pressed 0 V Not pressed Battery voltage	
90 (P)	Ground	CAN - L	Input/ Output	—	—	
91 (L)	Ground	CAN - H	Input/ Output	—	—	
92 (LG)	Ground	Key slot illumination	Output	Key slot illumina- tion	OFF	0 V
					Blinking	 <small>JPMIA0015GB</small> 6.5 V
					ON	Battery voltage

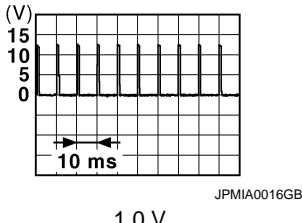
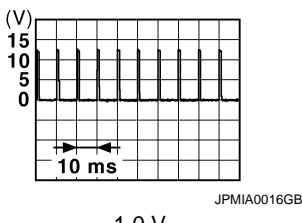
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BCM (BODY CONTROL MODULE)

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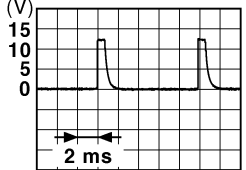
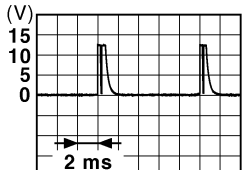

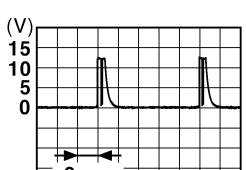

[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
		Signal name	Input/ Output			
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93 (V)	Ground	ON indicator lamp	Output	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage
95 (O)	Ground	ACC relay control	Output	Ignition switch	OFF	0 V
					ACC or ON	Battery voltage
96 (GR)	Ground	A/T device (detention switch) power supply	Output	—		Battery voltage
97 (L)	Ground	Steering lock condition No. 1	Input	Steering lock	LOCK status	0 V
					UNLOCK status	Battery voltage
98 (P)	Ground	Steering lock condition No. 2	Input	Steering lock	LOCK status	Battery voltage
					UNLOCK status	0 V
99 (R)	Ground	Selector lever P position switch	Input	Selector lever	P position	0 V
					Any position other than P	Battery voltage
100 (G)	Ground	Passenger door request switch	Input	Passenger door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	
101 (SB)	Ground	Driver door request switch	Input	Driver door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	
102 (O)	Ground	Blower fan motor relay control	Output	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage
103 (LG)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OFF		Battery voltage
106 (W)	Ground	Steering wheel lock unit power supply	Output	Ignition switch	OFF or ACC	Battery voltage
					ON	0 V

BCM (BODY CONTROL MODULE)

[INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
107 (LG)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF <div style="text-align: right;">  <p>1.4 V</p> </div>
					Turn signal switch LH <div style="text-align: right;">  <p>1.3 V</p> </div>
					Turn signal switch RH <div style="text-align: right;">  <p>1.3 V</p> </div>
					Front wiper switch LO <div style="text-align: right;">  <p>1.3 V</p> </div>
					Front washer switch ON <div style="text-align: right;">  <p>1.3 V</p> </div>

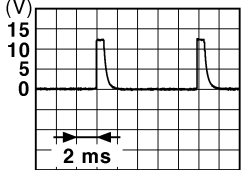
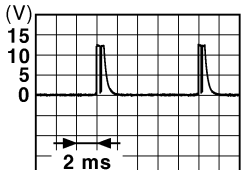
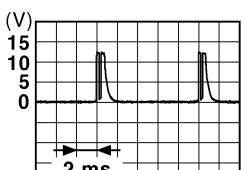
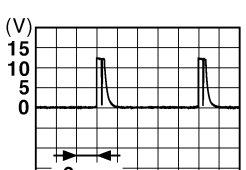
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BCM (BODY CONTROL MODULE)

[INTELLIGENT KEY SYSTEM]

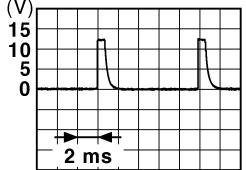
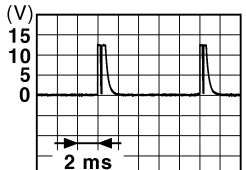

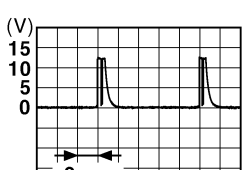

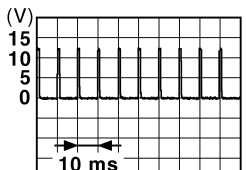
< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
108 (R)	Ground	Combination switch INPUT 4	Input	All switch OFF (Wiper intermittent dial 4)	 <small>JPMIA0041GB</small> 1.4 V
				Lighting switch AUTO (Wiper intermittent dial 4)	 <small>JPMIA0038GB</small> 1.3 V
				Lighting switch 1ST (Wiper intermittent dial 4)	 <small>JPMIA0036GB</small> 1.3 V
				Any of the conditions below with all switches OFF <ul style="list-style-type: none"> • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6 	 <small>JPMIA0039GB</small> 1.3 V

BCM (BODY CONTROL MODULE)

[INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
		Signal name	Input/ Output			
+	-					
109 (Y)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	 1.4 V
					Lighting switch PASS	 1.3 V
					Lighting switch 2ND	 1.3 V
					Front wiper switch INT	 1.3 V
					Front wiper switch HI	 1.3 V
					Pressed	0 V
110 (G)	Ground	Hazard switch	Input	Hazard switch	Not pressed	 1.1 V

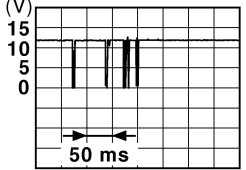
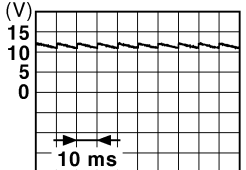
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BCM (BODY CONTROL MODULE)

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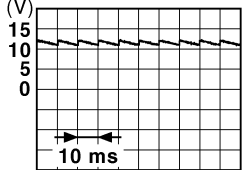
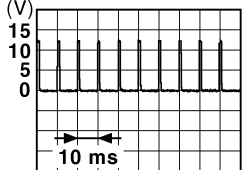

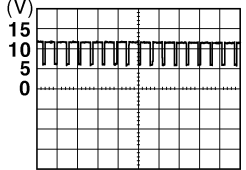
[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
111 (Y)	Ground	Steering lock unit communication	Input/ Output	Steering lock	LOCK status	Battery voltage
					LOCK or UNLOCK	 <p style="text-align: right; font-size: small;">JMkia0066GB</p>
					For 15 seconds after UN- LOCK	Battery voltage
					15 seconds or later after UNLOCK	0 V
113 (P)	Ground	Optical sensor signal	Input	Ignition switch ON	When bright outside of the vehicle	Close to 5 V
					When dark outside of the vehicle	Close to 0 V
114 (R)	Ground	Clutch interlock switch	Input	Clutch interlock switch	OFF (Clutch pedal is not depressed)	0 V
					ON (Clutch pedal is de- pressed)	Battery voltage
116 (SB)	Ground	Stop lamp switch 1	Input	—	—	Battery voltage
118 (P)	Ground	Stop lamp switch 2	Input	Stop lamp switch	OFF (Brake pedal is not depressed)	0 V
					ON (Brake pedal is de- pressed)	Battery voltage
				ICC brake hold relay (With ICC)	OFF	0 V
					ON	Battery voltage
119 (SB)	Ground	Front door lock as- sembly driver side (unlock sensor)	Input	Driver door	LOCK status	 <p style="text-align: right; font-size: small;">JPMIA0011GB</p>
					UNLOCK status	0 V
					11.8 V	
121 (R)	Ground	Key slot switch	Input	When Intelligent Key is inserted into key slot	Battery voltage	
				When Intelligent Key is not inserted into key slot	0 V	
122 (V)	Ground	ACC feedback signal	Input	Ignition switch	OFF	0 V
					ACC or ON	Battery voltage
123 (W)	Ground	IGN feedback signal	Input	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
		Signal name	Input/ Output			
+	-					
124 (LG)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closes)	 <p style="text-align: right; font-size: small;">JPMIA0011GB</p> <p style="text-align: center;">11.8 V</p>
					ON (When passenger door opens)	0 V
129 (O)	Ground	Trunk lid opener cancel switch	Input	Trunk lid opener cancel switch	CANCEL	 <p style="text-align: right; font-size: small;">JPMIA0012GB</p> <p style="text-align: center;">1.1 V</p>
					ON	0 V
132 (V)	Ground	Power window switch communication	Input/ Output	Ignition switch ON	 <p style="text-align: right; font-size: small;">JPMIA0013GB</p> <p style="text-align: center;">10.2 V</p>	
				Ignition switch OFF or ACC	0 V	
133 (W)	Ground	Push-button ignition switch illumination	Output	Push-button ignition switch illumination	ON (When tail lamps OFF)	5.5 V
					ON (When tail lamps ON)	<p>NOTE: The pulse width of this wave is varied by the illumination brightening/dimming level.</p>  <p style="text-align: right; font-size: small;">JPMIA0159GB</p>
					OFF	0 V
134 (GR)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	ON	0 V
					OFF	Battery voltage
137 (O)	Ground	Receiver and sensor ground	Input	Ignition switch ON	0 V	
138 (V)	Ground	Receiver and sensor power supply output	Output	Ignition switch	OFF	0 V
					ACC or ON	5.0 V

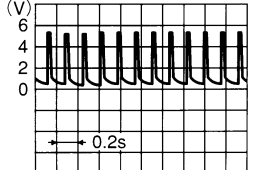

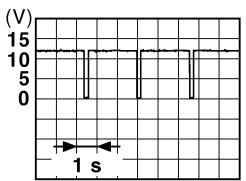
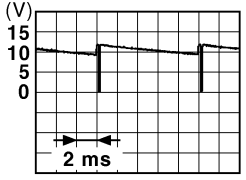
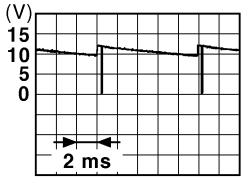
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BCM (BODY CONTROL MODULE)

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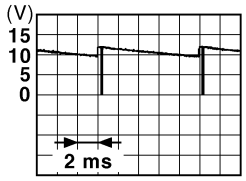
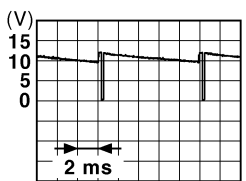
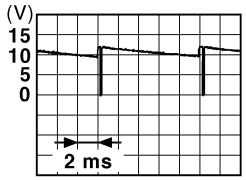
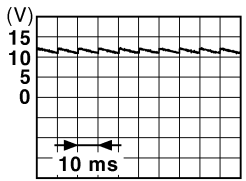
[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
		Signal name	Input/ Output			
+	-					
139 (L)	Ground	Tire pressure receiver signal	Input/ Output	Ignition switch ON	Standby state	 <small>OCC3881D</small>
					When receiving the signal from the transmitter	 <small>OCC3880D</small>
140 (GR)	Ground	Selector lever P/N position signal	Input	Selector lever	P or N position	12.0 V
					Except P and N positions	0 V
141 (G)	Ground	Security indicator signal	Output	Security indicator	ON	0 V
					Blinking	 <small>JPMIA0014GB</small> 11.3 V
142 (O)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF	0 V
					Lighting switch 1ST	 <small>JPMIA0031GB</small> 10.7 V
					Lighting switch HI	
					Lighting switch 2ND	
					Turn signal switch RH	
143 (P)	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	0 V
					Front wiper switch HI (Wiper intermittent dial 4)	 <small>JPMIA0032GB</small> 10.7 V
					Any of the conditions below with all switch OFF <ul style="list-style-type: none"> • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3 • Wiper intermittent dial 6 • Wiper intermittent dial 7 	

BCM (BODY CONTROL MODULE)

[INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
		Signal name	Input/ Output			
+	-					
144 (G)	Ground	Combination switch OUTPUT 2	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	0 V
					Front washer switch ON (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0033GB</p>
Any of the conditions below with all switches OFF					10.7 V	
<ul style="list-style-type: none"> • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6 						
145 (L)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper intermit- tent dial 4)	All switches OFF	0 V
					Front wiper switch INT	 <p style="text-align: right; font-size: small;">JPMIA0034GB</p>
Lighting switch AUTO					10.7 V	
146 (SB)	Ground	Combination switch OUTPUT 4	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0 V
					Front fog lamp switch ON	 <p style="text-align: right; font-size: small;">JPMIA0035GB</p>
Lighting switch 2ND					10.7 V	
Lighting switch PASS						
Turn signal switch LH						
149 (W)	Ground	Tire pressure warn- ing check switch	Input	—	5 V	
150 (GR)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closes)	 <p style="text-align: right; font-size: small;">JPMIA0011GB</p>
					ON (When driver door opens)	0 V
151 (G)	Ground	Rear window defog- ger relay	Output	Rear window de- fogger	Active	0 V
					Not activated	Battery voltage

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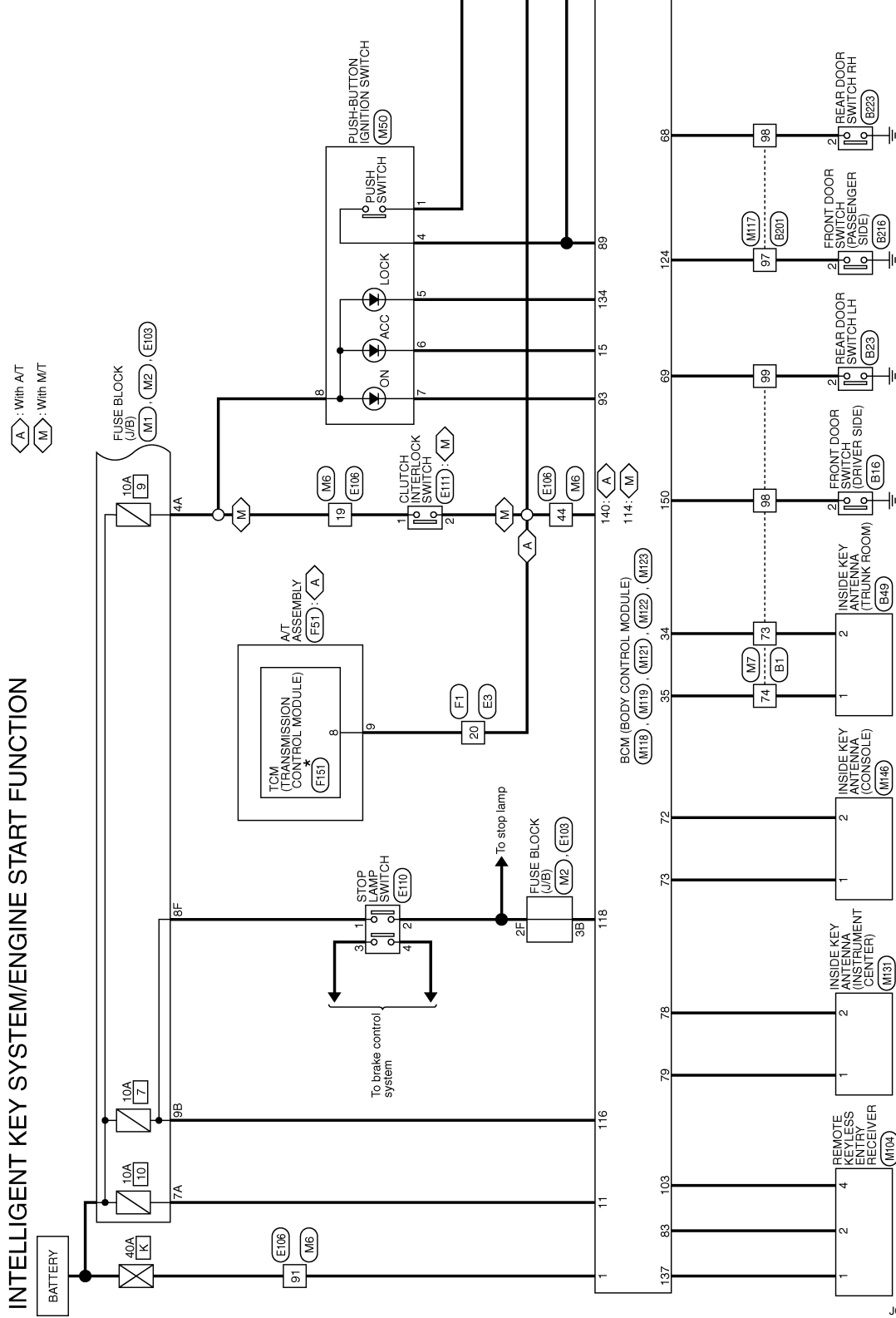
BCM (BODY CONTROL MODULE)

[INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

Wiring Diagram - INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION -

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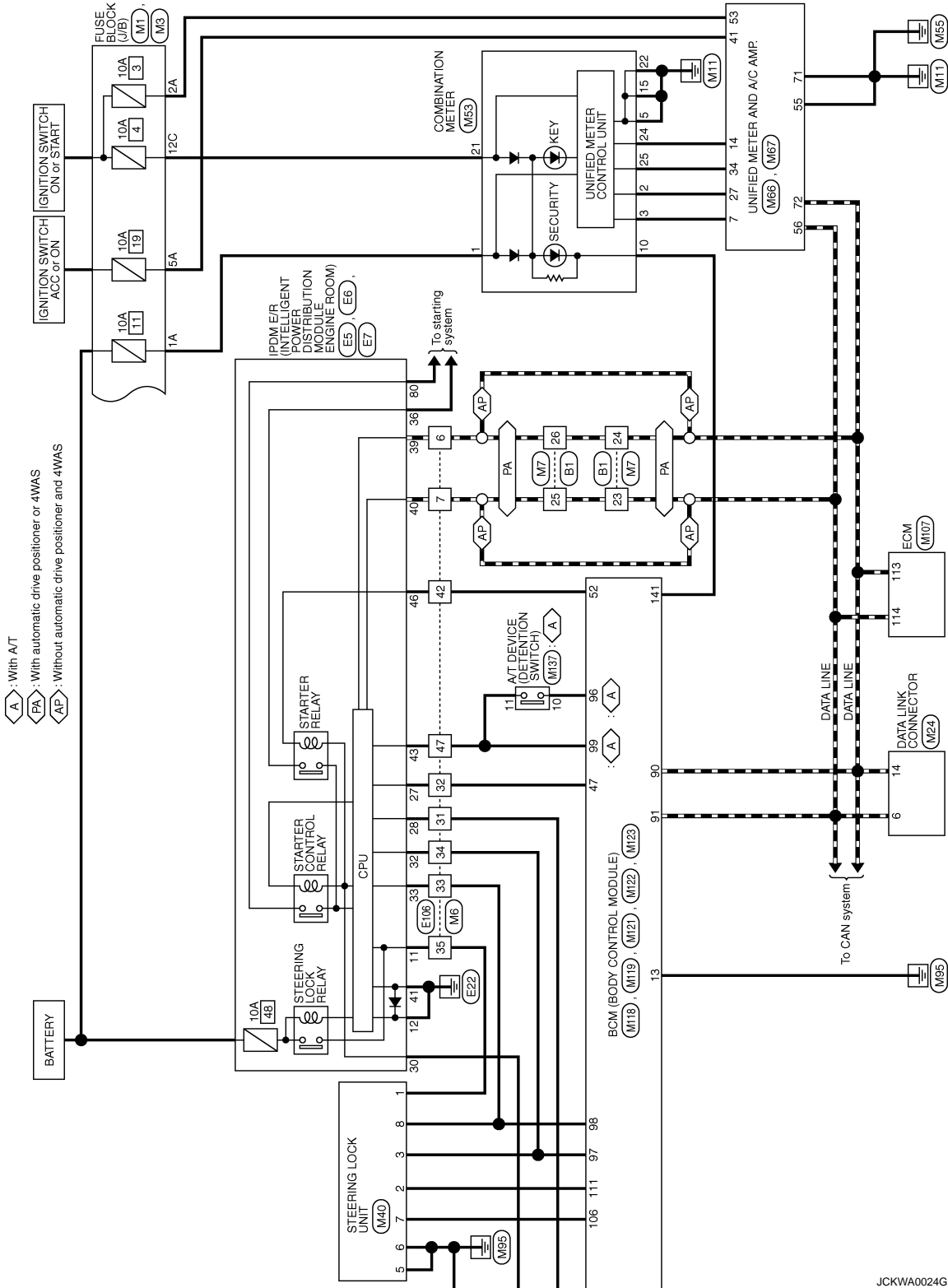
*: This connector is not shown in "Harness Layout".

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BCM (BODY CONTROL MODULE)

[INTELLIGENT KEY SYSTEM]

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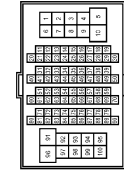
BCM (BODY CONTROL MODULE)

[INTELLIGENT KEY SYSTEM]

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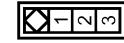
INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	THB0FW-GS16-TM4



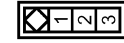
Terminal No.	Color of Wire	Signal Name [Specification]
23	L	-
24	P	-
25	L	-
26	P	-
72	G	-
74	R	-
98	V	-
99	R	-

Connector No.	B16
Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)
Connector Type	A03FW



Terminal No.	Color of Wire	Signal Name [Specification]
2	V	-

Connector No.	B23
Connector Name	REAR DOOR SWITCH LH
Connector Type	A03FW



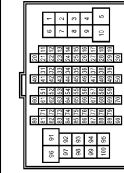
Terminal No.	Color of Wire	Signal Name [Specification]
2	R	-

Connector No.	B49
Connector Name	INSIDE KEY ANTENNA (TRUNK ROOM)
Connector Type	FK02F5Y



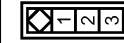
Terminal No.	Color of Wire	Signal Name [Specification]
1	R	-
2	G	-

Connector No.	B201
Connector Name	WIRE TO WIRE
Connector Type	THB0FW-GS16-TM4



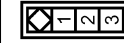
Terminal No.	Color of Wire	Signal Name [Specification]
97	GR	-
98	BR	-

Connector No.	B216
Connector Name	FRONT DOOR SWITCH (PASSENGER SIDE)
Connector Type	A03FW



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

Connector No.	B223
Connector Name	REAR DOOR SWITCH RH
Connector Type	A03FW



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

Connector No.	E3
Connector Name	WIRE TO WIRE
Connector Type	SA438MB-RS (P-SLZZ)



Terminal No.	Color of Wire	Signal Name [Specification]
20	GR	-

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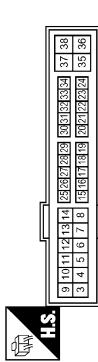
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

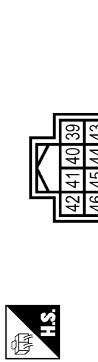
INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

Connector No.	E5
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-IM-IV



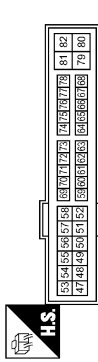
Terminal No.	Color of Wire	Signal Name [Specification]
11	BR	-
12	B/W	-
27	O	-
28	L	-
30	GR	-
32	L	-
33	P	-
36	G	-

Connector No.	E6
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH108FW-NH



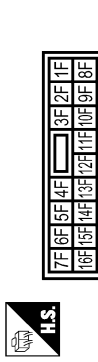
Terminal No.	Color of Wire	Signal Name [Specification]
39	P	-
40	L	-
41	B/W	-
43	SB	-
46	BR	-

Connector No.	E7
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4



Terminal No.	Color of Wire	Signal Name [Specification]
80	W	-

Connector No.	E103
Connector Name	FUSE BLOCK (J/B)
Connector Type	NI518FW-CS



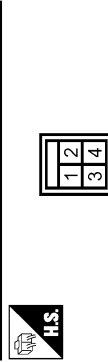
Terminal No.	Color of Wire	Signal Name [Specification]
2F	W	-
8F	L	-

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
6	P	-
7	L	-
18	G	-
31	L	-
32	O	-
33	P	-
34	L	-
35	BR	-
42	BR	-
44	GR	-
47	SB	-
91	W	-

Connector No.	E110
Connector Name	STOP LAMP SWITCH
Connector Type	MM4FW-LC



Terminal No.	Color of Wire	Signal Name [Specification]
1	L	-
2	W	-
3	L	-
4	SB	-

Connector No.	E111
Connector Name	CLUTCH INTERLOCK SWITCH
Connector Type	S02FL



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

Connector No.	F1
Connector Name	WIRE TO WIRE
Connector Type	SA438FB-RS10-SJZ2



Terminal No.	Color of Wire	Signal Name [Specification]
20	GR	-

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BCM (BODY CONTROL MODULE)

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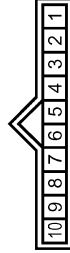
[INTELLIGENT KEY SYSTEM]

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

Connector No.	F51
Connector Name	A/T ASSEMBLY
Connector Type	BK10FG-D6Y



Connector No.	F151
Connector Name	TOM (TRANSMISSION CONTROL MODULE)
Connector Type	SP10EBGY



Terminal No.	9	Color of Wire	GR	Signal Name [Specification]	-
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Terminal No.	8	Color of Wire	G	Signal Name [Specification]	START RLY
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Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS50FW-H2



Terminal No.	1A	Color of Wire	GR	Signal Name [Specification]	-
2A	G	-	-	-	
4A	P	-	-	-	
5A	V	-	-	-	
7A	R	-	-	-	

Connector No.	M2
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS10FW-GS



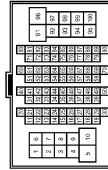
Terminal No.	3B	Color of Wire	P	Signal Name [Specification]	-
9B	SB	-	-	-	

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FW-GS



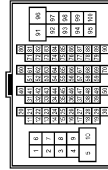
Terminal No.	12C	Color of Wire	R	Signal Name [Specification]	-
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Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS(B-TM4



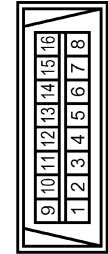
Terminal No.	6	Color of Wire	P	Signal Name [Specification]	-
7	L	-	-	-	
19	G	-	-	-	
31	L	-	-	-	
32	Y	-	-	-	
33	P	-	-	-	
34	L	-	-	-	
35	BR	-	-	-	
42	SB	-	-	-	
44	GR	-	-	- [With A.7]	
47	R	-	-	-	
91	W	-	-	-	

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS(B-TM4



Terminal No.	23	Color of Wire	L	Signal Name [Specification]	-
24	P	-	-	-	
25	L	-	-	-	
26	P	-	-	-	
28	SB	-	-	-	
73	SB	-	-	-	
74	V	-	-	-	
98	GR	-	-	-	
99	R	-	-	-	

Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



Terminal No.	6	Color of Wire	L	Signal Name [Specification]	-
14	P	-	-	-	

BCM (BODY CONTROL MODULE)

[INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

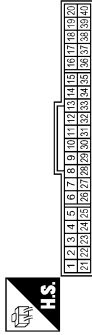
Connector No.	M40
Connector Name	STEERING LOCK UNIT
Connector Type	TH82FW-NH



Connector No.	M50
Connector Name	PUSH-BUTTON IGNITION SWITCH
Connector Type	TK08FBR



Connector No.	M53
Connector Name	COMBINATION METER
Connector Type	SAB40FW



Connector No.	M66
Connector Name	UNIFIED METER AND A/C AMP.
Connector Type	TH40FW-NH



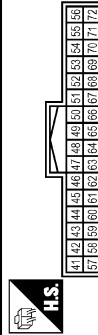
Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	S/L 12V (MECHANICAL)
2	Y	S/L (K LINE)
3	L	S/L COND.L1ON1
5	B	GND
6	B	GND
7	W	S/L 12V(GPU)
8	P	S/L COND.L1ON2

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	-
4	BR	-
5	GR	-
6	Y	-
7	V	-
8	P	-

Terminal No.	Color of Wire	Signal Name [Specification]
1	GR	BAT
2	LG	COMM (METER->AMP.)
3	GR	COMM (METER->METER)
5	B	GND
10	G	SECURITY
15	B	GND
21	R	IGN
22	B	GND
24	BR	COMM (LCD->AMP.)
25	Y	COMM (AMP->LCD)

Terminal No.	Color of Wire	Signal Name [Specification]
7	GR	COMM (AMP->METER)
14	BR	COMM (LCD->AMP.)
21	LG	COMM (METER->AMP.)
34	Y	COMM (AMP->LCD)

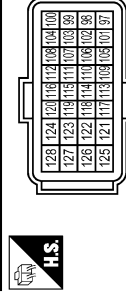
Connector No.	M67
Connector Name	UNIFIED METER AND A/C AMP.
Connector Type	TH82FW-NH



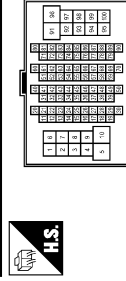
Connector No.	M104
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Type	JA804FB



Connector No.	M107
Connector Name	ECM
Connector Type	MAA24FGY-ME48-LH-Z



Connector No.	M117
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-GS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
41	V	ACC
53	G	IGN
55	B	GND
56	L	CAN-H
71	B	GND
72	P	CAN-L

Terminal No.	Color of Wire	Signal Name [Specification]
1	O	GND
2	Y	SIGNAL OUTPUT
4	LG	BATTERY

Terminal No.	Color of Wire	Signal Name [Specification]
113	P	VHECANL1
114	L	VHECANLH1

Terminal No.	Color of Wire	Signal Name [Specification]
97	LG	-
98	BR	-

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	M03FB-LC



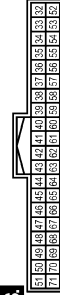
Terminal No.	Color of Wire	Signal Name [Specification]
1	W	BAT. (F/L)

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-GS



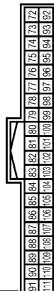
Terminal No.	Color of Wire	Signal Name [Specification]
11	R	BAT. (FUSE)
13	B	GND
15	Y	ACC LED

Connector No.	M121
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FGY-NH



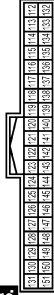
Terminal No.	Color of Wire	Signal Name [Specification]
34	SB	TRUNK ANTI-
35	Y	TRUNK ANTI+
47	Y	ING USM CONTI
52	SB	ST CONT USM
66	BR	DOOR SW (RR RH)
69	R	DOOR SW (RR LH)

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



Terminal No.	Color of Wire	Signal Name [Specification]
72	R	ROOM ANTI2-
73	G	ROOM ANTI2+
78	Y	ROOM ANTI-
79	BR	ROOM ANTI+
83	Y	KEYLESS TUNER SIGNAL
89	BR	ENG SW
90	P	CAN-L
91	L	CAN-H
93	V	ON LED
96	GR	A/T DEVICE
97	L	S/L CONDITION 1

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FC-NH



Terminal No.	Color of Wire	Signal Name [Specification]
114	R	CLUTCH SW
116	SB	STOP LAMP LOW
118	P	STOP LAMP HIGH
124	LG	DOOR SW (AS)
134	GR	LOCK LED
137	O	SENSOR GND
140	GR	SHIFT N/P
141	G	SECURITY INDICATOR OUTPUT
150	GR	DOOR SW (DR)

Connector No.	M131
Connector Name	INSIDE KEY ANTENNA (INSTRUMENT CENTER)
Connector Type	RK02FGY



Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	-
2	Y	-

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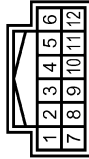
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

Connector No.	M137
Connector Name	A/T DEVICE
Connector Type	TH12FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
10	GR	-
11	R	-

Connector No.	M146
Connector Name	INSIDE KEY ANTENNA (CONSOLE)
Connector Type	FK02FGY



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

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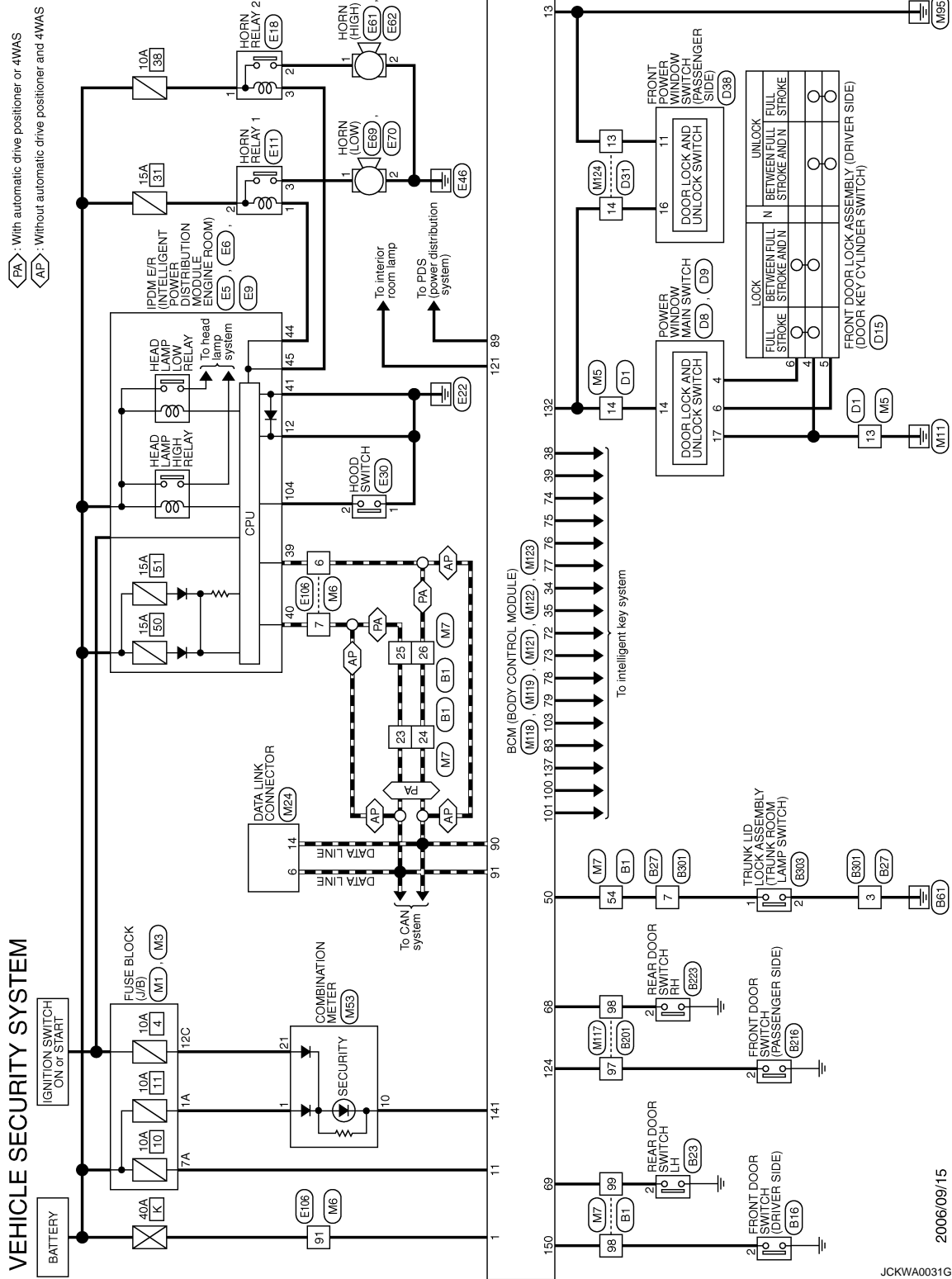
BCM (BODY CONTROL MODULE)

[INTELLIGENT KEY SYSTEM]

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Wiring Diagram - VEHICLE SECURITY SYSTEM -

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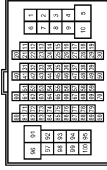



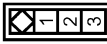

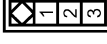

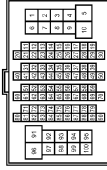

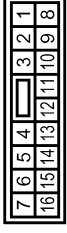

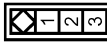

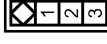
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BCM (BODY CONTROL MODULE)

[INTELLIGENT KEY SYSTEM]

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VEHICLE SECURITY SYSTEM

<table border="1"> <tr><td>Connector No.</td><td>B1</td></tr> <tr><td>Connector Name</td><td>WIRE TO WIRE</td></tr> <tr><td>Connector Type</td><td>THB0FW-CS16-TM4</td></tr> </table>   <table border="1"> <thead> <tr><th>Terminal No.</th><th>Color of Wire</th><th>Signal Name</th></tr> </thead> <tbody> <tr><td>23</td><td>L</td><td>-</td></tr> <tr><td>24</td><td>P</td><td>-</td></tr> <tr><td>25</td><td>L</td><td>-</td></tr> <tr><td>26</td><td>P</td><td>-</td></tr> <tr><td>54</td><td>L</td><td>-</td></tr> <tr><td>98</td><td>V</td><td>-</td></tr> <tr><td>99</td><td>R</td><td>-</td></tr> </tbody> </table>	Connector No.	B1	Connector Name	WIRE TO WIRE	Connector Type	THB0FW-CS16-TM4	Terminal No.	Color of Wire	Signal Name	23	L	-	24	P	-	25	L	-	26	P	-	54	L	-	98	V	-	99	R	-	<table border="1"> <tr><td>Connector No.</td><td>B27</td></tr> <tr><td>Connector Name</td><td>WIRE TO WIRE</td></tr> <tr><td>Connector Type</td><td>NS18FW-CS</td></tr> </table>   <table border="1"> <thead> <tr><th>Terminal No.</th><th>Color of Wire</th><th>Signal Name</th></tr> </thead> <tbody> <tr><td>3</td><td>B</td><td>-</td></tr> <tr><td>7</td><td>L</td><td>-</td></tr> </tbody> </table>	Connector No.	B27	Connector Name	WIRE TO WIRE	Connector Type	NS18FW-CS	Terminal No.	Color of Wire	Signal Name	3	B	-	7	L	-
Connector No.	B1																																													
Connector Name	WIRE TO WIRE																																													
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<table border="1"> <tr><td>Connector No.</td><td>B16</td></tr> <tr><td>Connector Name</td><td>FRONT DOOR SWITCH (DRIVER SIDE)</td></tr> <tr><td>Connector Type</td><td>A03FW</td></tr> </table>   <table border="1"> <thead> <tr><th>Terminal No.</th><th>Color of Wire</th><th>Signal Name</th></tr> </thead> <tbody> <tr><td>2</td><td>V</td><td>-</td></tr> </tbody> </table>	Connector No.	B16	Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)	Connector Type	A03FW	Terminal No.	Color of Wire	Signal Name	2	V	-	<table border="1"> <tr><td>Connector No.</td><td>B23</td></tr> <tr><td>Connector Name</td><td>REAR DOOR SWITCH LH</td></tr> <tr><td>Connector Type</td><td>A03FW</td></tr> </table>   <table border="1"> <thead> <tr><th>Terminal No.</th><th>Color of Wire</th><th>Signal Name</th></tr> </thead> <tbody> <tr><td>2</td><td>R</td><td>-</td></tr> </tbody> </table>	Connector No.	B23	Connector Name	REAR DOOR SWITCH LH	Connector Type	A03FW	Terminal No.	Color of Wire	Signal Name	2	R	-																					
Connector No.	B16																																													
Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)																																													
Connector Type	A03FW																																													
Terminal No.	Color of Wire	Signal Name																																												
2	V	-																																												
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Connector Type	A03FW																																													
Terminal No.	Color of Wire	Signal Name																																												
2	R	-																																												
<table border="1"> <tr><td>Connector No.</td><td>B201</td></tr> <tr><td>Connector Name</td><td>WIRE TO WIRE</td></tr> <tr><td>Connector Type</td><td>THB0FW-CS16-TM4</td></tr> </table>   <table border="1"> <thead> <tr><th>Terminal No.</th><th>Color of Wire</th><th>Signal Name</th></tr> </thead> <tbody> <tr><td>97</td><td>GR</td><td>-</td></tr> <tr><td>98</td><td>BR</td><td>-</td></tr> </tbody> </table>	Connector No.	B201	Connector Name	WIRE TO WIRE	Connector Type	THB0FW-CS16-TM4	Terminal No.	Color of Wire	Signal Name	97	GR	-	98	BR	-	<table border="1"> <tr><td>Connector No.</td><td>B301</td></tr> <tr><td>Connector Name</td><td>WIRE TO WIRE</td></tr> <tr><td>Connector Type</td><td>NS18FW-CS</td></tr> </table>   <table border="1"> <thead> <tr><th>Terminal No.</th><th>Color of Wire</th><th>Signal Name</th></tr> </thead> <tbody> <tr><td>3</td><td>B</td><td>-</td></tr> <tr><td>7</td><td>V</td><td>-</td></tr> </tbody> </table>	Connector No.	B301	Connector Name	WIRE TO WIRE	Connector Type	NS18FW-CS	Terminal No.	Color of Wire	Signal Name	3	B	-	7	V	-															
Connector No.	B201																																													
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Terminal No.	Color of Wire	Signal Name																																												
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Terminal No.	Color of Wire	Signal Name																																												
3	B	-																																												
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<table border="1"> <tr><td>Connector No.</td><td>B216</td></tr> <tr><td>Connector Name</td><td>FRONT DOOR SWITCH (PASSENGER SIDE)</td></tr> <tr><td>Connector Type</td><td>A03FW</td></tr> </table>   <table border="1"> <thead> <tr><th>Terminal No.</th><th>Color of Wire</th><th>Signal Name</th></tr> </thead> <tbody> <tr><td>2</td><td>GR</td><td>-</td></tr> </tbody> </table>	Connector No.	B216	Connector Name	FRONT DOOR SWITCH (PASSENGER SIDE)	Connector Type	A03FW	Terminal No.	Color of Wire	Signal Name	2	GR	-	<table border="1"> <tr><td>Connector No.</td><td>B223</td></tr> <tr><td>Connector Name</td><td>REAR DOOR SWITCH RH</td></tr> <tr><td>Connector Type</td><td>A03FW</td></tr> </table>   <table border="1"> <thead> <tr><th>Terminal No.</th><th>Color of Wire</th><th>Signal Name</th></tr> </thead> <tbody> <tr><td>2</td><td>BR</td><td>-</td></tr> </tbody> </table>	Connector No.	B223	Connector Name	REAR DOOR SWITCH RH	Connector Type	A03FW	Terminal No.	Color of Wire	Signal Name	2	BR	-																					
Connector No.	B216																																													
Connector Name	FRONT DOOR SWITCH (PASSENGER SIDE)																																													
Connector Type	A03FW																																													
Terminal No.	Color of Wire	Signal Name																																												
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Connector No.	B223																																													
Connector Name	REAR DOOR SWITCH RH																																													
Connector Type	A03FW																																													
Terminal No.	Color of Wire	Signal Name																																												
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BCM (BODY CONTROL MODULE)

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[INTELLIGENT KEY SYSTEM]

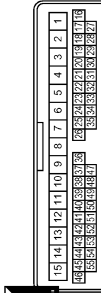
VEHICLE SECURITY SYSTEM

Connector No.	B303
Connector Name	TRUNK LID LOCK ASSEMBLY
Connector Type	TEB03FW



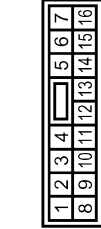
Terminal No.	Color of Wire	Signal Name
1	V	-
2	B	-

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Type	TH40FW-CS15



Terminal No.	Color of Wire	Signal Name
13	B	-
14	V	-

Connector No.	D8
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS18FW-CS



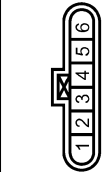
Terminal No.	Color of Wire	Signal Name
4	V	-
6	Y	-
14	V	-

Connector No.	D9
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS03FW-CS



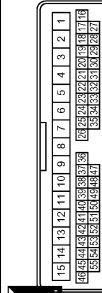
Terminal No.	Color of Wire	Signal Name
17	B	-

Connector No.	D15
Connector Name	FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE)
Connector Type	EQ6FY-RS



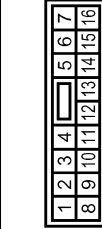
Terminal No.	Color of Wire	Signal Name
4	B	-
5	Y	-
6	V	-

Connector No.	D31
Connector Name	WIRE TO WIRE
Connector Type	TH40FW-CS15



Terminal No.	Color of Wire	Signal Name
13	B	-
14	V	-

Connector No.	D38
Connector Name	FRONT POWER WINDOW SWITCH (PASSENGER SIDE)
Connector Type	NS18FW-CS



Terminal No.	Color of Wire	Signal Name
11	B	-
16	V	-

Connector No.	E5
Connector Name	IPDM F/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-MF-IV



Terminal No.	Color of Wire	Signal Name
12	B/W	-

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BCM (BODY CONTROL MODULE)

[INTELLIGENT KEY SYSTEM]

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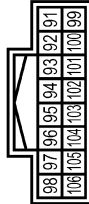
VEHICLE SECURITY SYSTEM

Connector No.	E6
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH88FW-NH



Terminal No.	Color of Wire	Signal Name
39	P	-
40	L	-
41	B/W	-
44	W	-
45	G	-

Connector No.	E8
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH116FW-NH



Terminal No.	Color of Wire	Signal Name
104	LG	-

Connector No.	E11
Connector Name	HORN RELAY 1
Connector Type	24381 7390A



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	LG	-
3	G	-

Connector No.	E18
Connector Name	HORN RELAY 2
Connector Type	M03FW-R-LC



Terminal No.	Color of Wire	Signal Name
1	R	-
2	Y	-
3	G	-

Connector No.	E30
Connector Name	HOOD SWITCH
Connector Type	RH02FB



Terminal No.	Color of Wire	Signal Name
1	B	-
2	LG	-

Connector No.	E01
Connector Name	HORN (HIGH)
Connector Type	P01FB-A



Terminal No.	Color of Wire	Signal Name
1	Y	-

Connector No.	E02
Connector Name	HORN (HIGH)
Connector Type	P01FB-A



Terminal No.	Color of Wire	Signal Name
2	B	-

Connector No.	E09
Connector Name	HORN (LOW)
Connector Type	P01FB-A



Terminal No.	Color of Wire	Signal Name
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BCM (BODY CONTROL MODULE)

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[INTELLIGENT KEY SYSTEM]

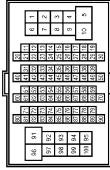
VEHICLE SECURITY SYSTEM

Connector No.	E70
Connector Name	HORN (LOW)
Connector Type	P01FEF-A



Terminal No.	2	Color of Wire	B	Signal Name	-
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Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS1B-TM4



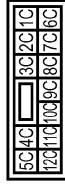
Terminal No.	6	Color of Wire	P	Signal Name	-
Terminal No.	7	Color of Wire	L	Signal Name	-
Terminal No.	91	Color of Wire	W	Signal Name	-

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS06FW-H2



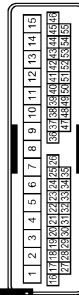
Terminal No.	1A	Color of Wire	GR	Signal Name	-
Terminal No.	7A	Color of Wire	R	Signal Name	-

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FW-CS



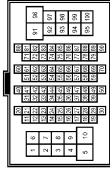
Terminal No.	12C	Color of Wire	R	Signal Name	-
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Connector No.	M5
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS15



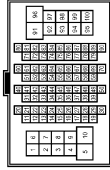
Terminal No.	13	Color of Wire	B	Signal Name	-
Terminal No.	14	Color of Wire	V	Signal Name	-

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS1B-TM4



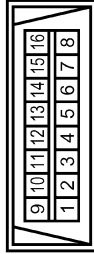
Terminal No.	6	Color of Wire	P	Signal Name	-
Terminal No.	7	Color of Wire	L	Signal Name	-
Terminal No.	91	Color of Wire	W	Signal Name	-

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	23	Color of Wire	L	Signal Name	-
Terminal No.	24	Color of Wire	P	Signal Name	-
Terminal No.	25	Color of Wire	L	Signal Name	-
Terminal No.	26	Color of Wire	P	Signal Name	-
Terminal No.	54	Color of Wire	R	Signal Name	-
Terminal No.	99	Color of Wire	GR	Signal Name	-
Terminal No.	99	Color of Wire	R	Signal Name	-

Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD18FW



Terminal No.	6	Color of Wire	L	Signal Name	-
Terminal No.	14	Color of Wire	P	Signal Name	-

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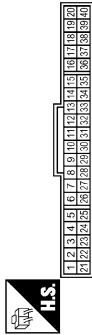
BCM (BODY CONTROL MODULE)

[INTELLIGENT KEY SYSTEM]

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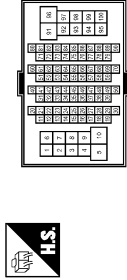
VEHICLE SECURITY SYSTEM

Connector No.	M153
Connector Name	COMBINATION METER
Connector Type	SAB40FW



Terminal No.	Color of Wire	Signal Name
1	GR	BAT
10	G	SECURITY
21	R	IGN

Connector No.	M117
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS1B-TM4



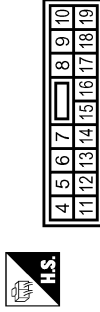
Terminal No.	Color of Wire	Signal Name
97	LG	-
98	BR	-

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	M03FB-LG



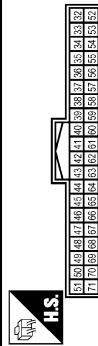
Terminal No.	Color of Wire	Signal Name
1	W	BAT (F/L)

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NIS18FW-GS



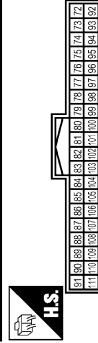
Terminal No.	Color of Wire	Signal Name
11	R	BAT (FUSE)
13	B	GND

Connector No.	M121
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH



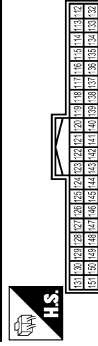
Terminal No.	Color of Wire	Signal Name
34	SB	TRUNK ANTI-
35	V	TRUNK ANTI+
38	B	BACK ANTI-
39	W	BACK ANTI+
50	R	TRUNK SW
68	BR	DOOR SW (RR LH)
		DOOR SW (RR RH)

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



Terminal No.	Color of Wire	Signal Name
72	R	ROOM ANTI-
73	G	ROOM ANTI+
74	SB	AS DOOR ANTI-
75	BR	AS DOOR ANTI+
76	V	DR DOOR ANTI-
77	LG	DR DOOR ANTI+
78	Y	ROOM ANTI-
79	BR	ROOM ANTI+
83	Y	KEYLESS TUNER SIGNAL
89	BR	ENG SW
90	P	CAN-L

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH



Terminal No.	Color of Wire	Signal Name
121	R	KEY SWITCH SIGNAL
124	LG	DOOR SW (AS)
132	V	POWER WINDOW SERIAL LINK
137	O	SENSOR GND
141	G	SECURITY INDICATOR OUTPUT
150	GR	DOOR SW (DR)

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BCM (BODY CONTROL MODULE)

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[INTELLIGENT KEY SYSTEM]

VEHICLE SECURITY SYSTEM

Connector No.	M124
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS15

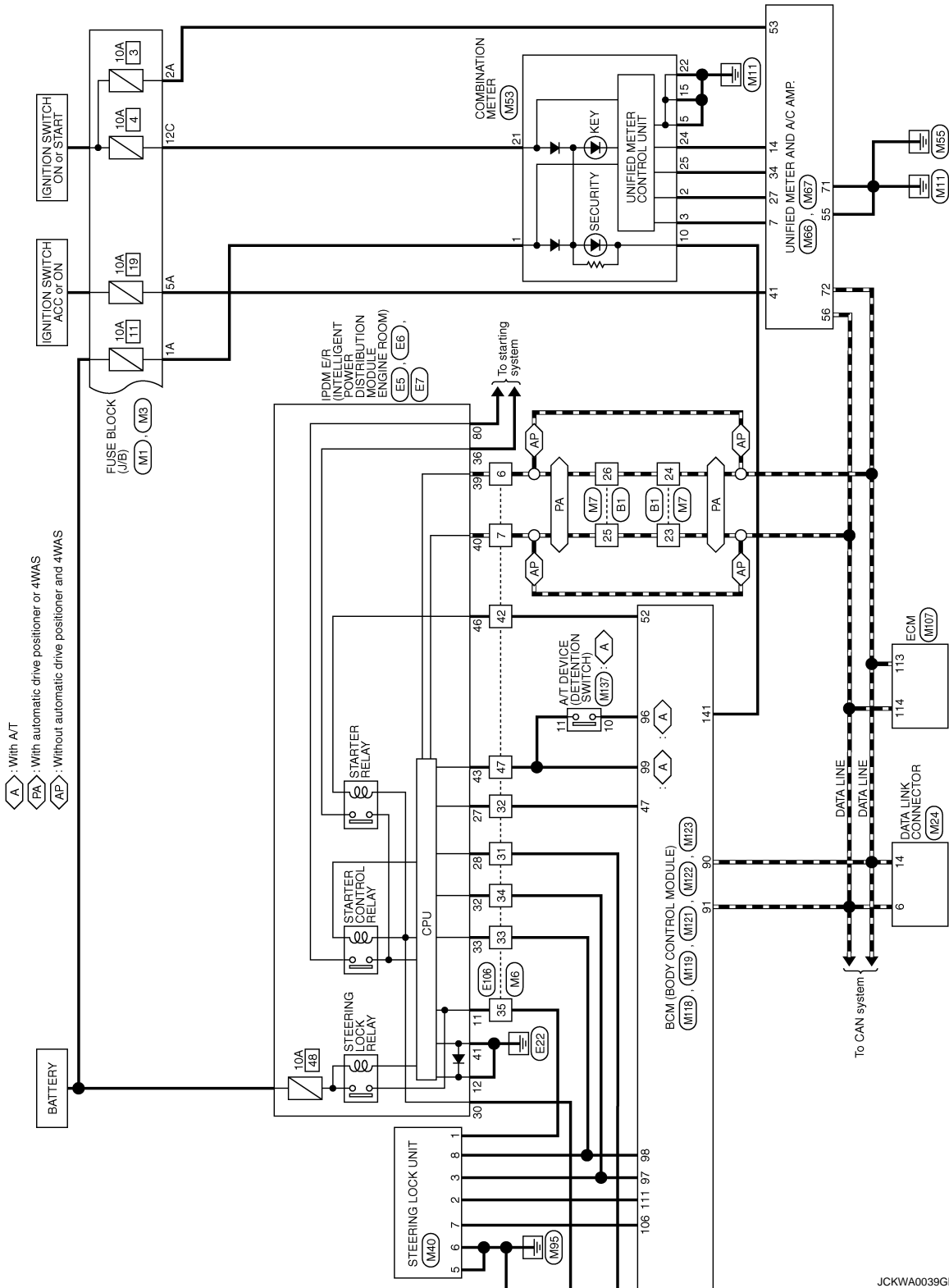
Terminal No.	Color of Wire	Signal Name
13	B	-
14	Y	-

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BCM (BODY CONTROL MODULE)

[INTELLIGENT KEY SYSTEM]

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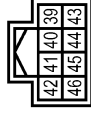
BCM (BODY CONTROL MODULE)

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[INTELLIGENT KEY SYSTEM]

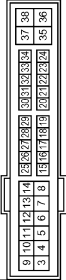
IVIS

Connector No.	E6
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH89FW-NH



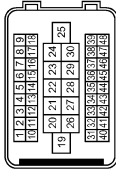
Terminal No.	Color of Wire	Signal Name [Specification]
39	P	-
40	L	-
41	B/W	-
43	SB	-
46	BR	-

Connector No.	E5
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4-1V



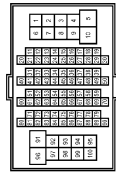
Terminal No.	Color of Wire	Signal Name [Specification]
11	BR	-
12	B/W	-
27	O	-
36	L	-
38	GR	-
32	L	-
33	P	-
36	G	-

Connector No.	E3
Connector Name	WIRE TO WIRE
Connector Type	SA438MB-RS10-SJZZ



Terminal No.	Color of Wire	Signal Name [Specification]
20	GR	-

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH89FW-CS16-TM4



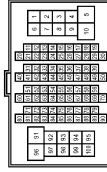
Terminal No.	Color of Wire	Signal Name [Specification]
23	L	-
24	P	-
25	L	-
26	P	-

Connector No.	E110
Connector Name	STOP LAMP SWITCH
Connector Type	M04FW-LC



Terminal No.	Color of Wire	Signal Name [Specification]
1	L	-
2	W	-
3	L	-
4	SB	-

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH89FW-CS16-TM4



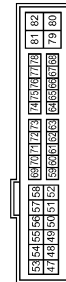
Terminal No.	Color of Wire	Signal Name [Specification]
6	P	-
7	L	-
19	G	-
31	L	-
32	O	-
33	P	-
34	L	-
35	BR	-
42	BR	-
44	GR	-
47	SB	-
91	W	-

Connector No.	E103
Connector Name	FUSE BLOCK (J/B)
Connector Type	RS16FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
2F	W	-
8F	L	-

Connector No.	E7
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4



Terminal No.	Color of Wire	Signal Name [Specification]
80	W	-

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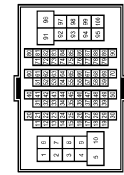
BCM (BODY CONTROL MODULE)

[INTELLIGENT KEY SYSTEM]

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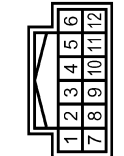
IVIS

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	THROW-CSI6-TM4



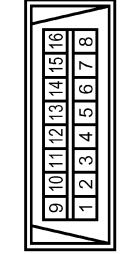
Terminal No.	Color of Wire	Signal Name [Specification]
23	L	-
24	P	-
25	L	-
26	P	-

Connector No.	M22
Connector Name	KEY SLOT
Connector Type	TH12FW-NH



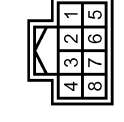
Terminal No.	Color of Wire	Signal Name [Specification]
1	R	BAT
2	GR	CLOCK
3	W	DATA
5	Y	ILL BAT
6	LG	ILL
7	B	GND

Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD18FW



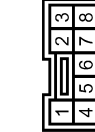
Terminal No.	Color of Wire	Signal Name [Specification]
6	L	-
14	P	-

Connector No.	M40
Connector Name	STEERING LOCK UNIT
Connector Type	TH08FW-NH



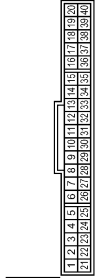
Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	S/L 12V (MECHANICAL)
2	Y	S/L (K LINE)
3	L	S/L CONDLT LON1
5	B	GND
6	B	GND
7	W	S/L 12V (CPU)
8	P	S/L CONDLT LON2

Connector No.	M50
Connector Name	PUSH-BUTTON IGNITION SWITCH
Connector Type	TK08FB



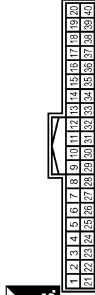
Terminal No.	Color of Wire	Signal Name [Specification]
1	B	-
4	BR	-
5	GR	-
6	Y	-
7	V	-
8	P	-

Connector No.	M53
Connector Name	COMBINATION METER
Connector Type	SAB40FW



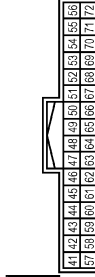
Terminal No.	Color of Wire	Signal Name [Specification]
1	GR	BAT
2	LG	COMM (METER->AMP)
3	GR	COMM (AMP->METER)
5	B	GND
10	G	SECURITY
15	B	GND
21	R	IGN
22	B	GND
24	BR	COMM (LCD->AMP)
25	Y	COMM (AMP->LCD)

Connector No.	M66
Connector Name	UNIFIED METER AND A/C AMP.
Connector Type	TH40FY-NH



Terminal No.	Color of Wire	Signal Name [Specification]
7	GR	COMM (AMP->METER)
14	BR	COMM (LCD->AMP)
27	LG	COMM (METER->AMP)
34	Y	COMM (AMP->LCD)

Connector No.	M67
Connector Name	UNIFIED METER AND A/C AMP.
Connector Type	TH22FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
41	V	ACC
63	G	IGN
65	B	GND
96	L	CAN-H
71	B	GND
72	P	CAN-L

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

IVS	Connector No. M107	ECM	MA24FGY-MEA&-LH-Z		Terminal No. 113	P	VHECAN L1	Signal Name [Specification]
	Connector Name	ECM	MA24FGY-MEA&-LH-Z		Terminal No. 114	L	VHECAN H1	
	Connector Type				Color of Wire			
	Connector No. M118	BCM (BODY CONTROL MODULE)	M03FB-LC		Terminal No. 1	W	BAT (F/L)	Signal Name [Specification]
	Connector Name	BCM (BODY CONTROL MODULE)	M03FB-LC					
	Connector Type							
	Connector No. M119	BCM (BODY CONTROL MODULE)	NS18FW-CS		Terminal No. 11	R	BAT (FUSE)	Signal Name [Specification]
	Connector Name	BCM (BODY CONTROL MODULE)	NS18FW-CS		Terminal No. 13	B	GND	
	Connector Type				Terminal No. 15	Y	ACCL LED	
	Connector No. M121	BCM (BODY CONTROL MODULE)	TH40FGY-NH		Terminal No. 47	Y	ING USM COANT1	Signal Name [Specification]
	Connector Name	BCM (BODY CONTROL MODULE)	TH40FGY-NH		Terminal No. 52	SB	ST CONT USM	
	Connector Type							
	Connector No. M122	BCM (BODY CONTROL MODULE)	TH40FB-NH		Terminal No. 80	GR	IMMOBI ANTENNA CONTROL	Signal Name [Specification]
	Connector Name	BCM (BODY CONTROL MODULE)	TH40FB-NH		Terminal No. 81	W	IMMOBI ANTENNA SIGNAL	
	Connector Type				Terminal No. 88	BR	ENG SW	
					Terminal No. 90	P	CAN-L	
					Terminal No. 91	L	CAN-H	
					Terminal No. 92	LG	KEY SLOT ILL	
					Terminal No. 93	Y	ON LED	
					Terminal No. 96	GR	A/T DEVICE	
					Terminal No. 97	L	S/L CONDITION 1	
					Terminal No. 98	P	S/L CONDITION 2	
					Terminal No. 99	R	SHIFT P	
	Connector No. M123	BCM (BODY CONTROL MODULE)	TH40FC-NH		Terminal No. 106	W	S/L 12V (GPU)	Signal Name [Specification]
	Connector Name	BCM (BODY CONTROL MODULE)	TH40FC-NH		Terminal No. 111	Y	S/L (K LINE)	
	Connector Type							
	Connector No. M137	A/T DEVICE	TH12FW-NH		Terminal No. 10	GR	-	Signal Name [Specification]
	Connector Name	A/T DEVICE	TH12FW-NH		Terminal No. 11	R	-	
	Connector Type							

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Fail Safe

Display contents of CONSULT	Fail-safe	Cancellation
B2013: ID DISCORD BCM-S/L	Inhibit engine cranking	Erase DTC
B2014: CHAIN OF S/L-BCM	Inhibit engine cranking	Erase DTC
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Display contents of CONSULT	Fail-safe	Cancellation
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2557: VEHICLE SPEED	Inhibit steering lock	When normal vehicle speed signals have been received from ABS actuator and electric unit (control unit) for 500 ms
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent <ul style="list-style-type: none"> • Starter control relay signal • Starter relay status signal
B2563: HI VOLTAGE	<ul style="list-style-type: none"> • Inhibit engine cranking • Inhibit steering lock 	500 ms after the power supply voltage decreases to less than 18 V
B2601: SHIFT POSITION	Inhibit steering lock	500 ms after the following signal reception status becomes consistent <ul style="list-style-type: none"> • Selector lever P position switch signal • P range signal (CAN)
B2602: SHIFT POSITION	Inhibit steering lock	5 seconds after the following BCM recognition conditions are fulfilled <ul style="list-style-type: none"> • Ignition switch is in the ON position • Selector lever P position switch signal: Except P position (battery voltage) • Vehicle speed: 4 /h or more
B2603: SHIFT POSI STATUS	Inhibit steering lock	500 ms after the following BCM recognition conditions are fulfilled <ul style="list-style-type: none"> • Ignition switch is in the ON position • Selector lever P position switch signal: Except P position (battery voltage) • Selector lever P/N position signal: Except P and N positions (0 V)
B2604: PNP SW	Inhibit steering lock	500 ms after any of the following BCM recognition conditions is fulfilled <ul style="list-style-type: none"> • Status 1 <ul style="list-style-type: none"> - Ignition switch is in the ON position - Selector lever P/N position signal: P and N position (battery voltage) - P range signal or N range signal (CAN): ON • Status 2 <ul style="list-style-type: none"> - Ignition switch is in the ON position - Selector lever P/N position signal: Except P and N positions (0 V) - P range signal and N range signal (CAN): OFF
B2605: PNP SW	Inhibit steering lock	500 ms after any of the following BCM recognition conditions is fulfilled <ul style="list-style-type: none"> • Ignition switch is in the ON position <ul style="list-style-type: none"> - Power position: IGN - Selector lever P/N position signal: Except P and N positions (0 V) - Interlock/PNP switch signal (CAN): OFF • Status 2 <ul style="list-style-type: none"> - Ignition switch is in the ON position - Selector lever P/N position signal: P or N position (battery voltage) - PNP switch signal (CAN): ON
B2606: S/L RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent <ul style="list-style-type: none"> • Steering lock relay signal (Request signal) • Steering lock relay signal (Condition signal)
B2607: S/L RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent <ul style="list-style-type: none"> • Steering lock relay signal (Request signal) • Steering lock relay signal (Condition signal)

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BCM (BODY CONTROL MODULE)

[INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

Display contents of CONSULT	Fail-safe	Cancellation
B2608: STARTER RELAY	Inhibit engine cranking	500 ms after the following signal communication status becomes consistent <ul style="list-style-type: none"> • Starter motor relay control signal • Starter relay status signal (CAN)
B2609: S/L STATUS	<ul style="list-style-type: none"> • Inhibit engine cranking • Inhibit steering lock 	When the following steering lock conditions agree <ul style="list-style-type: none"> • BCM steering lock control status • Steering lock condition No. 1 signal status • Steering lock condition No. 2 signal status
B260A: IGNITION RELAY	Inhibit engine cranking	500 ms after the following conditions are fulfilled <ul style="list-style-type: none"> • IGN relay (IPDM E/R) control signal: OFF (Battery voltage) • Ignition ON signal (CAN to IPDM E/R): OFF (Request signal) • Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions is fulfilled <ul style="list-style-type: none"> • Power position changes to ACC • Receives engine status signal (CAN)
B2612: S/L STATUS	<ul style="list-style-type: none"> • Inhibit engine cranking • Inhibit steering lock 	When any of the following conditions is fulfilled <ul style="list-style-type: none"> • Steering lock unit status signal (CAN) is received normally • The BCM steering lock control status matches the steering lock status recognized by the steering lock unit status signal (CAN from IPDM E/R)
B2617: STARTER RELAY CIRC	Inhibit engine cranking	1 second after the starter motor relay control inside BCM becomes normal
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM becomes normal
B2619: BCM	Inhibit engine cranking	1 second after the steering lock unit power supply output control inside BCM becomes normal
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization
B26E1: ENG STATE NO RECIV	Inhibit engine cranking	When any of the following conditions is fulfilled <ul style="list-style-type: none"> • Power position changes to ACC • Receives engine status signal (CAN)

DTC Inspection Priority Chart

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If some DTCs are displayed at the same time, perform inspections one by one based on the following priority chart.

Priority	DTC
1	<ul style="list-style-type: none"> • B2562: LOW VOLTAGE • B2563: HI VOLTAGE
2	<ul style="list-style-type: none"> • U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN)
3	<ul style="list-style-type: none"> • B2190: NATS ANTENA AMP • B2191: DIFFERENCE OF KEY • B2192: ID DISCORD BCM-ECM • B2193: CHAIN OF BCM-ECM

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Priority	DTC		
4	<ul style="list-style-type: none"> • B2013: ID DISCORD BCM-S/L • B2014: CHAIN OF S/L-BCM • B2553: IGNITION RELAY • B2555: STOP LAMP • B2556: PUSH-BTN IGN SW • B2557: VEHICLE SPEED • B2560: STARTER CONT RELAY • B2601: SHIFT POSITION • B2602: SHIFT POSITION • B2603: SHIFT POSI STATUS • B2604: PNP SW • B2605: PNP SW • B2606: S/L RELAY • B2607: S/L RELAY • B2608: STARTER RELAY • B2609: S/L STATUS • B260A: IGNITION RELAY • B260B: STEERING LOCK UNIT • B260C: STEERING LOCK UNIT • B260D: STEERING LOCK UNIT • B260F: ENG STATE SIG LOST • B2611: ACC RELAY • B2612: S/L STATUS • B2614: ACC RELAY CIRC • B2615: BLOWER RELAY CIRC • B2616: IGN RELAY CIRC • B2617: STARTER RELAY CIRC • B2618: BCM • B2619: BCM • B261A: PUSH-BTN IGN SW • B261E: VEHICLE TYPE • B26E1: ENG STATE NO RECIV • C1729: VHCL SPEED SIG ERR • U0415: VEHICLE SPEED SIG 	<p>A</p> <p>B</p> <p>C</p> <p>D</p> <p>E</p> <p>F</p> <p>G</p> <p>H</p> <p>I</p> <p>J</p>	
	<ul style="list-style-type: none"> • C1704: LOW PRESSURE FL • C1705: LOW PRESSURE FR • C1706: LOW PRESSURE RR • C1707: LOW PRESSURE RL • C1708: [NO DATA] FL • C1709: [NO DATA] FR • C1710: [NO DATA] RR • C1711: [NO DATA] RL • C1712: [CHECKSUM ERR] FL • C1713: [CHECKSUM ERR] FR • C1714: [CHECKSUM ERR] RR • C1715: [CHECKSUM ERR] RL • C1716: [PRESSDATA ERR] FL • C1717: [PRESSDATA ERR] FR • C1718: [PRESSDATA ERR] RR • C1719: [PRESSDATA ERR] RL • C1720: [CODE ERR] FL • C1721: [CODE ERR] FR • C1722: [CODE ERR] RR • C1723: [CODE ERR] RL • C1724: [BATT VOLT LOW] FL • C1725: [BATT VOLT LOW] FR • C1726: [BATT VOLT LOW] RR • C1727: [BATT VOLT LOW] RL • C1734: CONTROL UNIT 	<p>L</p> <p>M</p> <p>N</p> <p>O</p> <p>P</p>	
	6	<ul style="list-style-type: none"> • B2621: INSIDE ANTENNA • B2622: INSIDE ANTENNA • B2623: INSIDE ANTENNA 	

SEC

BCM (BODY CONTROL MODULE)

[INTELLIGENT KEY SYSTEM]

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NOTE:

Details of time display

- CRNT: Displays when there is a malfunction now or after returning to the normal condition until turning ignition switch OFF → ON again.
- 1 - 39: Displayed if any previous malfunction is present when current condition is normal. It increases like 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The counter remains at 39 even if the number of cycles exceeds it. It is counted from 1 again when turning ignition switch OFF → ON after returning to the normal condition if the malfunction is detected again.

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	—	—	—	—
U1000: CAN COMM CIRCUIT	—	—	—	BCS-33
U1010: CONTROL UNIT (CAN)	—	—	—	BCS-34
U0415: VEHICLE SPEED SIG	—	—	—	BCS-35
B2013: ID DISCORD BCM-S/L	×	—	—	SEC-43
B2014: CHAIN OF S/L-BCM	×	—	—	SEC-44
B2190: NATS ANTENNA AMP	×	—	—	SEC-37
B2191: DIFFERENCE OF KEY	×	—	—	SEC-40
B2192: ID DISCORD BCM-ECM	×	—	—	SEC-41
B2193: CHAIN OF BCM-ECM	×	—	—	SEC-42
B2553: IGNITION RELAY	—	—	—	PCS-48
B2555: STOP LAMP	—	—	—	SEC-47
B2556: PUSH-BTN IGN SW	—	×	—	SEC-49
B2557: VEHICLE SPEED	×	×	—	SEC-51
B2560: STARTER CONT RELAY	×	×	—	SEC-52
B2562: LOW VOLTAGE	—	—	—	BCS-36
B2563: HI VOLTAGE	×	×	—	BCS-37
B2601: SHIFT POSITION	×	×	—	SEC-53
B2602: SHIFT POSITION	×	×	—	SEC-56
B2603: SHIFT POSI STATUS	×	×	—	SEC-58
B2604: PNP SW	×	×	—	SEC-61
B2605: PNP SW	×	×	—	SEC-63
B2606: S/L RELAY	×	×	—	SEC-65
B2607: S/L RELAY	×	×	—	SEC-66
B2608: STARTER RELAY	×	×	—	SEC-68
B2609: S/L STATUS	×	×	—	SEC-70
B260A: IGNITION RELAY	×	×	—	PCS-50
B260B: STEERING LOCK VNIT	—	×	—	SEC-74
B260C: STEERING LOCK VNIT	—	×	—	SEC-75
B260D: STEERING LOCK VNIT	—	×	—	SEC-76
B260F: ENG STATE SIG LOST	×	×	—	SEC-77
B2611: ACC RELAY	—	—	—	PCS-52
B2612: S/L STATUS	×	×	—	SEC-79
B2614: ACC RELAY CIRC	—	×	—	PCS-54
B2615: BLOWER RELAY CIRC	—	×	—	PCS-57

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2616: IGN RELAY CIRC	—	×	—	PCS-60
B2617: STARTER RELAY CIRC	×	×	—	SEC-83
B2618: BCM	×	×	—	PCS-63
B2619: BCM	×	×	—	SEC-85
B261A: PUSH-BTN IGN SW	—	×	—	SEC-86
B261E: VEHICLE TYPE	×	× (Turn ON for 15 seconds)	—	SEC-88
B2621: INSIDE ANTENNA	—	—	—	DLK-58
B2622: INSIDE ANTENNA	—	—	—	DLK-60
B2623: INSIDE ANTENNA	—	—	—	DLK-62
B26E1: ENG STATE NO RES	×	×	—	SEC-78
C1704: LOW PRESSURE FL	—	—	×	WT-14
C1705: LOW PRESSURE FR	—	—	×	WT-14
C1706: LOW PRESSURE RR	—	—	×	WT-14
C1707: LOW PRESSURE RL	—	—	×	WT-14
C1708: [NO DATA] FL	—	—	×	WT-16
C1709: [NO DATA] FR	—	—	×	WT-16
C1710: [NO DATA] RR	—	—	×	WT-16
C1711: [NO DATA] RL	—	—	×	WT-16
C1712: [CHECKSUM ERR] FL	—	—	×	WT-19
C1713: [CHECKSUM ERR] FR	—	—	×	WT-19
C1714: [CHECKSUM ERR] RR	—	—	×	WT-19
C1715: [CHECKSUM ERR] RL	—	—	×	WT-19
C1716: [PRESSDATA ERR] FL	—	—	×	WT-22
C1717: [PRESSDATA ERR] FR	—	—	×	WT-22
C1718: [PRESSDATA ERR] RR	—	—	×	WT-22
C1719: [PRESSDATA ERR] RL	—	—	×	WT-22
C1720: [CODE ERR] FL	—	—	×	WT-24
C1721: [CODE ERR] FR	—	—	×	WT-24
C1722: [CODE ERR] RR	—	—	×	WT-24
C1723: [CODE ERR] RL	—	—	×	WT-24
C1724: [BATT VOLT LOW] FL	—	—	×	WT-27
C1725: [BATT VOLT LOW] FR	—	—	×	WT-27
C1726: [BATT VOLT LOW] RR	—	—	×	WT-27
C1727: [BATT VOLT LOW] RL	—	—	×	WT-27
C1729: VHCL SPEED SIG ERR	—	—	×	WT-30
C1734: CONTROL UNIT	—	—	×	WT-31

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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

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[INTELLIGENT KEY SYSTEM]

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

Reference Value

INFOID:000000000961491

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition		Value/Status
RADFAN REQ	Engine idle speed	Changes depending on engine coolant temperature, air conditioner operation status, vehicle speed, etc.	0 - 100 %
AC COMP REQ	Engine running	A/C switch OFF	Off
		A/C switch ON (Compressor is operating)	On
TAIL&CLR REQ	Lighting switch OFF		Off
	Lighting switch 1ST, 2ND, HI or AUTO (Light is illuminated)		On
HL LO REQ	Lighting switch OFF		Off
	Lighting switch 2ND HI or AUTO (Light is illuminated)		On
HL HI REQ	Lighting switch OFF		Off
	Lighting switch HI		On
FR FOG REQ	Lighting switch 2ND or AUTO (Light is illuminated)	Front fog lamp switch OFF	Off
		<ul style="list-style-type: none"> • Front fog lamp switch ON • Daytime running light activated (Only for Canada) 	On
FR WIP REQ	Ignition switch ON	Front wiper switch OFF	STOP
		Front wiper switch INT	1LOW
		Front wiper switch LO	Low
		Front wiper switch HI	Hi
WIP AUTO STOP	Ignition switch ON	Front wiper stop position	STOP P
		Any position other than front wiper stop position	ACT P
WIP PROT	Ignition switch ON	Front wiper operates normally	Off
		Front wiper stops at fail-safe operation	BLOCK
IGN RLY1 -REQ	Ignition switch OFF or ACC		Off
	Ignition switch ON		On
IGN RLY	Ignition switch OFF or ACC		Off
	Ignition switch ON		On
PUSH SW	Release the push-button ignition switch		Off
	Press the push-button ignition switch		On
INTER/NP SW	Ignition switch ON	A/T selector lever in any position other than P or N (A/T models)	Off
		Release clutch pedal (M/T models)	
	Ignition switch ON	A/T selector lever in P or N position (A/T models)	On
		Depress clutch pedal (M/T models)	
ST RLY REQ	Ignition switch ON		Off
	At engine cranking		On

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

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[INTELLIGENT KEY SYSTEM]

Monitor Item	Condition	Value/Status
ST RLY CONT	Ignition switch ON	Off
	At engine cranking	On
IHBT RLY -REQ	Ignition switch ON	Off
	At engine cranking	On
ST/INHI RLY	Ignition switch ON	Off
	At engine cranking	ST →INHI
	The status of starter relay or starter control relay cannot be recognized by the battery voltage malfunction, etc. when the starter relay is ON and the starter control relay is OFF	UNKWN
DETENT SW	Ignition switch ON <ul style="list-style-type: none"> • Press the selector button with A/T selector lever in P position • A/T selector lever in any position other than P 	Off
	Release the A/T selector button with A/T selector lever in P position NOTE: The lever is fixed ON for M/T	On
S/L RLY -REQ	None of the conditions below are present	Off
	<ul style="list-style-type: none"> • Open the driver door after the ignition switch is turned OFF (for a few seconds) • Press the push-button ignition switch when the steering lock is activated • Depress the clutch pedal when the steering lock is activated 	On
S/L STATE	Steering lock is activated	LOCK
	Steering lock is deactivated	UNLK
	[DTC B210A] is detected	UNKWN
DTRL REQ	NOTE: The item is indicated, but not monitored.	Off
OIL P SW	Ignition switch OFF, ACC or engine running	Open
	Ignition switch ON	Close
HOOD SW	Close the hood	Off
	Open the hood	On
HL WASHER REQ	NOTE: The item is indicated, but not monitored.	Off
THFT HRN REQ	Not operation	Off
	<ul style="list-style-type: none"> • Panic alarm is activated • Horn is activated with VEHICLE SECURITY (THEFT WARNING) SYSTEM 	On
HORN CHIRP	Not operating	Off
	Door locking with Intelligent Key (horn chirp mode)	On
CRNRNG LMP REQ	NOTE: The item is indicated, but not monitored.	Off

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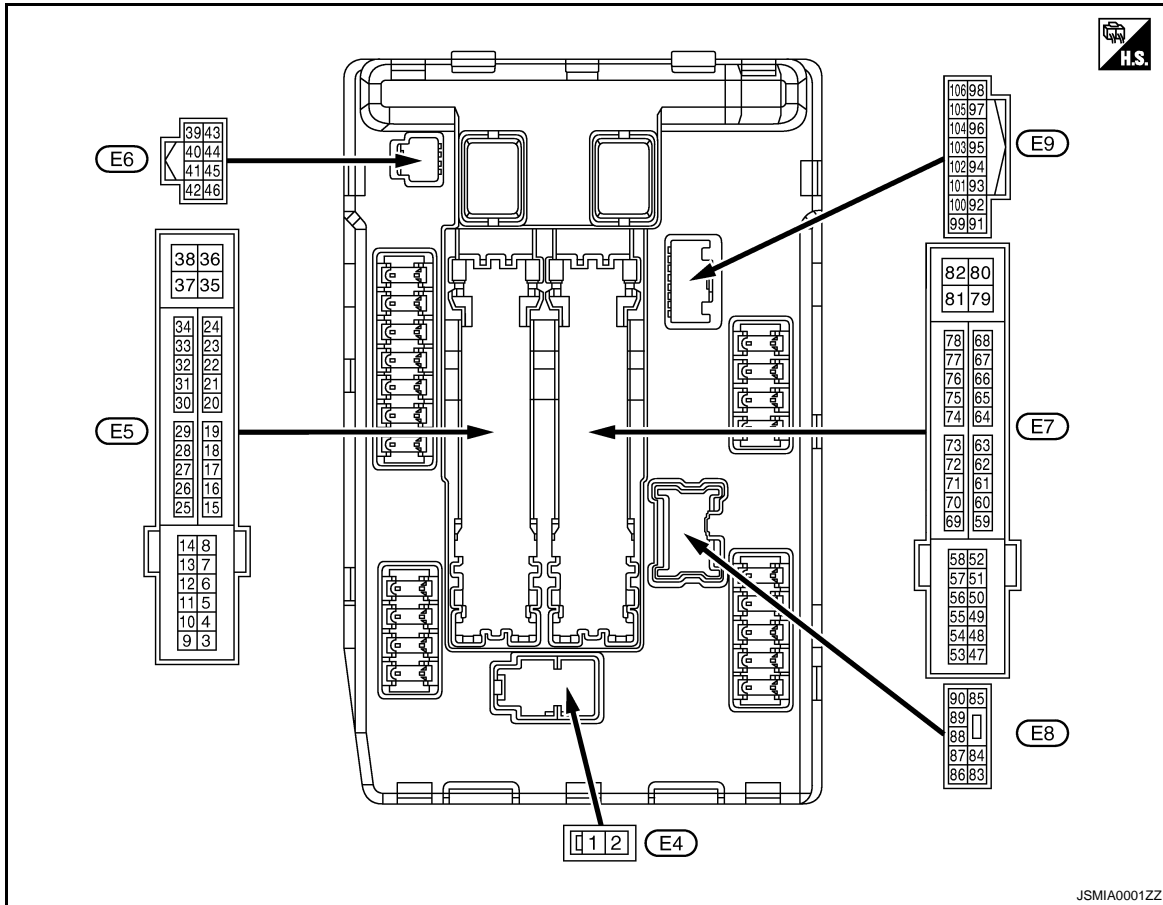
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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
1 (W)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (L)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
4 (V)	Ground	Front wiper LO	Output	Ignition switch OFF	Front wiper switch OFF	0 V
				Ignition switch ON	Front wiper switch LO	Battery voltage
5 (L)	Ground	Front wiper HI	Output	Ignition switch OFF	Front wiper switch OFF	0 V
				Ignition switch ON	Front wiper switch HI	Battery voltage
7 (R)	Ground	Tail, license plate lamps & interior lamps	Output	Ignition switch OFF	Lighting switch OFF	0 V
				Ignition switch ON	Lighting switch 1ST	Battery voltage
11 (BR)	Ground	Steering lock unit power supply	Output	Ignition switch OFF	A few seconds after opening the driver door	Battery voltage
				Ignition switch LOCK	Press the push-button ignition switch	Battery voltage
				Ignition switch ACC or ON		0 V
12 (B/W)	Ground	Ground	—	Ignition switch ON		0 V

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[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
		Signal name	Input/ Output			
13 (Y)	Ground	Fuel pump power supply	Output	Approximately 1 second or more after turning the ignition switch ON		0 V
				<ul style="list-style-type: none"> • Approximately 1 second after turning the ignition switch ON • Engine running 		Battery voltage
16 (LG)	Ground	Front wiper auto stop	Input	Ignition switch ON	Front wiper stop position	0 V
					Any position other than front wiper stop position	Battery voltage
19 (W)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
25 (G)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
26*1 (R)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
27 (O)	Ground	Ignition relay monitor	Input	Ignition switch OFF or ACC		Battery voltage
				Ignition switch ON		0 V
28 (L)	Ground	Push-button ignition switch	Input	Press the push-button ignition switch		0 V
				Release the push-button ignition switch		Battery voltage
30 (GR)	Ground	Starter relay control	Input	A/T models	A/T selector lever in any position other than P or N (ignition switch ON)	0 V
					A/T selector lever P or N (ignition switch ON)	Battery voltage
				M/T models	Release the clutch pedal	0 V
					Depress the clutch pedal	Battery voltage
32 (L)	Ground	Steering lock unit condition-1	Input	Steering lock is activated		0 V
				Steering lock is deactivated		Battery voltage
33 (P)	Ground	Steering lock unit condition-2	Input	Steering lock is activated		Battery voltage
				Steering lock is deactivated		0 V
36 (G)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
39 (P)	—	CAN - L	Input/ Output	—		—
40 (L)	—	CAN - H	Input/ Output	—		—
41 (B/W)	Ground	Ground	—	Ignition switch ON		0 V
42 (Y)	Ground	Cooling fan relay control	Input	Ignition switch OFF or ACC		0 V
				Ignition switch ON		0.7 V
43 (SB)	Ground	A/T device (Detention switch)	Input	Ignition switch ON	Press the A/T selector button (A/T selector lever P)	Battery voltage
					<ul style="list-style-type: none"> • A/T selector lever in any position other than P • Release the A/T selector button (A/T selector lever P) 	
44 (W)	Ground	Horn relay control	Input	The horn is deactivated		Battery voltage
				The horn is activated		0 V

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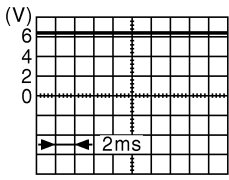
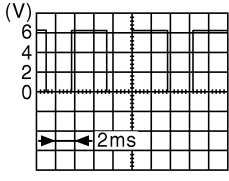
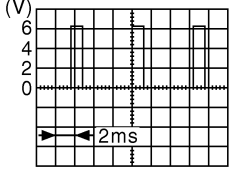
[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
45 (G)	Ground	Anti theft horn relay control	Input	The horn is deactivated		Battery voltage
				The horn is activated		0 V
46 (BR)	Ground	Starter relay control	Input	A/T models	A/T selector lever in any position other than P or N (ignition switch ON)	0 V
					A/T selector lever P or N (ignition switch ON)	Battery voltage
				M/T models	Release the clutch pedal	0 V
					Depress the clutch pedal	Battery voltage
48 (L)	Ground	A/C relay power supply	Output	Engine running	A/C switch OFF	0 V
					A/C switch ON (A/C compressor is operating)	Battery voltage
49 (R)	Ground	ECM relay power supply	Output	Ignition switch OFF (For a few seconds after turning ignition switch OFF)		0 V
				<ul style="list-style-type: none"> Ignition switch ON Ignition switch OFF (More than a few seconds after turning ignition switch OFF) 		Battery voltage
51 (G)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
53 (W)	Ground	ECM relay power supply	Output	Ignition switch OFF (For a few seconds after turning ignition switch OFF)		0 V
				<ul style="list-style-type: none"> Ignition switch ON Ignition switch OFF (More than a few seconds after turning ignition switch OFF) 		Battery voltage
54 (R)	Ground	Throttle control motor relay power supply	Output	Ignition switch OFF (For a few seconds after turning ignition switch OFF)		0 V
				<ul style="list-style-type: none"> Ignition switch ON Ignition switch OFF (More than a few seconds after turning ignition switch OFF) 		Battery voltage
55 (BR)	Ground	ECM power supply	Output	Ignition switch OFF		Battery voltage
56 (V)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
57 (R)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
58 (Y)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
69 (W)	Ground	ECM relay control	Output	Ignition switch OFF (For a few seconds after turning ignition switch OFF)		Battery voltage
				<ul style="list-style-type: none"> Ignition switch ON Ignition switch OFF (More than a few seconds after turning ignition switch OFF) 		0 - 1.5 V

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

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[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
70 (O)	Ground	Throttle control motor re- lay control	Output	Ignition switch ON → OFF		0 -1.0 V ↓ Battery voltage ↓ 0 V
				Ignition switch ON		0 - 1.0 V
73*2 (P)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
74 (G)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
75 (Y)	Ground	Oil pressure switch	Input	Ignition switch ON	Engine stopped	0 V
					Engine running	Battery voltage
76 (V)	Ground	Power generation com- mand signal	Output	Ignition switch ON		 6.3 V
				40% is set on "ACTIVE TEST", "AL- TERNATOR DUTY" of "ENGINE"		 3.8 V
				80% is set on "ACTIVE TEST", "AL- TERNATOR DUTY" of "ENGINE"		 1.4 V
77 (L)	Ground	Fuel pump relay control	Output	<ul style="list-style-type: none"> • Approximately 1 second after turning the ignition switch ON • Engine running 		0 - 1.0 V
				Approximately 1 second or more after turning the ignition switch ON		Battery voltage
80 (W)	Ground	Starter motor	Output	At engine cranking		Battery voltage
83 (R)	Ground	Headlamp LO (RH)	Output	Ignition switch ON	Lighting switch OFF	0 V
					Lighting switch 2ND	Battery voltage
84 (P)	Ground	Headlamp LO (LH)	Output	Ignition switch ON	Lighting switch OFF	0 V
					Lighting switch 2ND	Battery voltage

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[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
86 (W)	Ground	Front fog lamp (RH)	Output	Lighting switch 2ND	<ul style="list-style-type: none"> • Front fog lamp switch ON • Daytime running light activated (Only for Canada) 	Battery voltage
					Front fog lamp switch OFF	0 V
87 (L)	Ground	Front fog lamp (LH)	Output	Lighting switch 2ND	<ul style="list-style-type: none"> • Front fog lamp switch ON • Daytime running light activated (Only for Canada) 	Battery voltage
					Front fog lamp switch OFF	0 V
88 (G)	Ground	Washer pump power supply	Output	Ignition switch ON		Battery voltage
89 (BR)	Ground	Headlamp HI (RH)	Output	Ignition switch ON	<ul style="list-style-type: none"> • Lighting switch HI • Lighting switch PASS 	Battery voltage
					Lighting switch OFF	0 V
90 (P)	Ground	Headlamp HI (LH)	Output	Ignition switch ON	<ul style="list-style-type: none"> • Lighting switch HI • Lighting switch PASS 	Battery voltage
					Lighting switch OFF	0 V
91 (P)	Ground	Parking lamp (RH)	Output	Ignition switch ON	Lighting switch 1ST	Battery voltage
					Lighting switch OFF	0 V
92 (O)	Ground	Parking lamp (LH)	Output	Ignition switch ON	Lighting switch 1ST	Battery voltage
					Lighting switch OFF	0 V
97 (V)	Ground	Cooling fan control	Output	Engine idling		0 - 5 V
104 (LG)	Ground	Hood switch	Input	Close the hood		Battery voltage
				Open the hood		0 V

*1: Only for the models with ICC system

*2: M/T models only

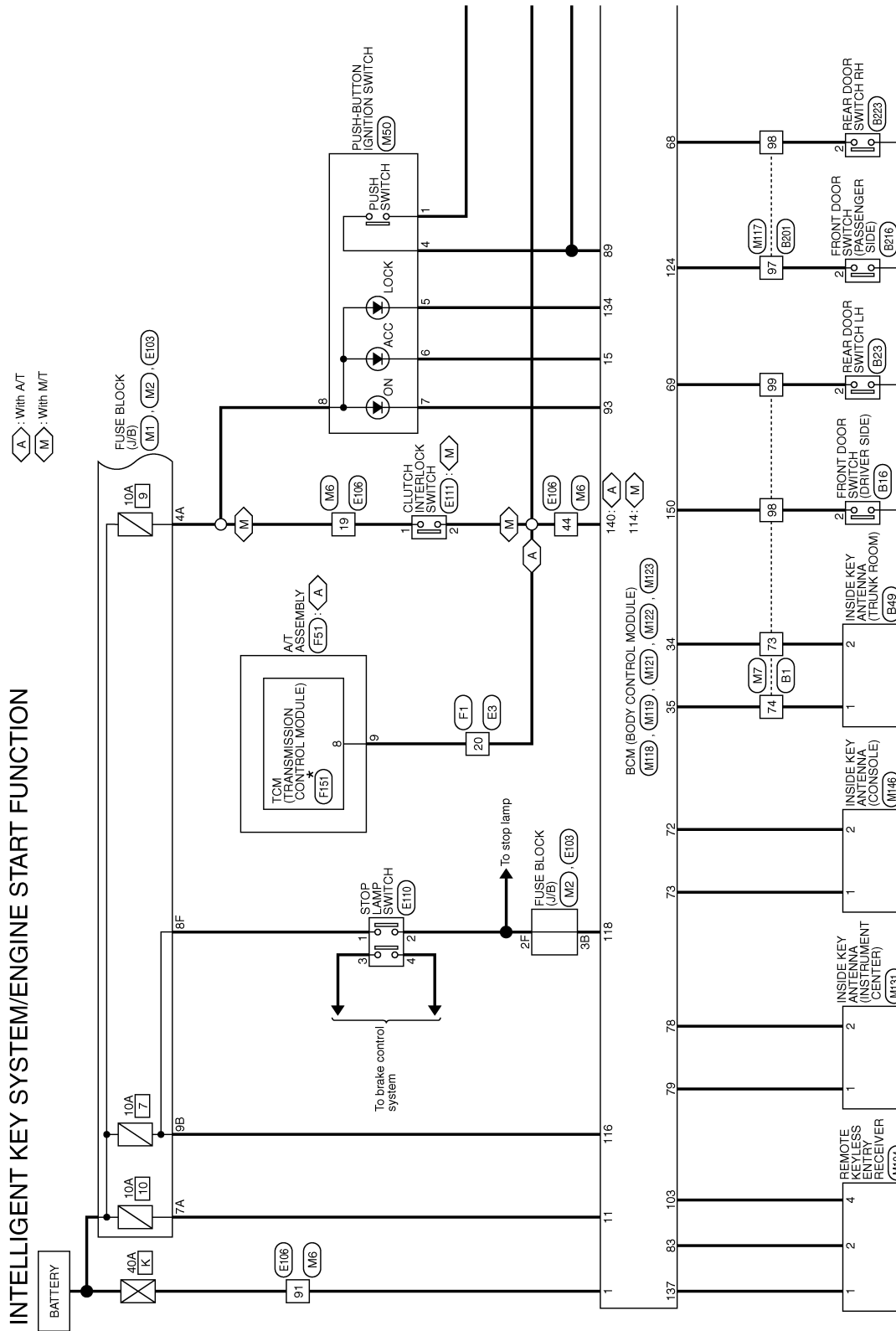
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

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[INTELLIGENT KEY SYSTEM]

Wiring Diagram — INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION —

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*: This connector is not shown in "Harness Layout".

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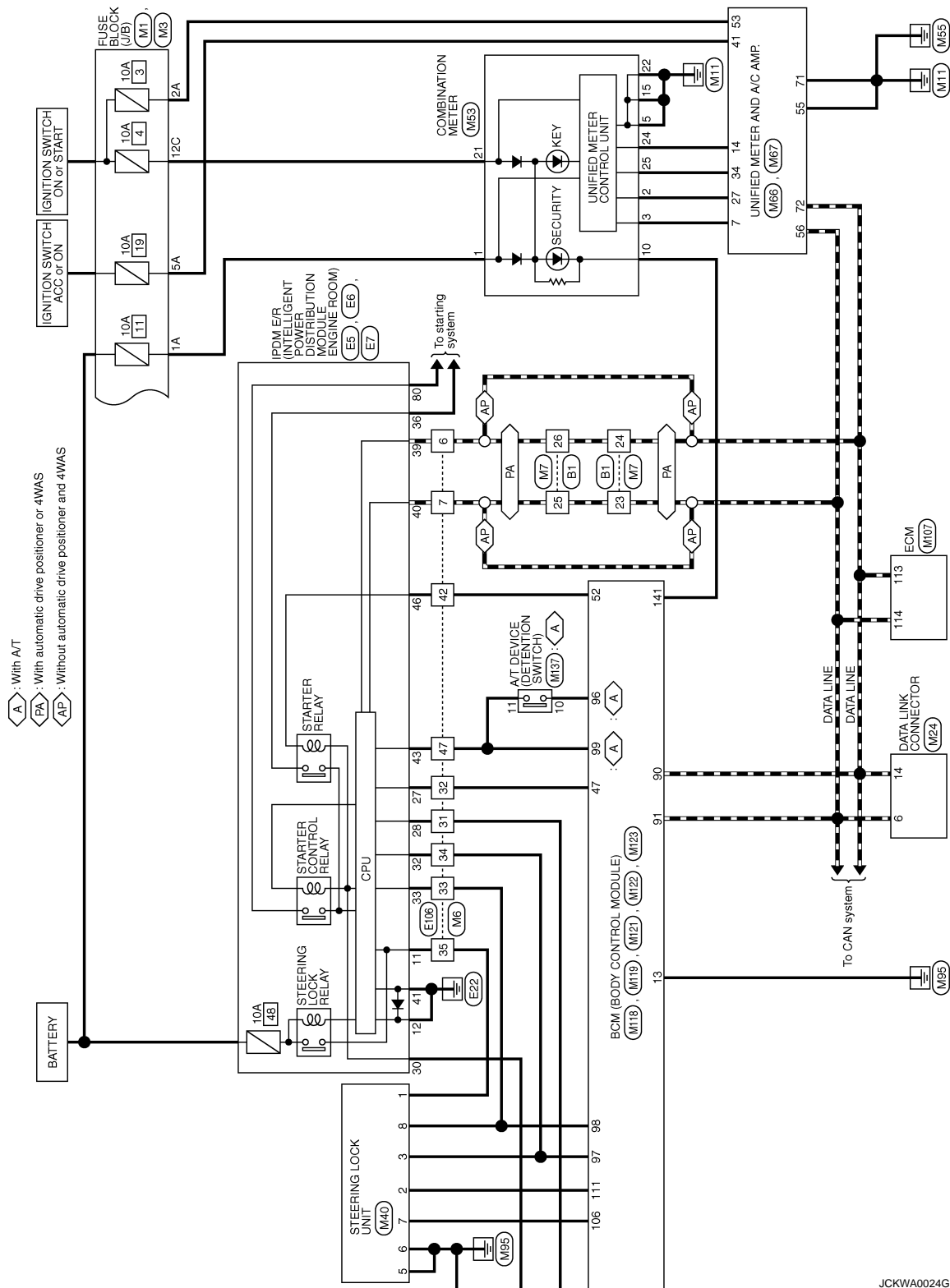
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[INTELLIGENT KEY SYSTEM]



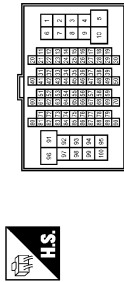
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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) [INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	THB0FW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
23	L	-
24	P	-
25	L	-
26	P	-
73	G	-
74	R	-
98	V	-
99	R	-

Connector No.	B16
Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)
Connector Type	A03FW



Terminal No.	Color of Wire	Signal Name [Specification]
2	V	-

Connector No.	B23
Connector Name	REAR DOOR SWITCH LH
Connector Type	A03FW



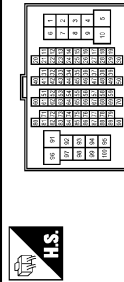
Terminal No.	Color of Wire	Signal Name [Specification]
2	R	-

Connector No.	B49
Connector Name	INSIDE KEY ANTENNA (TRUNK ROOM)
Connector Type	FK02FSY



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

Connector No.	B201
Connector Name	WIRE TO WIRE
Connector Type	THB0FW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
97	GR	-
98	BR	-

Connector No.	B216
Connector Name	FRONT DOOR SWITCH (PASSENGER SIDE)
Connector Type	A03FW



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

Connector No.	B223
Connector Name	REAR DOOR SWITCH RH
Connector Type	A03FW



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

Connector No.	E3
Connector Name	WIRE TO WIRE
Connector Type	SA-A38MB-RS1P-SLZZ



Terminal No.	Color of Wire	Signal Name [Specification]
20	GR	-

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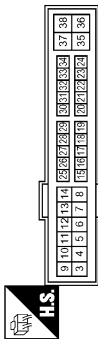
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

Connector No.	E5
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-IM4-IV



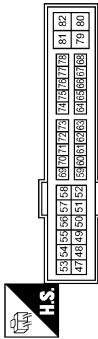
Terminal No.	Color of Wire	Signal Name [Specification]
11	BR	-
12	B/W	-
27	O	-
28	L	-
30	GR	-
32	L	-
33	P	-
36	G	-

Connector No.	E6
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-NH



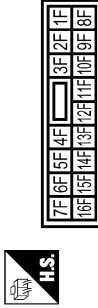
Terminal No.	Color of Wire	Signal Name [Specification]
39	P	-
40	L	-
41	B/W	-
43	SB	-
46	BR	-

Connector No.	E7
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-IM4



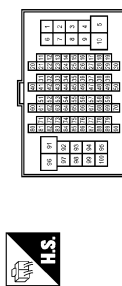
Terminal No.	Color of Wire	Signal Name [Specification]
80	W	-

Connector No.	E103
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS18FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
2F	W	-
8F	L	-

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH20FW-CS16-IM4



Terminal No.	Color of Wire	Signal Name [Specification]
6	P	-
7	L	-
18	G	-
31	L	-
32	O	-
33	P	-
34	L	-
35	BR	-
42	BR	-
44	GR	-
47	SB	-
91	W	-

Connector No.	E110
Connector Name	STOP LAMP SWITCH
Connector Type	IM4FW-LC



Terminal No.	Color of Wire	Signal Name [Specification]
1	L	-
2	W	-
3	L	-
4	SB	-

Connector No.	E111
Connector Name	CLUTCH INTERLOCK SWITCH
Connector Type	S2FL



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

Connector No.	F1
Connector Name	WIRE TO WIRE
Connector Type	SA438FB-RS10-SJZ2



Terminal No.	Color of Wire	Signal Name [Specification]
20	GR	-

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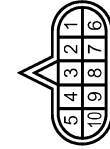
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

Connector No.	F51
Connector Name	A/T ASSEMBLY
Connector Type	IRK10FG-DDY



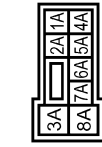
Terminal No.	9	Color of Wire	GR	Signal Name [Specification]	-
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Connector No.	F151
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Type	SP10EBGY



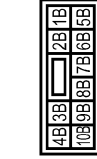
Terminal No.	8	Color of Wire	G	Signal Name [Specification]	START RLY
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Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS08FW-M2



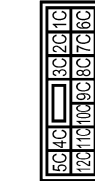
Terminal No.	1A	Color of Wire	GR	Signal Name [Specification]	-
	2A		G		-
	4A		P		-
	5A		V		-
	7A		R		-

Connector No.	M2
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS10FW-GS



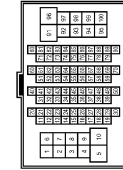
Terminal No.	3B	Color of Wire	P	Signal Name [Specification]	-
	4B		SB		-

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FW-GS



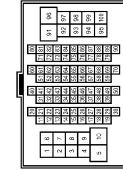
Terminal No.	12C	Color of Wire	R	Signal Name [Specification]	-
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Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH80MM-CS19-TM4



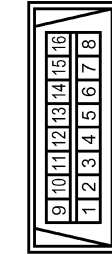
Terminal No.	6	Color of Wire	P	Signal Name [Specification]	-
	7		L		-
	19		G		-
	31		L		-
	32		Y		-
	33		P		-
	34		L		-
	35		BR		-
	42		SB		-
	44		GR		- [WITH A.7]
	47		R		-
	91		W		-

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH80MM-CS18-TM4



Terminal No.	23	Color of Wire	L	Signal Name [Specification]	-
	24		P		-
	25		L		-
	26		L		-
	73		SB		-
	74		V		-
	99		GR		-
	99		R		-

Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



Terminal No.	6	Color of Wire	L	Signal Name [Specification]	-
	14		P		-

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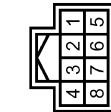
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

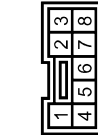
[INTELLIGENT KEY SYSTEM]

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

Connector No.	M40
Connector Name	STEERING LOCK UNIT
Connector Type	TH08FW-NH



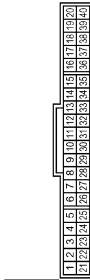
Connector No.	M50
Connector Name	PUSH-BUTTON IGNITION SWITCH
Connector Type	TK08FBR



Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	S/L 12V (MECHANICAL)
2	Y	S/L (K LINE)
3	L	S/L COND.L1 ON1
5	B	GND
6	B	GND
7	W	S/L 12V (CPU)
8	P	S/L COND.L1 ON2

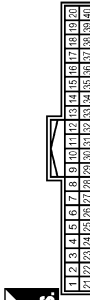
Terminal No.	Color of Wire	Signal Name [Specification]
1	B	-
4	BR	-
5	GR	-
6	Y	-
7	V	-
8	P	-

Connector No.	M53
Connector Name	COMBINATION METER
Connector Type	SAB40FW



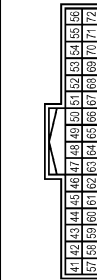
Terminal No.	Color of Wire	Signal Name [Specification]
1	GR	BAT
2	LG	COMM (METER->AMP)
3	GR	COMM (METER->METER)
5	B	GND
10	G	SECURITY
15	B	GND
21	R	IGN
22	B	GND
24	BR	COMM (LGD->AMP)
25	Y	COMM (AMP->LGD)

Connector No.	M66
Connector Name	UNIFIED METER AND A/C AMP.
Connector Type	TH40FW-NH



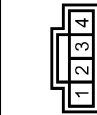
Terminal No.	Color of Wire	Signal Name [Specification]
7	GR	COMM (AMP->METER)
14	BR	COMM (LGD->AMP)
27	LG	COMM (METER->AMP)
34	Y	COMM (AMP->LGD)

Connector No.	M67
Connector Name	UNIFIED METER AND A/C AMP.
Connector Type	TH02FW-NH



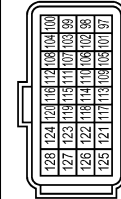
Terminal No.	Color of Wire	Signal Name [Specification]
41	V	ACC
53	G	IGN
55	B	GND
56	L	CAN-H
71	B	GND
72	P	CAN-L

Connector No.	M104
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Type	LAB04FB



Terminal No.	Color of Wire	Signal Name [Specification]
1	O	GND
2	Y	SIGNAL OUTPUT
4	LG	BATTERY

Connector No.	M107
Connector Name	ECM
Connector Type	MAA24EGY-ME48-LH-Z



Terminal No.	Color of Wire	Signal Name [Specification]
113	P	VHECANL1
114	L	VHECANLH1

Connector No.	M117
Connector Name	WIRE TO WIRE
Connector Type	TH00MW-GS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
97	LG	-
98	BR	-

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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) [INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	M03FB-LG



Terminal No.	Color of Wire	Signal Name [Specification]
1	W	BAT. (F/L)

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-GS



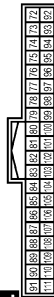
Terminal No.	Color of Wire	Signal Name [Specification]
11	R	BAT. (FUSE)
13	B	GND
15	Y	ACC-LED

Connector No.	M121
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FGY-NH



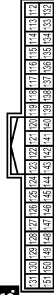
Terminal No.	Color of Wire	Signal Name [Specification]
34	SB	TRUNK ANTI-
35	V	TRUNK ANTI+
47	Y	ING LISM CONTI
52	SB	ST CONT USM
88	BR	DOOR SW (RR RH)
89	R	DOOR SW (RR LH)

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



Terminal No.	Color of Wire	Signal Name [Specification]
72	R	ROOM ANTI2-
73	G	ROOM ANTI2+
78	Y	ROOM ANTI-
79	BR	ROOM ANTI+
83	Y	KEYLESS TUNER SIGNAL
89	BR	ENG SW
90	P	CAN-L
91	L	CAN-H
93	V	ON LED
96	GR	A/T DEVICE
97	L	S/L CONDITION 1

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH



Terminal No.	Color of Wire	Signal Name [Specification]
114	R	CLUTCH SW
116	SB	STOP LAMP LOW
118	P	STOP LAMP HIGH
124	LG	DOOR SW (AS)
134	GR	LOCK LED
137	O	SENSOR GND
140	GR	SHIFT N/P
141	G	SECURITY INDICATOR OUTPUT
150	GR	DOOR SW (DR)

Connector No.	M131
Connector Name	INSIDE KEY ANTENNA (INSTRUMENT CENTER)
Connector Type	RK02FY



Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	-
2	Y	-

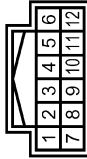
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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

Connector No.	M137
Connector Name	A/T DEVICE
Connector Type	TH12FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
10	GR	-
11	R	-

Connector No.	M146
Connector Name	INSIDE KEY ANTENNA (CONSOLE)
Connector Type	RK02FGY



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

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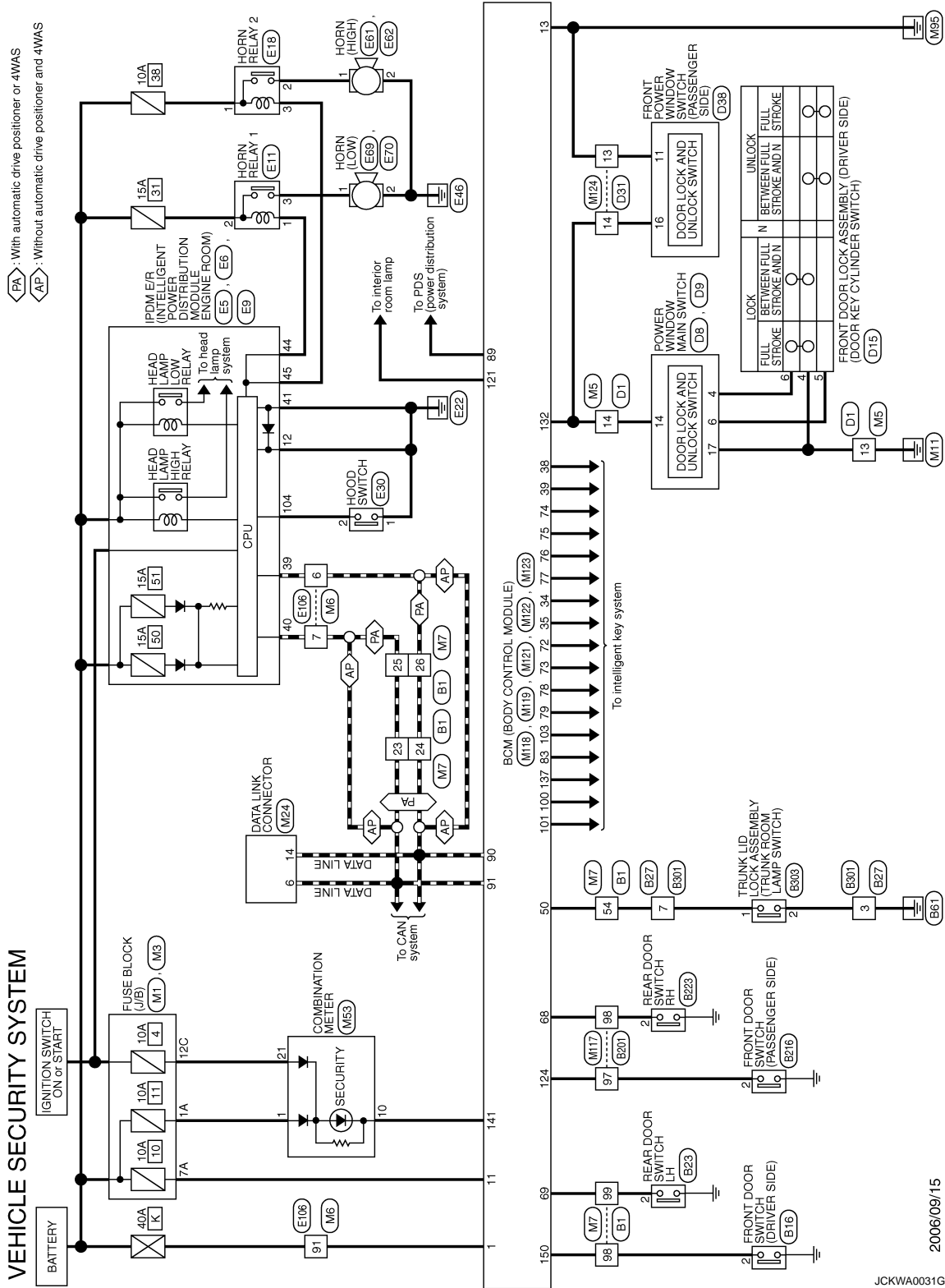
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Wiring Diagram — VEHICLE SECURITY SYSTEM —

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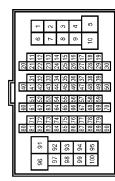

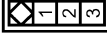

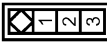
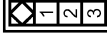
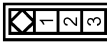

SEC

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

VEHICLE SECURITY SYSTEM

<table border="1"> <tr><td>Connector No.</td><td>B1</td></tr> <tr><td>Connector Name</td><td>WIRE TO WIRE</td></tr> <tr><td>Connector Type</td><td>THB0FW-GS16-TM4</td></tr> </table>  <table border="1"> <tr><td>Terminal No.</td><td>Color of Wire</td><td>Signal Name</td></tr> <tr><td>23</td><td>L</td><td>-</td></tr> <tr><td>24</td><td>P</td><td>-</td></tr> <tr><td>25</td><td>L</td><td>-</td></tr> <tr><td>26</td><td>P</td><td>-</td></tr> <tr><td>54</td><td>L</td><td>-</td></tr> <tr><td>98</td><td>V</td><td>-</td></tr> <tr><td>99</td><td>R</td><td>-</td></tr> </table>	Connector No.	B1	Connector Name	WIRE TO WIRE	Connector Type	THB0FW-GS16-TM4	Terminal No.	Color of Wire	Signal Name	23	L	-	24	P	-	25	L	-	26	P	-	54	L	-	98	V	-	99	R	-	<table border="1"> <tr><td>Connector No.</td><td>B27</td></tr> <tr><td>Connector Name</td><td>WIRE TO WIRE</td></tr> <tr><td>Connector Type</td><td>NS18MW-GS</td></tr> </table>  <table border="1"> <tr><td>Terminal No.</td><td>Color of Wire</td><td>Signal Name</td></tr> <tr><td>3</td><td>B</td><td>-</td></tr> <tr><td>7</td><td>L</td><td>-</td></tr> </table>	Connector No.	B27	Connector Name	WIRE TO WIRE	Connector Type	NS18MW-GS	Terminal No.	Color of Wire	Signal Name	3	B	-	7	L	-
Connector No.	B1																																													
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7	L	-																																												
<table border="1"> <tr><td>Connector No.</td><td>B23</td></tr> <tr><td>Connector Name</td><td>REAR DOOR SWITCH LH</td></tr> <tr><td>Connector Type</td><td>A03FW</td></tr> </table>  <table border="1"> <tr><td>Terminal No.</td><td>Color of Wire</td><td>Signal Name</td></tr> <tr><td>2</td><td>R</td><td>-</td></tr> </table>	Connector No.	B23	Connector Name	REAR DOOR SWITCH LH	Connector Type	A03FW	Terminal No.	Color of Wire	Signal Name	2	R	-	<table border="1"> <tr><td>Connector No.</td><td>B301</td></tr> <tr><td>Connector Name</td><td>WIRE TO WIRE</td></tr> <tr><td>Connector Type</td><td>NS18FW-GS</td></tr> </table>  <table border="1"> <tr><td>Terminal No.</td><td>Color of Wire</td><td>Signal Name</td></tr> <tr><td>3</td><td>B</td><td>-</td></tr> <tr><td>7</td><td>V</td><td>-</td></tr> </table>	Connector No.	B301	Connector Name	WIRE TO WIRE	Connector Type	NS18FW-GS	Terminal No.	Color of Wire	Signal Name	3	B	-	7	V	-																		
Connector No.	B23																																													
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Connector Type	A03FW																																													
Terminal No.	Color of Wire	Signal Name																																												
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Connector No.	B301																																													
Connector Name	WIRE TO WIRE																																													
Connector Type	NS18FW-GS																																													
Terminal No.	Color of Wire	Signal Name																																												
3	B	-																																												
7	V	-																																												
<table border="1"> <tr><td>Connector No.</td><td>B16</td></tr> <tr><td>Connector Name</td><td>FRONT DOOR SWITCH (DRIVER SIDE)</td></tr> <tr><td>Connector Type</td><td>A03FW</td></tr> </table>  <table border="1"> <tr><td>Terminal No.</td><td>Color of Wire</td><td>Signal Name</td></tr> <tr><td>2</td><td>V</td><td>-</td></tr> </table>	Connector No.	B16	Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)	Connector Type	A03FW	Terminal No.	Color of Wire	Signal Name	2	V	-	<table border="1"> <tr><td>Connector No.</td><td>B223</td></tr> <tr><td>Connector Name</td><td>REAR DOOR SWITCH RH</td></tr> <tr><td>Connector Type</td><td>A03FW</td></tr> </table>  <table border="1"> <tr><td>Terminal No.</td><td>Color of Wire</td><td>Signal Name</td></tr> <tr><td>2</td><td>BR</td><td>-</td></tr> </table>	Connector No.	B223	Connector Name	REAR DOOR SWITCH RH	Connector Type	A03FW	Terminal No.	Color of Wire	Signal Name	2	BR	-																					
Connector No.	B16																																													
Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)																																													
Connector Type	A03FW																																													
Terminal No.	Color of Wire	Signal Name																																												
2	V	-																																												
Connector No.	B223																																													
Connector Name	REAR DOOR SWITCH RH																																													
Connector Type	A03FW																																													
Terminal No.	Color of Wire	Signal Name																																												
2	BR	-																																												
<table border="1"> <tr><td>Connector No.</td><td>B216</td></tr> <tr><td>Connector Name</td><td>FRONT DOOR SWITCH (PASSENGER SIDE)</td></tr> <tr><td>Connector Type</td><td>A03FW</td></tr> </table>  <table border="1"> <tr><td>Terminal No.</td><td>Color of Wire</td><td>Signal Name</td></tr> <tr><td>2</td><td>GR</td><td>-</td></tr> </table>	Connector No.	B216	Connector Name	FRONT DOOR SWITCH (PASSENGER SIDE)	Connector Type	A03FW	Terminal No.	Color of Wire	Signal Name	2	GR	-	<table border="1"> <tr><td>Connector No.</td><td>B201</td></tr> <tr><td>Connector Name</td><td>WIRE TO WIRE</td></tr> <tr><td>Connector Type</td><td>THB0FW-GS16-TM4</td></tr> </table>  <table border="1"> <tr><td>Terminal No.</td><td>Color of Wire</td><td>Signal Name</td></tr> <tr><td>97</td><td>GR</td><td>-</td></tr> <tr><td>98</td><td>BR</td><td>-</td></tr> </table>	Connector No.	B201	Connector Name	WIRE TO WIRE	Connector Type	THB0FW-GS16-TM4	Terminal No.	Color of Wire	Signal Name	97	GR	-	98	BR	-																		
Connector No.	B216																																													
Connector Name	FRONT DOOR SWITCH (PASSENGER SIDE)																																													
Connector Type	A03FW																																													
Terminal No.	Color of Wire	Signal Name																																												
2	GR	-																																												
Connector No.	B201																																													
Connector Name	WIRE TO WIRE																																													
Connector Type	THB0FW-GS16-TM4																																													
Terminal No.	Color of Wire	Signal Name																																												
97	GR	-																																												
98	BR	-																																												

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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

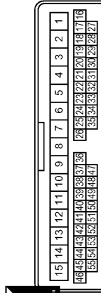
VEHICLE SECURITY SYSTEM

Connector No.	B303
Connector Name	TRUNK LID LOCK ASSEMBLY
Connector Type	TB03FW



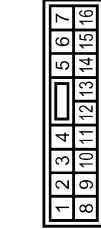
Terminal No.	Color of Wire	Signal Name
1	V	-
2	B	-

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Type	TH40FW-CS15



Terminal No.	Color of Wire	Signal Name
13	B	-
14	V	-

Connector No.	D8
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS18FW-CS



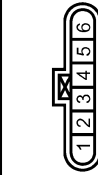
Terminal No.	Color of Wire	Signal Name
4	V	-
6	Y	-
14	V	-

Connector No.	D9
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS03FW-CS



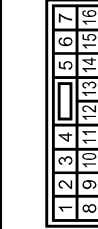
Terminal No.	Color of Wire	Signal Name
17	B	-

Connector No.	D15
Connector Name	FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE)
Connector Type	EW0FY-RS



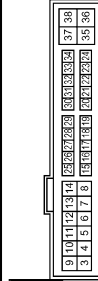
Terminal No.	Color of Wire	Signal Name
4	B	-
5	Y	-
6	V	-

Connector No.	D38
Connector Name	FRONT POWER WINDOW SWITCH (PASSENGER SIDE)
Connector Type	NS18FW-CS



Terminal No.	Color of Wire	Signal Name
11	B	-
16	V	-

Connector No.	E5
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-IMF-V



Terminal No.	Color of Wire	Signal Name
12	B/W	-

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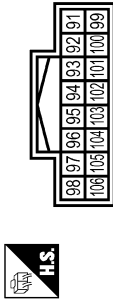
VEHICLE SECURITY SYSTEM

Connector No.	E8
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH08FW-NH



Terminal No.	Color of Wire	Signal Name
39	P	-
40	L	-
41	B/W	-
44	W	-
45	G	-

Connector No.	E9
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH16FW-NH



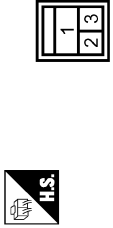
Terminal No.	Color of Wire	Signal Name
104	LG	-

Connector No.	E11
Connector Name	HORN RELAY 1
Connector Type	Z4381 7900A



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	LG	-
3	G	-

Connector No.	E18
Connector Name	HORN RELAY 2
Connector Type	M03FW-R-LC



Terminal No.	Color of Wire	Signal Name
1	R	-
2	Y	-
3	G	-

Connector No.	E30
Connector Name	HOOD SWITCH
Connector Type	RH02FB



Terminal No.	Color of Wire	Signal Name
1	B	-
2	LG	-

Connector No.	E61
Connector Name	HORN (HIGH)
Connector Type	P01FB-A



Terminal No.	Color of Wire	Signal Name
1	Y	-

Connector No.	E62
Connector Name	HORN (HIGH)
Connector Type	P01FB-A



Terminal No.	Color of Wire	Signal Name
2	B	-

Connector No.	E69
Connector Name	HORN (LOW)
Connector Type	P01FB-A



Terminal No.	Color of Wire	Signal Name
1	G	-

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

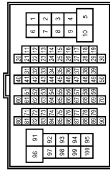
VEHICLE SECURITY SYSTEM

Connector No.	E70
Connector Name	HORN (LOW)
Connector Type	F01FEE-A



Terminal No.	2	Color of Wire	B	Signal Name	-
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Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS1B-TM4



Terminal No.	6	Color of Wire	P	Signal Name	-
Terminal No.	7	Color of Wire	L	Signal Name	-
Terminal No.	91	Color of Wire	W	Signal Name	-

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS08FW-M2



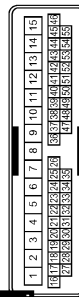
Terminal No.	1A	Color of Wire	GR	Signal Name	-
Terminal No.	7A	Color of Wire	R	Signal Name	-

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FW-GS



Terminal No.	12C	Color of Wire	R	Signal Name	-
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Connector No.	M5
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS15



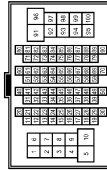
Terminal No.	13	Color of Wire	B	Signal Name	-
Terminal No.	14	Color of Wire	V	Signal Name	-

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS1B-TM4



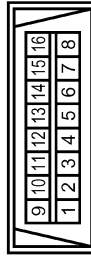
Terminal No.	6	Color of Wire	P	Signal Name	-
Terminal No.	7	Color of Wire	L	Signal Name	-
Terminal No.	91	Color of Wire	W	Signal Name	-

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS1B-TM4



Terminal No.	23	Color of Wire	L	Signal Name	-
Terminal No.	24	Color of Wire	P	Signal Name	-
Terminal No.	25	Color of Wire	L	Signal Name	-
Terminal No.	26	Color of Wire	P	Signal Name	-
Terminal No.	54	Color of Wire	R	Signal Name	-
Terminal No.	99	Color of Wire	GR	Signal Name	-
Terminal No.	99	Color of Wire	R	Signal Name	-

Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD18FW



Terminal No.	6	Color of Wire	L	Signal Name	-
Terminal No.	14	Color of Wire	P	Signal Name	-

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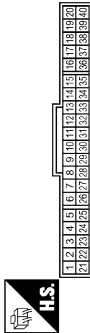
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

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[INTELLIGENT KEY SYSTEM]

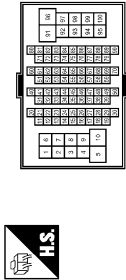
VEHICLE SECURITY SYSTEM

Connector No.	M53
Connector Name	COMBINATION METER
Connector Type	SAB40FW



Terminal No.	Color of Wire	Signal Name
1	GR	BAT
10	G	SECURITY
21	R	IGN

Connector No.	M117
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS18-TM4



Terminal No.	Color of Wire	Signal Name
97	LG	-
98	BR	-

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	M03FB-LG



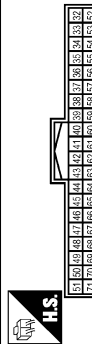
Terminal No.	Color of Wire	Signal Name
1	W	BAT (F/L)

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS18FW-CS



Terminal No.	Color of Wire	Signal Name
11	R	BAT (FUSE)
13	B	GND

Connector No.	M121
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH



Terminal No.	Color of Wire	Signal Name
34	SB	TRUNK ANTI-
35	V	TRUNK ANTI+
38	B	BACK ANTI-
39	W	BACK ANTI+
50	R	TRUNK SW
68	BR	DOOR SW (RR RH)
	R	DOOR SW (RR LH)

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



Terminal No.	Color of Wire	Signal Name
72	R	ROOM ANTI-
73	G	ROOM ANTI+
74	SB	AS DOOR ANTI-
75	BR	AS DOOR ANTI+
76	V	DR DOOR ANTI-
77	LG	DR DOOR ANTI+
78	Y	ROOM ANTI-
79	BR	ROOM ANTI+
83	Y	KEYLESS TUNER SIGNAL
89	BR	ENG SW
90	P	CAN-L

91	L	CAN-H
100	G	AS REQUEST SW
101	SB	DR REQUEST SW
103	LG	KEYLESS TUNER POWER SUPPLY

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH



Terminal No.	Color of Wire	Signal Name
121	R	KEY SWITCH SIGNAL
124	LG	DOOR SW (AS)
132	V	POWER WINDOW SERIAL LINK
141	G	SECURITY INDICATOR OUTPUT
150	GR	DOOR SW (DR)

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VEHICLE SECURITY SYSTEM

Connector No.	M124
Connector Name	WIRE TO WIRE
Connector Type	TH40WV-CS15

Terminal No.	Color of Wire	Signal Name
13	B	-
14	Y	-

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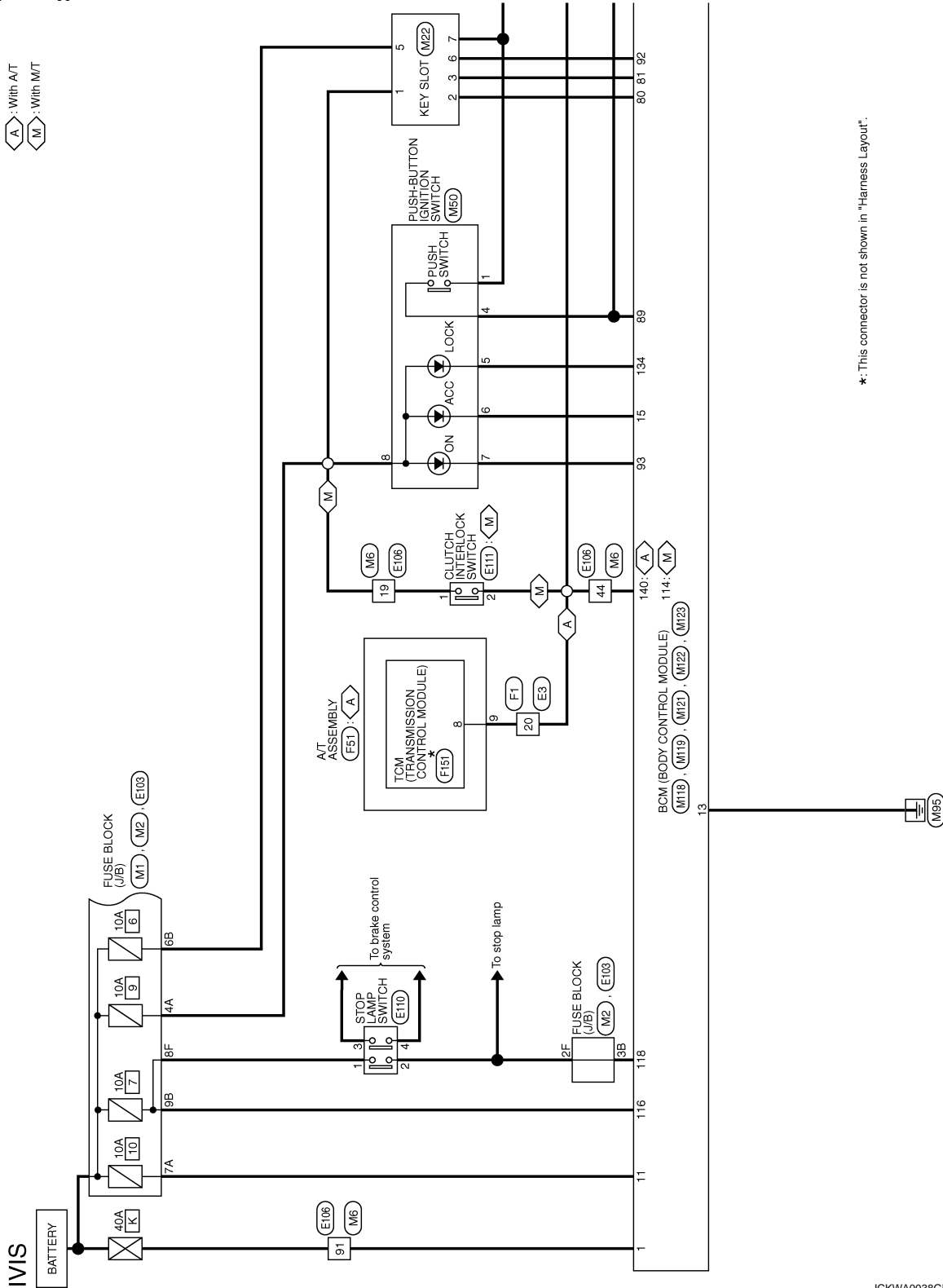
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Wiring Diagram — IVIS —

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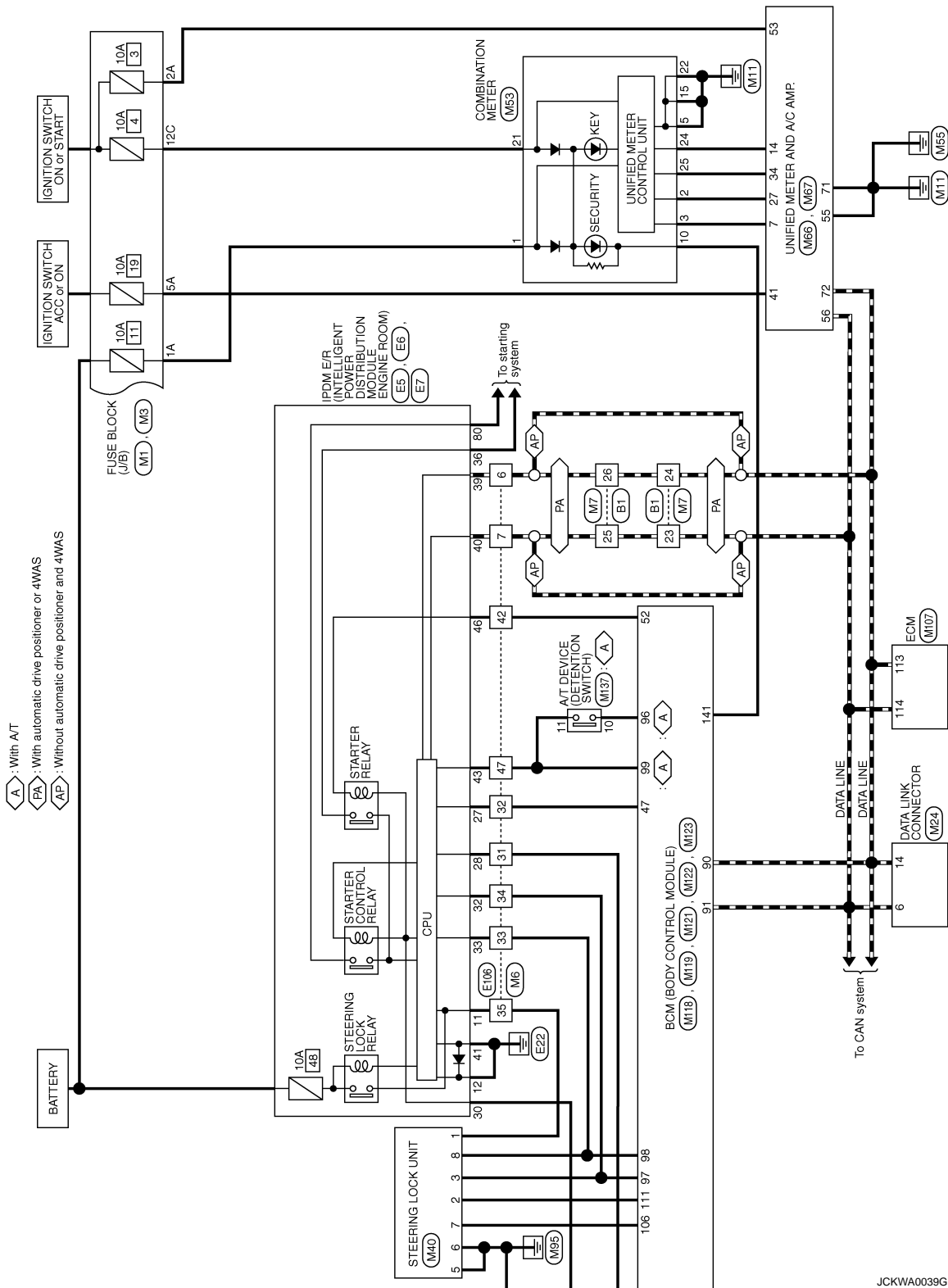
*: This connector is not shown in "Harness Layout".

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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

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[INTELLIGENT KEY SYSTEM]



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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

IVIS

Connector No.	E6
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH89FW-NH



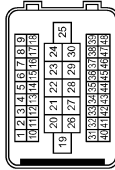
Terminal No.	Color of Wire	Signal Name [Specification]
39	P	-
40	L	-
41	B/W	-
43	SB	-
46	BR	-

Connector No.	E5
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4-1V



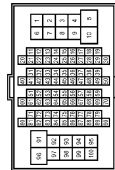
Terminal No.	Color of Wire	Signal Name [Specification]
11	BR	-
12	B/W	-
27	O	-
28	L	-
30	GR	-
32	L	-
33	P	-
36	G	-

Connector No.	E3
Connector Name	WIRE TO WIRE
Connector Type	SA438MB-FS10-SJZ



Terminal No.	Color of Wire	Signal Name [Specification]
20	GR	-

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH89FW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
23	L	-
24	P	-
25	L	-
26	P	-

Connector No.	E110
Connector Name	STOP LAMP SWITCH
Connector Type	M04FW-LC



Terminal No.	Color of Wire	Signal Name [Specification]
1	L	-
2	W	-
3	L	-
4	SB	-

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH89FW-CS16-TM4



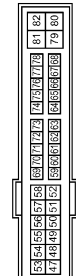
Terminal No.	Color of Wire	Signal Name [Specification]
6	P	-
7	L	-
19	G	-
31	L	-
32	O	-
33	P	-
34	L	-
35	BR	-
42	BR	-
44	GR	-
47	SB	-
91	W	-

Connector No.	E103
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
2F	W	-
8F	L	-

Connector No.	E7
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4



Terminal No.	Color of Wire	Signal Name [Specification]
80	W	-

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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) [INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

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Connector No.	E11
Connector Name	CLUTCH INTERLOCK SWITCH
Connector Type	S02FL



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

Connector No.	F1
Connector Name	WIRE TO WIRE
Connector Type	SA438FB-FRS10-SJZZ



Terminal No.	Color of Wire	Signal Name [Specification]
20	GR	-

Connector No.	F51
Connector Name	A/T ASSEMBLY
Connector Type	RK10FC-DGY



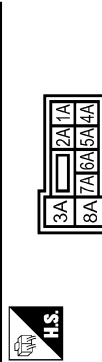
Terminal No.	Color of Wire	Signal Name [Specification]
9	GR	-

Connector No.	F151
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Type	SPT0FEGY



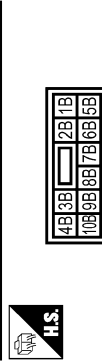
Terminal No.	Color of Wire	Signal Name [Specification]
8	G	START RLY

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS06FW-M2



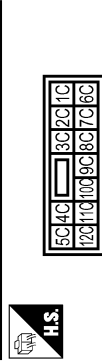
Terminal No.	Color of Wire	Signal Name [Specification]
1A	GR	-
2A	G	-
4A	P	-
5A	V	-
7A	R	-

Connector No.	M2
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS10FW-CS



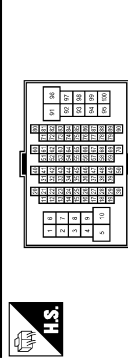
Terminal No.	Color of Wire	Signal Name [Specification]
3B	P	-
6B	Y	-
9B	SB	-

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
12C	R	-

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH60MW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
6	P	-
7	L	-
19	G	-
31	L	-
32	Y	-
33	P	-
34	L	-
35	BR	-
42	SB	-
44	GR	- [With A/T]
47	R	-
91	W	-

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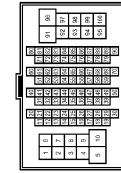
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

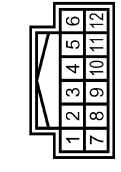
IVIS

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



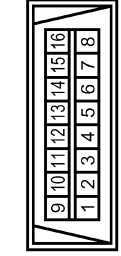
Terminal No.	Color of Wire	Signal Name [Specification]
23	L	-
24	P	-
25	L	-
26	P	-

Connector No.	M22
Connector Name	KEY SLOT
Connector Type	TH12FW-NH



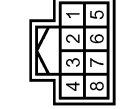
Terminal No.	Color of Wire	Signal Name [Specification]
1	R	BAT
2	GR	GLOCK
3	W	DATA
5	Y	ILL BAT
6	LG	ILL
7	B	GND

Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD18FW



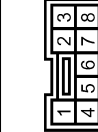
Terminal No.	Color of Wire	Signal Name [Specification]
6	L	-
14	P	-

Connector No.	M40
Connector Name	STEERING LOCK UNIT
Connector Type	TH82FW-NH



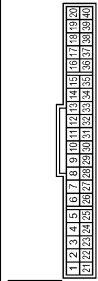
Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	S/L 12V (MECHANICAL)
2	Y	S/L (K LINE)
3	L	S/L COND.L/ON1
5	B	GND
6	B	GND
7	W	S/L 12V (CPU)
8	P	S/L COND.L/ON2

Connector No.	M50
Connector Name	PUSH-BUTTON IGNITION SWITCH
Connector Type	TK82FBR



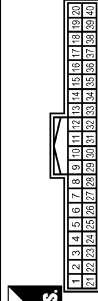
Terminal No.	Color of Wire	Signal Name [Specification]
1	B	-
4	BR	-
5	GR	-
6	Y	-
7	V	-
8	P	-

Connector No.	M53
Connector Name	COMBINATION METER
Connector Type	SAB40FW



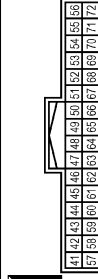
Terminal No.	Color of Wire	Signal Name [Specification]
1	GR	BAT
2	LG	COMM (METER->AMP)
3	GR	COMM (AMP->METER)
5	B	GND
10	G	SECURITY
15	B	GND
21	R	IGN
22	B	GND
24	BR	COMM (LCD->AMP)
25	Y	COMM (AMP->LCD)

Connector No.	M66
Connector Name	UNIFIED METER AND A.C AMP.
Connector Type	TH40FY-NH



Terminal No.	Color of Wire	Signal Name [Specification]
7	GR	COMM (AMP->METER)
14	BR	COMM (LCD->AMP)
27	LG	COMM (METER->AMP)
34	Y	COMM (AMP->LCD)

Connector No.	M67
Connector Name	UNIFIED METER AND A.C AMP.
Connector Type	TH82FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
41	V	ACC
53	G	IGN
55	B	GND
56	L	CAN-H
71	B	GND
72	P	CAN-L

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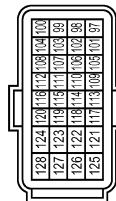
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]


IVIS

Connector No.	M107
Connector Name	ECM
Connector Type	MAA24FGY-MEA8-LH-Z




Terminal No.	Color of Wire	Signal Name [Specification]
113	P	VHEGAN L1
114	L	VHEGAN HI

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	MA3FB-LC



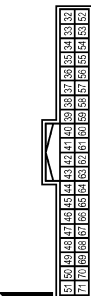
Terminal No.	Color of Wire	Signal Name [Specification]
1	W	BAT (F/L)

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS18FW-CS




Terminal No.	Color of Wire	Signal Name [Specification]
11	R	BAT (FUSE)
13	B	GND
15	Y	ACCL LED

Connector No.	M121
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FGY-NH



Terminal No.	Color of Wire	Signal Name [Specification]
47	Y	IMG USM CONT1
52	SB	ST CONT USM


Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



Terminal No.	Color of Wire	Signal Name [Specification]
80	GR	IMMOBI ANTENNA CONTROL
81	W	IMMOBI ANTENNA SIGNAL
88	BR	ENG SW
90	P	CAN-L
91	L	CAN-H
92	LG	KEY SLOT ILL
93	V	ON LED
96	GR	A/T DEVICE
97	L	S/L CONDITION 1
98	P	S/L CONDITION 2
99	R	SHIFT P

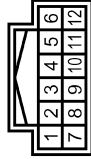
106	W	S/L 12V (GPU)
111	Y	S/L (K LINE)

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH



Terminal No.	Color of Wire	Signal Name [Specification]
114	R	CLUTCH SW
116	SB	STOP LAMP LOW
118	P	STOP LAMP HIGH
134	GR	LOCK LED
140	GR	SHIFT N/P
141	G	SECURITY INDICATOR OUTPUT

Connector No.	M137
Connector Name	A/T DEVICE
Connector Type	TH12FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
10	GR	-
11	R	-

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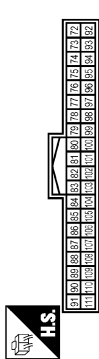
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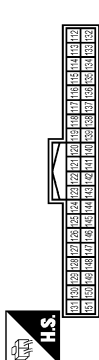
106	W	S/L 12V (GPU)
111	Y	S/L (K LINE)

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH




Terminal No.	Color of Wire	Signal Name
80	GR	IMMOBI ANTENNA CONTROL
81	W	IMMOBI ANTENNA SIGNAL
88	BR	ENG SW
90	P	CAN-L
91	L	CAN-H
92	LG	KEY SLOT ILL
93	V	ON LED
96	GR	A/T DEVICE
97	L	S/L CONDITION 1
98	P	S/L CONDITION 2
99	R	SHIFT P

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FC-NH



Terminal No.	Color of Wire	Signal Name
114	R	CLUTCH SW
116	SB	STOP LAMP LOW
118	P	STOP LAMP HIGH
134	GR	LOCK LED
140	GR	SHIFT N/P
141	G	SECURITY INDICATOR OUTPUT

Connector No.	M137
Connector Name	A/T DEVICE
Connector Type	TH12FW-NH



Terminal No.	Color of Wire	Signal Name
10	GR	-
11	R	-

Fail Safe

CAN COMMUNICATION CONTROL

When CAN communication with ECM and BCM is impossible, IPDM E/R performs fail-safe control. After CAN communication recovers normally, it also returns to normal control.

If No CAN Communication Is Available With ECM

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INFOID:000000000961495

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Control part	Fail-safe operation
Cooling fan	<ul style="list-style-type: none"> • Outputs the pulse duty signal (PWM signal) 100% when the ignition switch is turned ON • Outputs the pulse duty signal (PWM signal) 0% when the ignition switch is turned OFF
A/C compressor	A/C relay OFF
Alternator	Outputs the power generation command signal (PWM signal) 0%

If No CAN Communication Is Available With BCM

Control part	Fail-safe operation
Headlamp	<ul style="list-style-type: none"> • Turns ON the headlamp low relay when the ignition switch is turned ON • Turns OFF the headlamp low relay when the ignition switch is turned OFF • Headlamp high relay OFF
<ul style="list-style-type: none"> • Parking lamps • License plate lamps • Side maker lamps • Illuminations • Tail lamps 	<ul style="list-style-type: none"> • Turns ON the tail lamp relay when the ignition switch is turned ON • Turns OFF the tail lamp relay when the ignition switch is turned OFF
Front wiper	<ul style="list-style-type: none"> • The status just before activation of fail-safe control is maintained until the ignition switch is turned OFF while the front wiper is operating at LO or HI speed. • The wiper is operated at LO speed until the ignition switch is turned OFF if the fail-safe control is activated while the front wiper is set in the INT mode and the front wiper motor is operating.
Front fog lamps	Front fog lamp relay OFF
Horn	Horn OFF
Ignition relay	The status just before activation of fail-safe is maintained.
Starter motor	Starter control relay OFF
Steering lock unit	Steering lock relay OFF

IGNITION RELAY MALFUNCTION DETECTION FUNCTION

- IPDM E/R monitors the voltage at the contact circuit and excitation coil circuit of the ignition relay inside it.
- IPDM E/R judges the ignition relay error if the voltage differs between the contact circuit and the excitation coil circuit.
- If the ignition relay cannot turn OFF due to contact seizure, it activates the tail lamp relay for 10 minutes to alert the user to the ignition relay malfunction when the ignition switch is turned OFF.

DTC	Ignition switch	Ignition relay	Tail lamp relay
—	ON	ON	—
—	OFF	OFF	—
B2098: IGN RELAY ON	OFF	ON	ON (10 minutes)
B2099: IGN RELAY OFF	ON	OFF	—

NOTE:

The tail lamp turns OFF when the ignition switch is turned ON.

FRONT WIPER CONTROL

IPDM E/R detects front wiper stop position by a front wiper auto stop signal.

When a front wiper auto stop signal is in the conditions listed below, IPDM E/R stops power supply to wiper after repeating a front wiper 10 second activation and 20 second stop five times.

Ignition switch	Front wiper switch	Auto stop signal
ON	OFF	Front wiper stop position signal cannot be input 10 seconds.
	ON	The signal does not change for 10 seconds.

NOTE:

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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

This operation status can be confirmed on the IPDM E/R “Data Monitor” that displays “BLOCK” for the item “WIP PROT” while the wiper is stopped.

STARTER MOTOR PROTECTION FUNCTION

IPDM E/R turns OFF the starter control relay to protect the starter motor when the starter control relay remains active for 90 seconds.

DTC Index

INFOID:000000000961496

CONSULT display	Fail-safe	TIME ^{NOTE}		Refer to
No DTC is detected. further testing may be required.	—	—	—	—
U1000: CAN COMM CIRCUIT	×	CRNT	1 – 39 ^{*1} CRNT ^{*2}	PCS-15
B2098: IGN RELAY ON	×	CRNT	1 – 39	PCS-16
B2099: IGN RELAY OFF	—	CRNT	1 – 39	PCS-17
B2108: STRG LCK RELAY ON	—	CRNT	1 – 39	SEC-89
B2109: STRG LCK RELAY OFF	—	CRNT	1 – 39	SEC-90
B210A: STRG LCK STATE SW	—	CRNT	1 – 39	SEC-91
B210B: START CONT RLY ON	—	CRNT	1 – 39	SEC-95
B210C: START CONT RLY OFF	—	CRNT	1 – 39	SEC-96
B210D: STARTER RELAY ON	—	CRNT	1 – 39	SEC-97
B210E: STARTER RELAY OFF	—	CRNT	1 – 39	SEC-98
B210F: INTRLCK/PNP SW ON	—	CRNT	1 – 39	SEC-100
B2110: INTRLCK/PNP SW OFF	—	CRNT	1 – 39	SEC-104

*1: Only for the models with AFS

*2: Only for the models without AFS (The display is fixed to CRNT until the self-diagnosis results are erased when the malfunctions were found in the past.)

NOTE:

The details of TIME display are as follows.

- CRNT: The malfunctions that are detected now
- 1 - 39: The number is indicated when it is normal at present and a malfunction was detected in the past. It increases like 0 → 1 → 2 . . . 38 → 39 after returning to the normal condition whenever IGN OFF → ON. It is fixed to 39 until the self-diagnosis results are erased if it is over 39. It returns to 0 when a malfunction is detected again in the process.

SYMPTOM DIAGNOSIS

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION SYMPTOMS

Symptom Table

INFOID:000000000961497

Engine can not be started with all Intelligent Keys.

CAUTION:

- Follow Trouble Diagnosis Flowchart referring to “[SEC-5, "Work Flow"](#)”. Determine malfunctioning condition before performing this diagnosis.
- Check that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis.
- Check systems shown in the “Diagnosis/service procedure” column in this order.

CONDITIONS OF VEHICLE (OPERATING CONDITIONS)

- Engine start function is ON when setting on CONSULT-III.
- Use Intelligent Key with registered Intelligent Key ID.
- One or more of Intelligent Keys with registered Intelligent Key ID is in the passenger compartment.

Diagnosis/service procedure		Reference page
1. Check power supply and ground circuit	BCM	SEC-107
	IPDM E/R	SEC-107
2. Check push button ignition switch		PCS-68
3. Check Intermittent Incident		GI-39

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SEC

VEHICLE SECURITY SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

VEHICLE SECURITY SYSTEM SYMPTOMS

Symptom Table

INFOID:000000000961498

Procedure		Diagnostic procedure	Refer to page
Symptom			
1	Vehicle security system cannot be set by	Door switch	Check door switch DLK-65
		Hood switch	Check hood switch SEC-114
		Trunk	Check trunk room lamp switch DLK-84
		Door outside key	Check key cylinder switch SEC-112
		Intelligent Key	Check Intelligent Key. DLK-107
	—	Check Intermittent Incident GI-39	
Security indicator does not turn ON.		Check vehicle security indicator SEC-120	Check Intermittent Incident GI-39
2	* Vehicle security system does not sound alarm when	Any door is opened.	Check door switch DLK-65
			Check Intermittent Incident GI-39
3	Vehicle security alarm does not activate.	Horn alarm	Check horn SEC-116
			Check Intermittent Incident GI-39
		Head lamp alarm	Check head lamp alarm SEC-118
			Check Intermittent Incident GI-39
4	Vehicle security system cannot be canceled by	Door outside key	Check key cylinder switch SEC-112
			Check Intermittent Incident GI-39
		Intelligent Key	Check Intelligent Key DLK-107
			Check Intermittent Incident GI-39

*: Check the system is in the armed phase.

INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS SYMPTOMS

< SYMPTOM DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS SYMPTOMS

Symptom Table

INFOID:000000000961499

Security indicator does not turn ON or flash.

CAUTION:

- Follow Trouble Diagnosis Flowchart referring to "[SEC-5, "Work Flow"](#)". Determine malfunctioning condition before performing this diagnosis.
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis.
- Check systems shown in the "Action" column in this order.

CONDITIONS OF VEHICLE (OPERATING CONDITIONS)

- Intelligent Key is not inserted into key slot.
- Engine switch is not depressed.

Action	Reference page
1. Check vehicle security indicator	SEC-120
2. Check Intermittent Incident	GI-39

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ON-VEHICLE MAINTENANCE

PRE-INSPECTION FOR DIAGNOSTIC

Basic Inspection

INFOID:000000000961500

The engine start function, door lock function, power distribution system and NATS-IVIS/NMS in the Intelligent Key system are closely related to each other regarding control. Narrow down the functional area in question by performing basic inspection to identify which function is malfunctioning. The vehicle security function can operate only when the door lock and power distribution system are operating normally. Therefore, it is easy to identify any factor unique to the vehicle security system by performing the vehicle security operation check after basic inspection.

1. CHECK DOOR LOCK OPERATION

1. Check the door lock for normal operation with the Intelligent Key controller and door request switch. Successful door lock operation with the Intelligent Key and request SW indicates that the remote keyless entry receiver and inside key antenna required for engine start are functioning normally. Identify the malfunctioning point by referring to the DLK section if the door cannot be unlocked.

Can the door be locked with the Intelligent Key and door request switch?

- YES >> GO TO 2.
NO >> Refer to [DLK-167, "Symptom Table"](#).

2. CHECK ENGINE STARTING

1. Checks that the engine starts when operating the Intelligent Key inserted into the key slot.

Does the engine start?

- YES >> GO TO 3.
NO >> Refer to [SEC-201, "Symptom Table"](#).

3. CHECK STEERING LOCKING

1. Does the steering lock when operating door switch after switching the power supply from ON position (or ACC position) to LOCK position?
If door switch is malfunctioning, BCM cannot lock the steering. If BCM does not detect DTC, steering lock unit is normal.

Does steering lock?

- YES >> GO TO 4.
NO >> Refer to [DLK-65, "Component Function Check"](#).

4. CHECK POWER SUPPLY INDICATOR SWITCHING

1. Press push-button ignition switch and position indicator will switch from LOCK, ACC to ON gradually when steering is locked. Checks that the position indicator is illuminated at different positions of the circuit.

Is each position indicator illuminating?

- YES >> GO TO 5.
NO >> Refer to [PCS-68, "Component Function Check"](#).

5. CHECK VEHICLE SECURITY SYSTEM

1. Check the vehicle security system for normal operation.
The vehicle security function can operate only when the door lock and power distribution functions are operating normally.
Therefore, it is easy to identify any factor unique to the vehicle security by performing the vehicle security operation check after this basic inspection.

>> Go to [SEC-204, "Vehicle Security Operation Check"](#).

Vehicle Security Operation Check

INFOID:000000000961501

1. INSPECTION START

Turn ignition switch "OFF" and pull out Intelligent Key from key slot.

NOTE:

PRE-INSPECTION FOR DIAGNOSTIC

< ON-VEHICLE MAINTENANCE >

[INTELLIGENT KEY SYSTEM]

Before starting operation check, open front windows.

>> GO TO 2.

2. CHECK SECURITY INDICATOR LAMP

1. Lock doors using Intelligent Key or mechanical key.
2. Check that security indicator lamp illuminates for 30 seconds.

Security indicator lamp should illuminate.

OK >> GO TO 3.

NG >> Perform diagnosis and repair. Refer to [SEC-120, "Component Function Check"](#).

3. CHECK ALARM FUNCTION

1. After 30 seconds, security indicator lamp will start to blink.
2. Open any door or hood before unlocking with Intelligent Key or mechanical key, or open trunk lid without Intelligent Key or mechanical key.

Do alarm function properly.

OK >> GO TO 4.

NG >> Check the following.

- The vehicle security system does not phase in alarm mode. Refer to [SEC-202, "Symptom Table"](#).
- Alarm (horn, headlamp and hazard lamp) do not operate. Refer to [SEC-202, "Symptom Table"](#).

4. CHECK ALARM CANCEL OPERATION

Unlock any door or open trunk lid using Intelligent Key or mechanical key.

Alarm (horn, headlamp and hazard lamp) should stop.

OK >> INSPECTION END.

NG >> Check door lock function. Refer to [DLK-18, "INTELLIGENT KEY : System Description"](#).

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< ON-VEHICLE REPAIR >

ON-VEHICLE REPAIR**KEY SLOT****Exploded View**

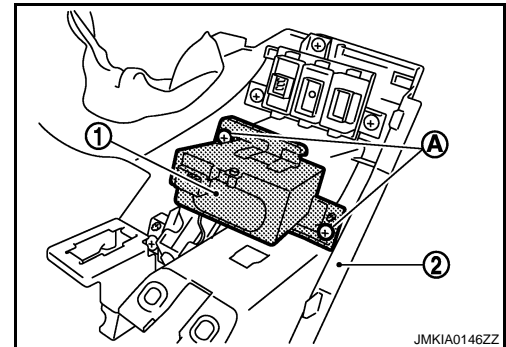
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Refer to [IP-11, "Exploded View"](#).**Removal and Installation**

INFOID:000000000961503

REMOVAL

1. Remove the instrument driver lower panel (2). Refer to [IP-12, "Removal and Installation"](#).
2. Disconnect key slot connector.
3. Remove the key slot mounting screw (A), and then remove key slot (1) from instrument driver lower panel (2).

**INSTALLATION**

Install in the reverse order of removal.

PUSH BUTTON IGNITION SWITCH

< ON-VEHICLE REPAIR >

[INTELLIGENT KEY SYSTEM]

PUSH BUTTON IGNITION SWITCH

Exploded View

INFOID:000000000961504

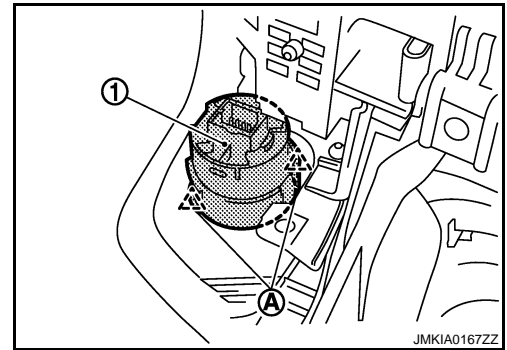
Refer to [JP-11, "Exploded View"](#).

Removal and Installation

INFOID:000000000961505

REMOVAL

1. Remove the cluster lid A assembly. Refer to [JP-12, "Removal and Installation"](#).
2. Remove the push-button ignition switch (1) from cluster lid A assembly, and then remove pawl (A). Press push-button ignition switch (1) back to disengage from cluster lid A assembly.



INSTALLATION

Install in the reverse order of removal.

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