

SECTION **SEC** SECURITY CONTROL SYSTEM

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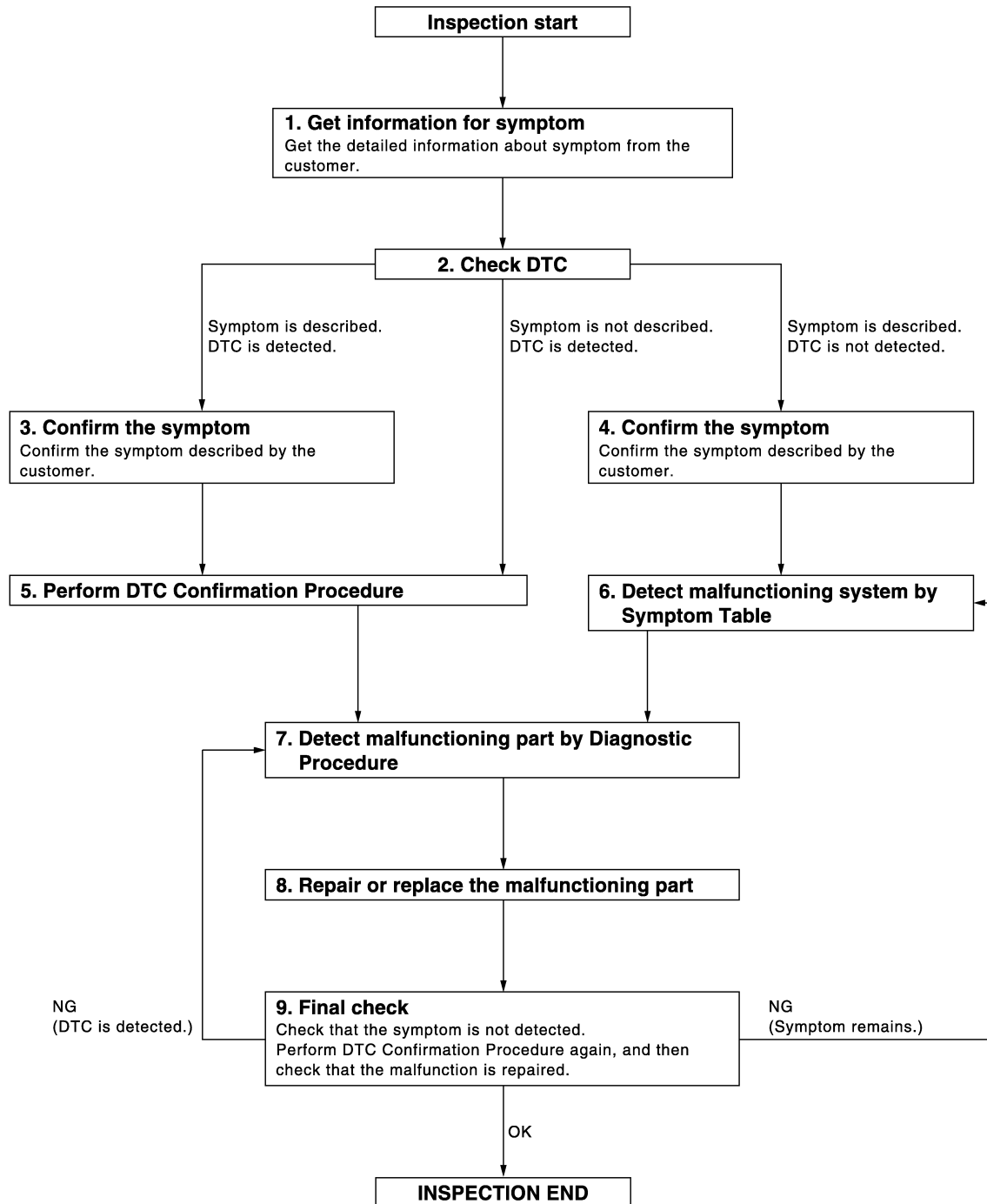
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000003814899

OVERALL SEQUENCE



SEC

DETAILED FLOW

JMMIA0021GB

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

1. Check DTC for BCM and IPDM E/R.
2. Perform the following procedure if DTC is detected.
 - 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.

Are any symptoms described and any DTC detected?

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

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

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

3.CONFIRM THE SYMPTOM

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

>> GO TO 6.

5.PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC Confirmation Procedure for the detected DTC, and then check that DTC is detected again.

At this time, always connect CONSULT-III to the vehicle, and check diagnostic results in real time.

If two or more DTCs are detected, refer to [SEC-175, "DTC Inspection Priority Chart"](#), and determine trouble diagnosis order.

NOTE:

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 7.

NO >> Refer to [GI-35, "Intermittent Incident"](#).

6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

Detect malfunctioning system according to [SEC-192, "Symptom Table"](#) based on the confirmed symptom in step 4, and determine the trouble diagnosis order based on possible causes and symptom.

>> GO TO 7.

7.DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

NOTE:

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

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[INTELLIGENT KEY SYSTEM]

Is malfunctioning part detected?

YES >> GO TO 8.

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

8.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 and replacement.
3. Check DTC. If DTC is detected, erase it.

>> GO TO 9.

9.FINAL CHECK

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

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

Does the symptom reappear?

YES (DTC is detected)>>GO TO 7.

YES (Symptom remains)>>GO TO 6.

NO >> INSPECTION END

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B

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INSPECTION AND ADJUSTMENT

ECM RE-COMMUNICATING FUNCTION

ECM RE-COMMUNICATING FUNCTION : Description

INFOID:000000003814900

Performing the 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 beginning work.
- Distinguish keys with unregistered key IDs from those with registered IDs.

ECM RE-COMMUNICATING FUNCTION : Special Repair Requirement

INFOID:000000003814901

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 the "ON" position for at least 5 seconds.
4. Turn ignition switch to "OFF".
5. Start engine.

Can engine be started?

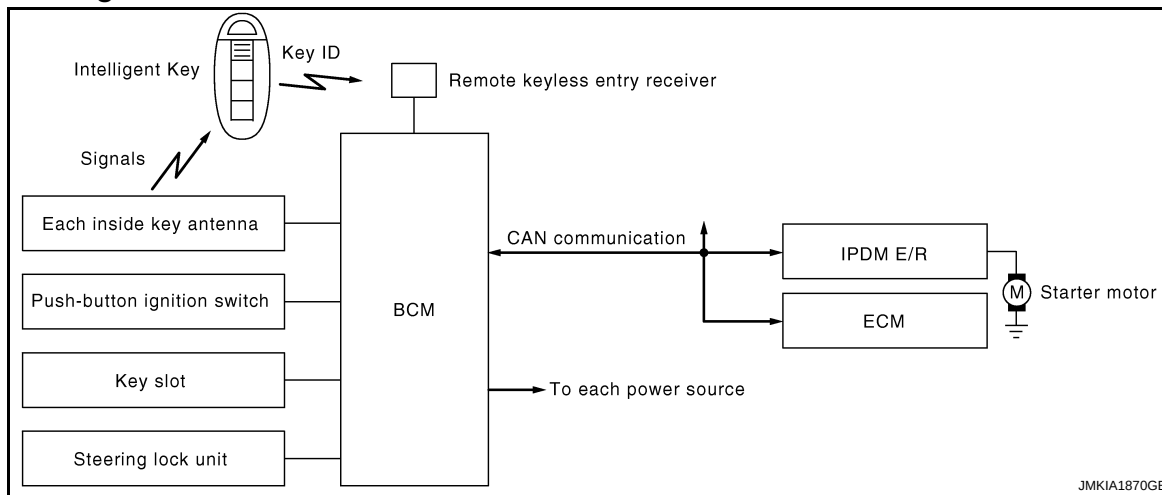
YES >> Procedure is completed.

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

FUNCTION DIAGNOSIS

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

System Diagram



System Description

INFOID:000000003814903

- 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 communication 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 communication 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 NVIS (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 NVIS (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 starting 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.
- Up to 4 Intelligent Keys can be registered (Including the standard Intelligent Key) on request from the owner.

NOTE:

- Refer to [SEC-9, "System Description"](#) for any functions other than engine start function of Intelligent Key system.

PRECAUTIONS FOR INTELLIGENT KEY SYSTEM

- In the Intelligent Key system, the transponder [the chip for NVIS (NATS) ID verification] is integrated into the Intelligent Key. (For the conventional models, it is integrated into the mechanical key.) Therefore, the mechanical key cannot perform the ID verification, and thus it cannot start the engine. Instead, the NVIS (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

- When the push-button ignition switch is pressed, the BCM signals the inside key antenna and transmits the request signal to the Intelligent Key.
- The Intelligent Key receives the request signal and transmits the Intelligent Key ID signal to the BCM via the remote keyless entry receiver.
- The BCM receives the Intelligent Key ID signal and verifies it with the registered ID.

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

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.
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 receives 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 the ACC or ON position, even if the engine start condition* is satisfied, the engine cannot be started.

*: For the engine start condition, refer to “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 NVIS (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-14, "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.

- The ignition switch is in the ACC position
- All doors are closed
- Selector lever is in the P position

Reset Condition of Battery Saver System

If any of the following conditions are met the battery saver system is released and the steering will change automatically to the lock position from the OFF position.

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

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

STEERING LOCK OPERATION

Steering is locked by steering lock unit when ignition switch is in the OFF position, 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

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

PUSH-BUTTON IGNITION SWITCH OPERATION PROCEDURE

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

Operation Enable Condition

- 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 the following engine start conditions,
 - Brake pedal operating condition
 - Selector lever position
 - 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.

Operation Condition

Power supply position	Engine start/stop condition		Push-button ignition switch operation frequency
	Brake pedal	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)	—	P 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 selector lever position is in the N position, the engine start condition is different according to the vehicle speed.

- At a vehicle speed of less than 4 km/h (2.5MPH), the engine can start only when the brake pedal is depressed.
- At a vehicle speed of 4 km/h (2.5MPH) 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 selector lever position is in any position other than the P position and when the vehicle speed is 5 km/h (3.1MPH) 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)

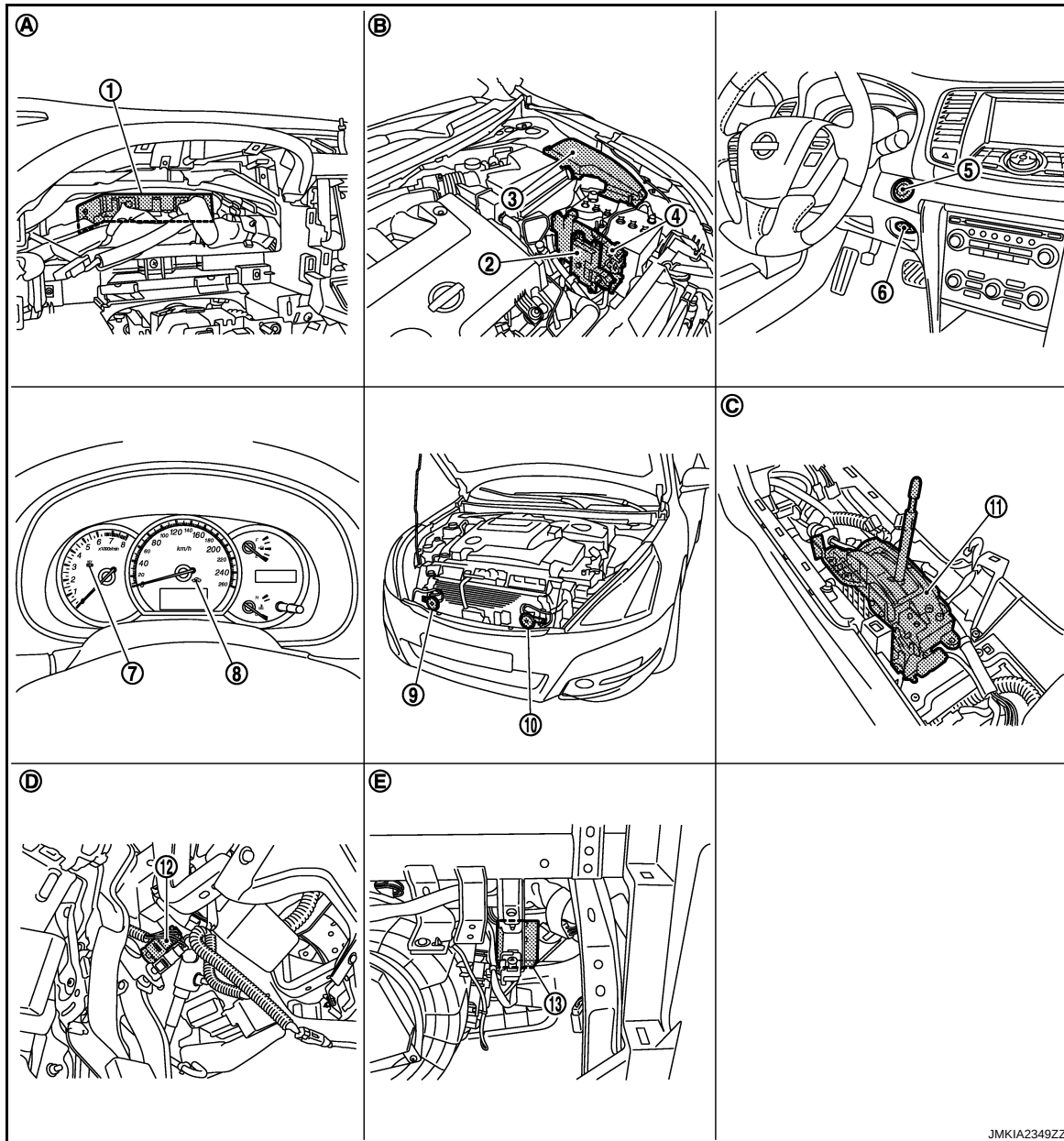
INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Component Parts Location

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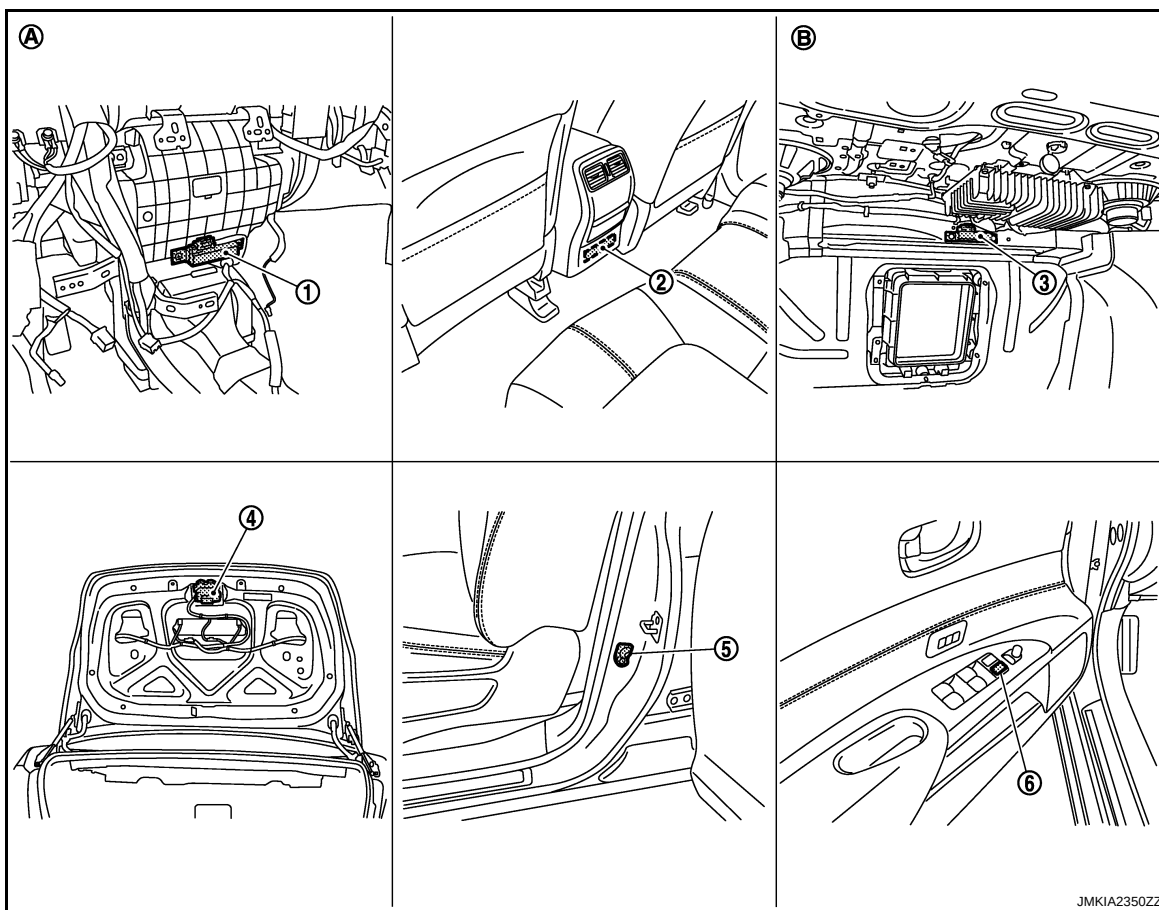
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|---|--|--|
| 1. BCM M118, M119, M121, M122, M123 | 2. TCM F23 | 3. IPDM E/R E10, E11, F12 |
| 4. ECM E16 | 5. Push-button ignition switch M101 | 6. Key slot M99 |
| 7. Combination meter (key warning lamp) M34 | 8. Combination meter (security indicator lamp) M34 | 9. Horn (high) E340, E341 |
| 10. Horn (low) E342, E343 | 11. Control device (detention switch) M57 | 12. Stop lamp switch E115 |
| 13. Remote keyless entry receiver M78 | | |
| A. Behind the combination meter | B. Engine room (LH) | C. View with the center console assembly removed |
| D. Behind the instrument lower panel LH | E. Behind the instrument lower panel RH | |

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]



1. Inside key antenna (instrument center) M105
2. Inside key antenna (console) M262
3. Inside key antenna (trunk room) B86
4. Trunk lid lock assembly (trunk room lamp switch) T5
5. Front door switch (driver side) B34
6. Power window main switch (door lock and unlock switch) D5, D6

A. Behind the cluster lid C assembly B. Trunk room

Component Description

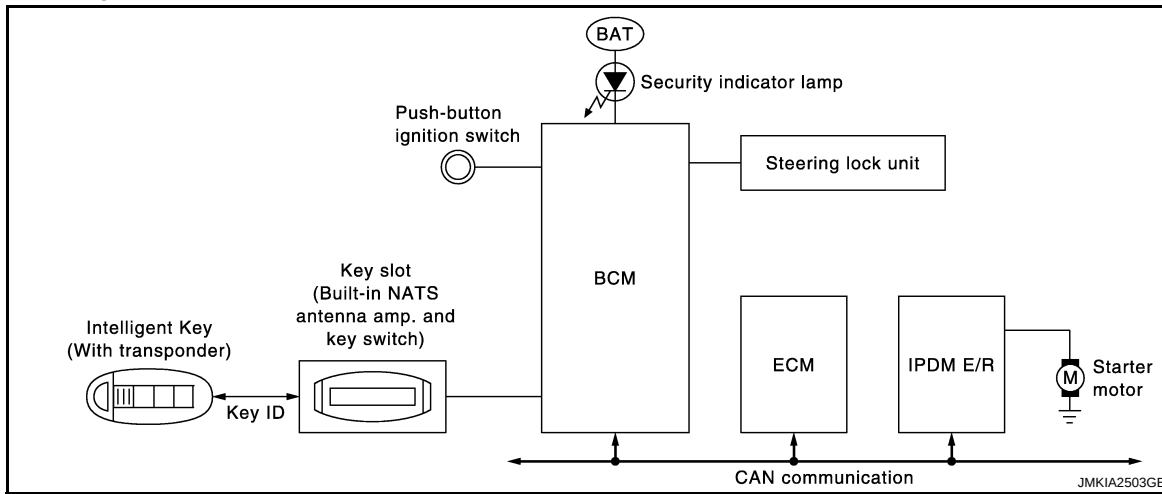
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Component	Reference
BCM	SEC-91
Steering lock unit	SEC-78
Push-button ignition switch	SEC-92
Door switch	DLK-57
Control device (detention switch)	SEC-56
Inside key antenna	DLK-50
Remote keyless entry receiver	DLK-67
Stop lamp switch	SEC-50
Park/neutral position switch	SEC-64
Steering lock relay	SEC-69
Starter relay	SEC-72
Starter control relay	SEC-102
Security indicator lamp	SEC-115
Key warning lamp	SEC-117

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

System Diagram

INFOID:000000003814906



System Description

INFOID:000000003814907

- The NVIS (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 NVIS (NATS) ID verification when inserting the Intelligent Key and performs the Intelligent Key ID verification when carrying the Intelligent Key.
- The mechanical key integrated in the Intelligent Key cannot start the engine. When the Intelligent Key battery is discharged, the NVIS (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 NVIS (NATS) is onboard with the model.
- The security indicator always blinks when the power supply position is in LOCK, OFF and ACC position.
- Up to 4 Intelligent Keys can be registered (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 NVIS (NATS) and registration procedure for Intelligent Key when installing the BCM, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.
- Possible symptom of NVIS (NATS) malfunction is "Engine can not start". The engine can be started with the Intelligent Key system and NVIS (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 NVIS (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 IDs (NVIS "NATS" ID registration and Intelligent Key ID registration).
The NVIS (NATS) ID registration is the procedure that registers the IDs 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 NVIS (NATS) registration only, the engine cannot be started by pressing the push-button ignition switch when carrying the Intelligent Key. The registrations of both systems should be performed.

SECURITY INDICATOR LAMP

- Warns that the vehicle is equipped with NVIS (NATS).

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

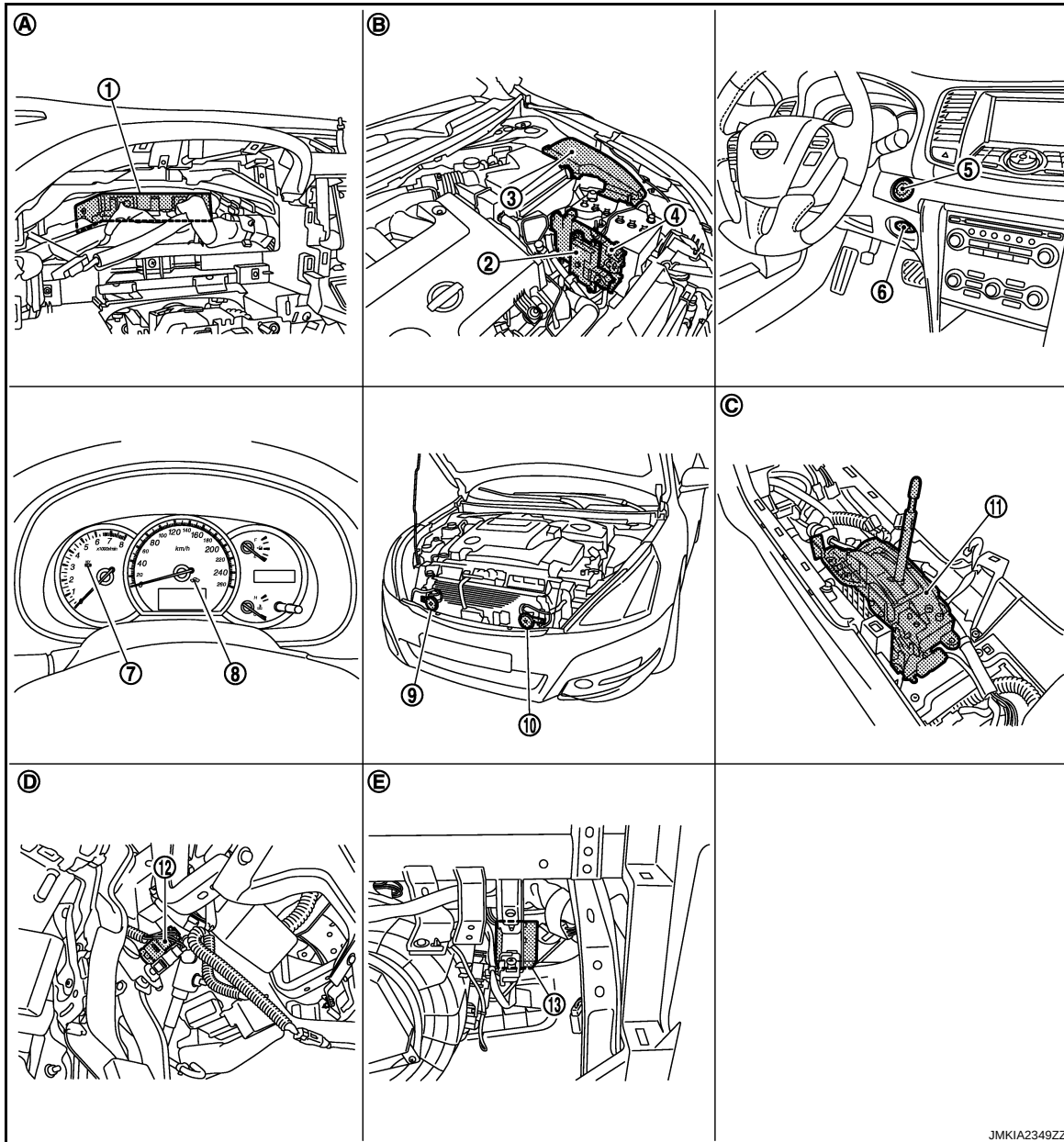
- The security indicator lamp always blinks when the ignition switch is in the LOCK and ACC position.

NOTE:

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

Component Parts Location

INFOID:000000003814908



A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P

SEC

- | | | |
|---|--|---------------------------|
| 1. BCM M118, M119, M121, M122, M123 | 2. TCM F23 | 3. IPDM E/R E10, E11, F12 |
| 4. ECM E16 | 5. Push-button ignition switch M101 | 6. Key slot M99 |
| 7. Combination meter (key warning lamp) M34 | 8. Combination meter (security indicator lamp) M34 | 9. Horn (high) E340, E341 |
| 10. Horn (low) E342, E343 | 11. Control device (detention switch) M57 | 12. Stop lamp switch E115 |
| 13. Remote keyless entry receiver M78 | | |

A. Behind the combination meter

B. Engine room (LH)

C. View with the center console assembly removed

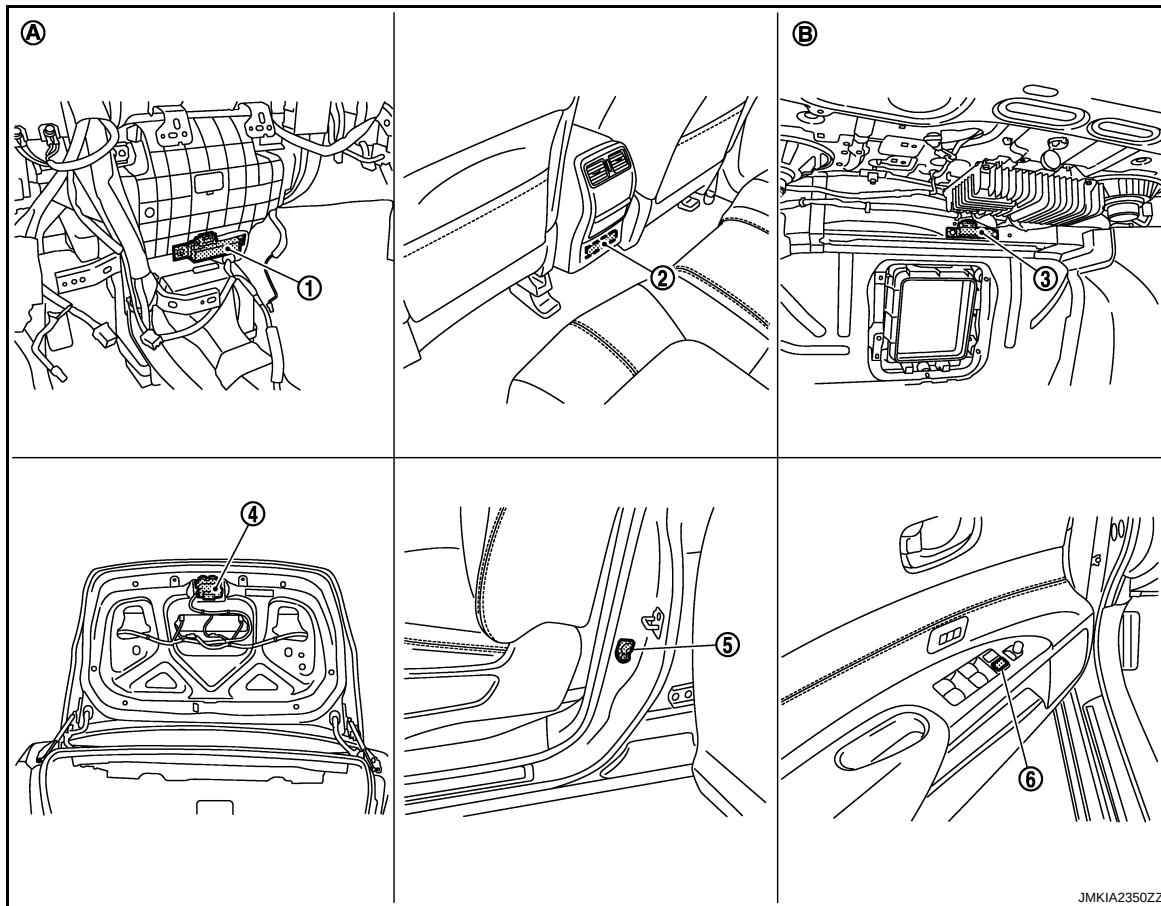
D. Behind the instrument lower panel LH

E. Behind the instrument lower panel RH

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]



- | | | |
|--|--|--|
| 1. Inside key antenna (instrument center) M105 | 2. Inside key antenna (console) M262 | 3. Inside key antenna (trunk room) B86 |
| 4. Trunk lid lock assembly (trunk room lamp switch) T5 | 5. Front door switch (driver side) B34 | 6. Power window main switch (door lock and unlock switch) D5, D6 |
| A. Behind the cluster lid C assembly | B. Trunk room | |

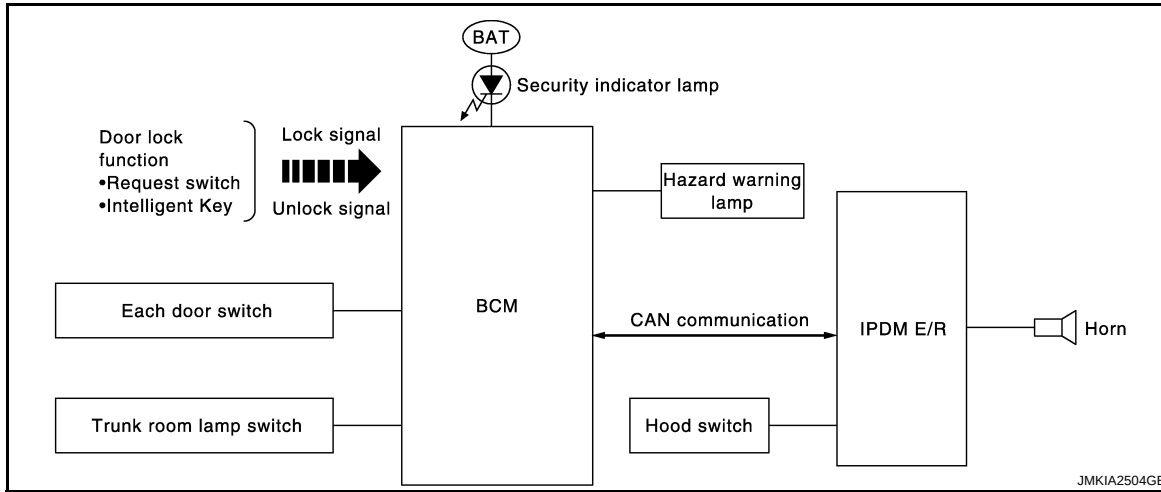
Component Description

INFOID:000000003814909

Component	Reference
BCM	SEC-91
Steering lock unit	SEC-78
Push-button ignition switch	SEC-92
Door switch	DLK-57
Key slot	DLK-86
Control device (detention switch)	SEC-56
Stop lamp switch	SEC-50
Park/neutral position switch	SEC-64
Steering lock relay	SEC-96
Starter relay	SEC-72
Starter control relay	SEC-96
Security indicator lamp	SEC-115
Key warning lamp	SEC-117

VEHICLE SECURITY SYSTEM

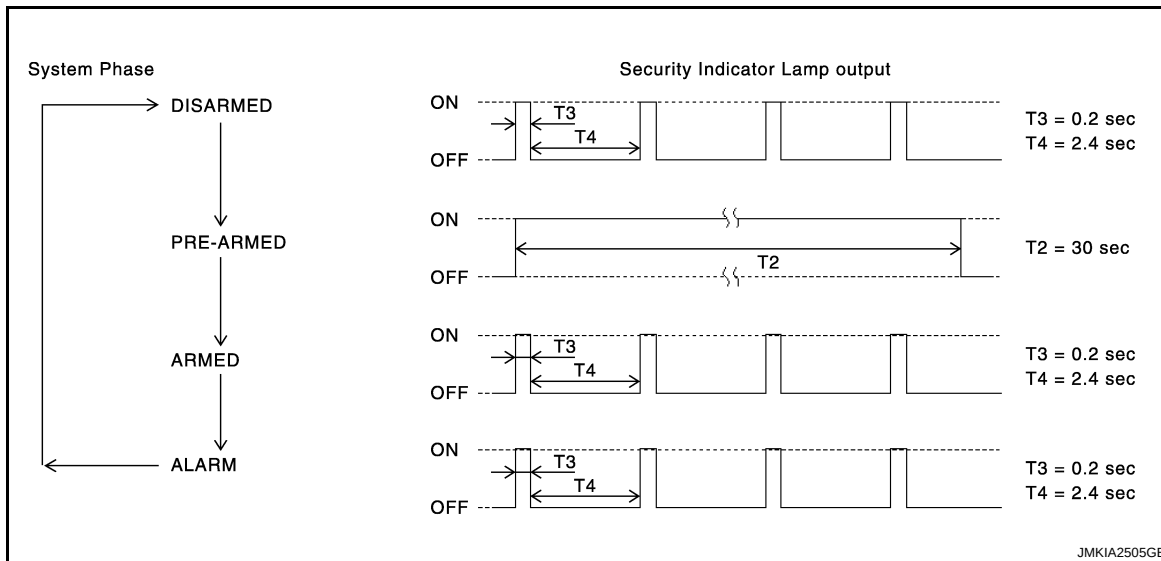
System Diagram



System Description

INFOID:000000003814911

OPERATION FLOW



SETTING THE VEHICLE SECURITY SYSTEM

Initial Condition

- Ignition switch is in the OFF position.

Disarmed Phase

- When any door, trunk lid or hood 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 is performed, the vehicle security system turns into the "pre-armed" phase. (The security indicator lamp illuminates.)

- BCM receives LOCK signal from front door request switch or Intelligent Key, after trunk lid, hood and all doors are closed.
- The security indicator lamp illuminates for 30 seconds. Then, the system automatically shifts into the "armed" phase.

VEHICLE SECURITY SYSTEM

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

CANCELING THE SET VEHICLE SECURITY SYSTEM

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

1. Unlock the all doors with the door request switch or Intelligent Key.
2. Turn ignition switch to the "ON" or "ACC" position.

CANCELING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM

When unlocking all doors with the door request switch or Intelligent Key, the alarm operation is canceled.

ACTIVATING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM

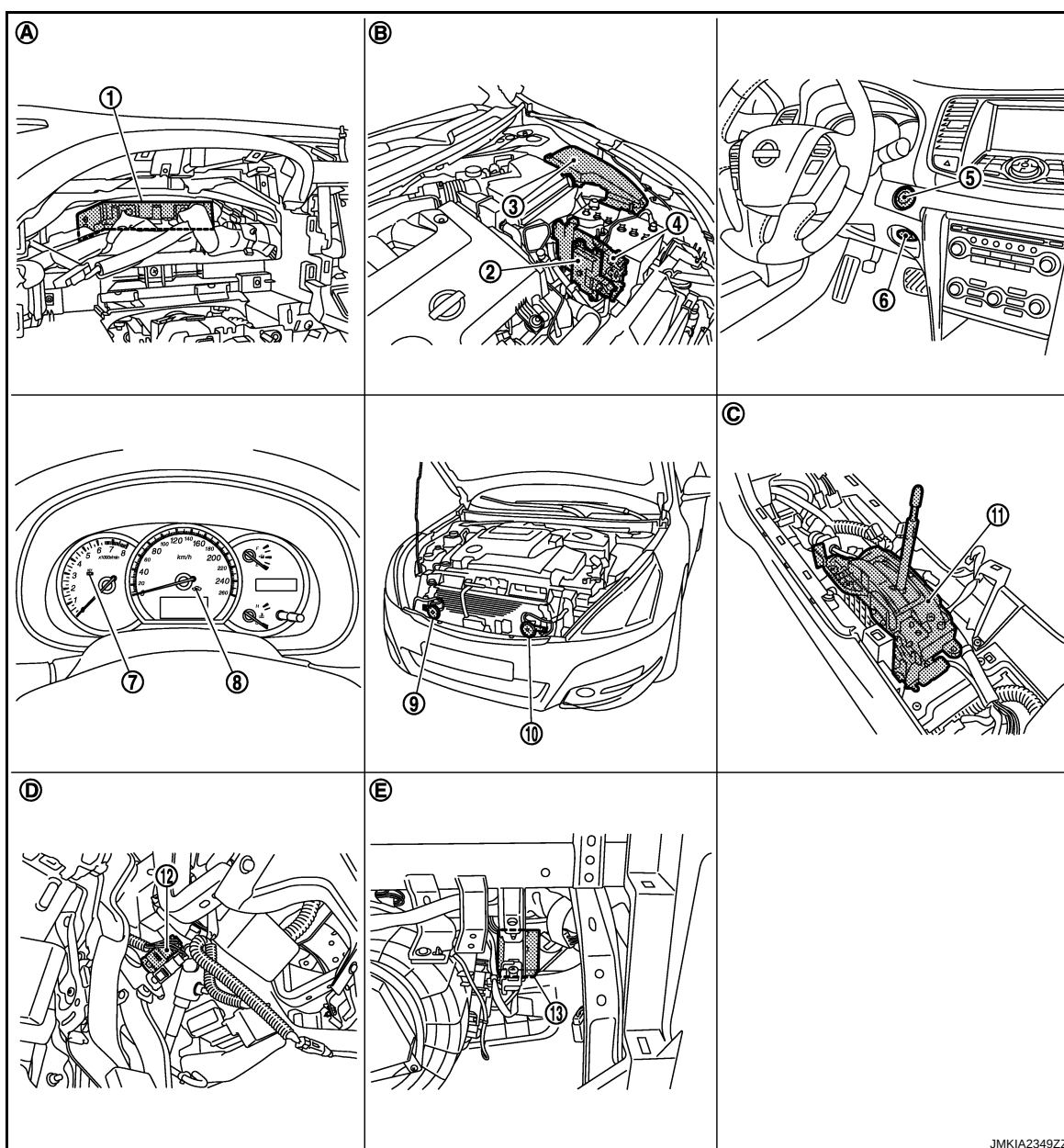
Check that the system is in the armed phase. (The security indicator lamp blinks every 2.4 seconds.)

When the following operation 1 or 2 is performed, the system sounds the horns and blinks the hazard warning lamp for about 27.5 seconds.

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

Component Parts Location

INFOID:000000003814912



JMK1A2349ZZ

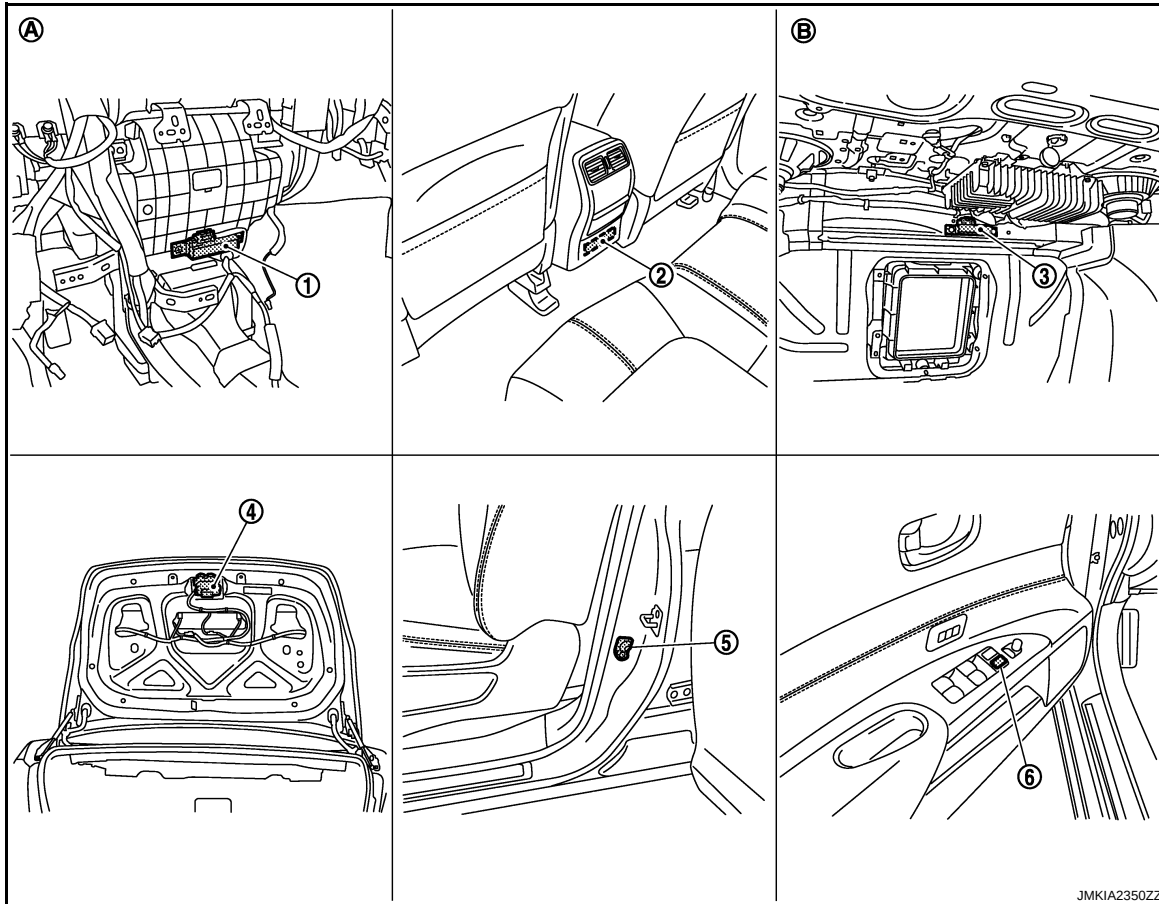
VEHICLE SECURITY SYSTEM

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

- | | | |
|---|--|---------------------------|
| 1. BCM M118, M119, M121, M122, M123 | 2. TCM F23 | 3. IPDM E/R E10, E11, F12 |
| 4. ECM E16 | 5. Push-button ignition switch M101 | 6. Key slot M99 |
| 7. Combination meter (key warning lamp) M34 | 8. Combination meter (security indicator lamp) M34 | 9. Horn (high) E340, E341 |
| 10. Horn (low) E342, E343 | 11. Control device (detention switch) M57 | 12. Stop lamp switch E115 |
| 13. Remote keyless entry receiver M78 | | |

- | | | |
|---|---|--|
| A. Behind the combination meter | B. Engine room (LH) | C. View with the center console assembly removed |
| D. Behind the instrument lower panel LH | E. Behind the instrument lower panel RH | |



- | | | |
|--|--|--|
| 1. Inside key antenna (instrument center) M105 | 2. Inside key antenna (console) M262 | 3. Inside key antenna (trunk room) B86 |
| 4. Trunk lid lock assembly (trunk room lamp switch) T5 | 5. Front door switch (driver side) B34 | 6. Power window main switch (door lock and unlock switch) D5, D6 |
| A. Behind the cluster lid C assembly | B. Trunk room | |

Component Description

INFOID:000000003814913

Component	Reference
BCM	SEC-91
Horn relay 1	DLK-91
Horn relay 2	DLK-91
Security indicator lamp	SEC-115
Door switch	DLK-57

VEHICLE SECURITY SYSTEM

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Component	Reference
Trunk room lamp switch	DLK-76
Hood switch	SEC-113

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

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

INFOID:000000003839089

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 Diagnostic Result	Displays the diagnosis results judged by BCM.
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM. Refer to CONSULT-III operation manual.
Data Monitor	The BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Ecu Identification	The BCM part number is displayed.
Configuration	- Read and save the vehicle specification. - Write the vehicle specification when replacing BCM.

SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

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

×: Applicable item

System	Sub system selection item	Diagnosis mode		
		Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
—	AIR CONDITONER*			
- Intelligent Key system - Engine start system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
NVIS - NATS	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Trunk lid opener system	TRUNK		×	×
Vehicle security system	THEFT ALM	×	×	×
—	RETAINED PWR*		×	
Signal buffer system	SIGNAL BUFFER		×	×
—	TPMS (AIR PRESSURE MONITOR)*	×	×	×

NOTE:

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

FREEZE FRAME DATA (FFD) AND IGN COUNTER

Freeze Frame Data

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

The BCM records the following condition at the moment a particular DTC is detected.

- Vehicle Speed
- Odo/Trip Meter
- Vehicle Condition (BCM detected condition)

CONSULT screen terms	Description
SLEEP>LOCK	While turning BCM status from low power consumption mode to normal mode (Power supply position is "LOCK".)
SLEEP>OFF	While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".)
LOCK>ACC	While turning power supply position from "LOCK" to "ACC"
ACC>ON	While turning power supply position from "ACC" to "IGN"
RUN>ACC	While turning power supply position from "RUN" to "ACC" (Vehicle is stopping and selector lever is except P position.)
CRANK>RUN	While turning power supply position from "CRANKING" to "RUN" (From cranking up the engine to run it)
RUN>URGENT	While turning power supply position from "RUN" to "ACC" (Emergency stop operation)
ACC>OFF	While turning power supply position from "ACC" to "OFF"
OFF>LOCK	While turning power supply position from "OFF" to "LOCK"
OFF>ACC	While turning power supply position from "OFF" to "ACC"
ON>CRANK	While turning power supply position from "IGN" to "CRANKING"
OFF>SLEEP	While turning BCM status from normal mode (Power supply position is "OFF".) to low power consumption mode
LOCK>SLEEP	While turning BCM status from normal mode (Power supply position is "LOCK".) to low power consumption mode
LOCK	Power supply position is "LOCK" (Ignition switch OFF with steering is locked.)
OFF	Power supply position is "OFF" (Ignition switch OFF with steering is unlocked.)
ACC	Power supply position is "ACC" (Ignition switch ACC)
ON	Power supply position is "IGN" (Ignition switch ON with engine stopped)
ENGINE RUN	Power supply position is "RUN" (Ignition switch ON with engine running)
CRANKING	Power supply position is "CRANKING" (At engine cranking)

IGN Counter

IGN counter indicates the number of times that ignition switch is turned ON after DTC is detected.

- The number is 0 when a malfunction is detected now.
- The number increases like 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON.
- The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.

INTELLIGENT KEY

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

INFOID:000000003814915

BCM CONSULT-III FUNCTION

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.
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

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Monitor item	Description
REMO CONT ID CONFIR	It can be checked whether Intelligent Key ID code is registered or not in this mode.
AUTO LOCK SET	Auto door lock time can be changed in this mode. • MODE 1: 1 minute • MODE 2: 5 minutes • MODE 3: 30 seconds • MODE 4: 2 minutes
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch (driver side and passenger side) mode can be changed to operate (WITH) or not operate (WITHOUT) in this mode.
ENGINE START BY I-KEY	Engine start function mode can be changed to operate (WITH) or not operate (WITHOUT) in this mode.
TRUNK/GLASS HATCH OPEN	Buzzer reminder function mode by trunk lid opener request switch can be changed to operate (WITH) or not operate (WITHOUT) in this mode.
PANIC ALARM SET	NOTE: This item is displayed, but cannot be used.
PW DOWN SET	NOTE: This item is displayed, but cannot be used.
TRUNK OPEN DELAY	Trunk button pressing on Intelligent Key button can be selected as per the following in this mode. • MODE 1: Press and hold • MODE 2: Press twice • MODE 3: Press and hold, or press twice
LO-BATT OF KEY FOB WARN	Intelligent Key low battery warning mode can be changed to operate (WITH) or not operate (WITHOUT) in this mode.
ANTI KEY LOCK IN FUNCTI	Key reminder function mode can be changed to operate (WITH) or not operate (WITHOUT) in this mode.
HAZARD ANSWER BACK	Hazard reminder function mode can be selected from the following in this mode. • LOCK ONLY: Door lock operation only • UNLOCK ONLY: Door unlock operation only • LOCK/UNLOCK: Lock/unlock operation • OFF: Non-operational
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 in this mode. • Horn chirp: Sound horn • Buzzer: Sound Intelligent Key warning buzzer • OFF: Non-operational
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) in this mode.
SHORT CRANKING OUTPUT	Starter motor can operate during the times below. • 70 msec • 100 msec • 200 msec
INSIDE ANT DIAGNOSIS	This function allows inside key antenna self-diagnosis.
HORN WITH KEYLESS LOCK	Horn reminder function mode by Intelligent Key button can be changed to operate (ON) or not operate (OFF) in this mode.

SELF-DIAG RESULT

Refer to [SEC-176, "DTC Index"](#).

DATA MONITOR

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 lid opener request switch.
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch.
IGN RLY2 -F/B	Indicates [ON/OFF] condition of ignition relay 2.

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Monitor Item	Condition
CLUCH SW	NOTE: This item is displayed, but cannot be monitored.
BRAKE SW 1	Indicates [ON/OFF] condition of brake switch.
DETE/CANCL SW	Indicates [ON/OFF] condition of the P position.
SFT PN/N SW	Indicates [ON/OFF] condition of the P or N position.
S/L -LOCK	Indicates [ON/OFF] condition of steering lock unit (LOCK).
S/L -UNLOCK	Indicates [ON/OFF] condition of steering lock unit (UNLOCK).
S/L RELAY -F/B	Indicates [ON/OFF] condition of steering lock relay.
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 the P position.
SFT PN -IPDM	Indicates [ON/OFF] condition of the P or N position.
SFT P -MET	Indicates [ON/OFF] condition of the P position.
SFT N -MET	Indicates [ON/OFF] condition of the N position.
ENGINE STATE	Indicates [STOP/STALL/CRANK/RUN] condition of engine states.
S/L LOCK-IPDM	Indicates [ON/OFF] condition of steering lock unit (LOCK).
S/L UNLK-IPDM	Indicates [ON/OFF] condition of steering lock unit (UNLOCK).
S/L RELAY-REQ	Indicates [ON/OFF] condition of steering lock relay.
VEH SPEED 1	Displays the vehicle speed signal received from combination meter by numerical value [Km/h].
VEH SPEED 2	Displays the vehicle speed signal received from ABS, 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.
ID OK FLAG	Indicates [SET/RESET] condition of key ID.
PRMT ENG STRT	Indicates [SET/RESET] condition of engine start possibility.
PRMT RKE STRT	NOTE: This item is displayed, but cannot be monitored.
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.
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	NOTE: This item is displayed, but cannot be monitored.
RKE-P/W OPEN	NOTE: This item is displayed, but cannot be monitored.
RKE-MODE CHG	Indicates [ON/OFF] condition of MODE CHANGE signal from Intelligent Key.
RKE OPE COUN1	When remote keyless entry receiver receives the signal transmitted while operating on Intelligent Key, the numerical values start changing.
RKE OPE COUN2	NOTE: This item is displayed, but cannot be monitored.

ACTIVE TEST

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Test item	Description
BATTERY SAVER	This test is able to check interior room lamp operation. The interior room lamp will be activated when "ON" on CONSULT-III screen is touched.
PW REMOTO DOWN SET	NOTE: This item is displayed, but cannot be used.
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation. The Intelligent Key warning buzzer will be activated when "ON" on CONSULT-III screen is touched.
INSIDE BUZZER	This test is able to check warning chime in combination meter operation. - Take away warning chime sounds when "TAKE OUT" on CONSULT-III screen is touched. - Key warning chime sounds when "KEY" on CONSULT-III screen is touched. - P position warning chime sounds when "KNOB" on CONSULT-III screen is touched.
INDICATOR	This test is able to check warning lamp operation. "KEY" Warning lamp illuminates when "RED ON" on CONSULT-III screen is touched. "KEY" Warning lamp blinks when "RED IND" 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 when "ON" on CONSULT-III screen is touched.
LCD	This test is able to check meter display information - Engine start information displays when "BP N" on CONSULT-III screen is touched. - Engine start information displays when "BP I" on CONSULT-III screen is touched. - Key ID warning displays when "ID NG" on CONSULT-III screen is touched. - Steering lock information displays when "ROTAT" on CONSULT-III screen is touched. - P position warning displays when "SFT P" on CONSULT-III screen is touched. - Intelligent Key insert information displays when "INSRT" on CONSULT-III screen is touched. - Intelligent Key low battery warning displays when "BATT" on CONSULT-III screen is touched. - Take away warning displays when "OUTKEY" on CONSULT-III screen is touched. - OFF position warning displays when "LK WN" 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 "OPEN" on CONSULT-III screen is touched.
FLASHER	This test is able to check security hazard lamp operation. The hazard lamps will be activated when "RH" or "LH" on CONSULT-III screen is touched.
HORN	This test is able to check horn operation. The horn will be activated when "ON" on CONSULT-III screen is touched.
P RANGE	This test is able to check control device power supply Control 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. ACC indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched.
IGNITION ON IND	This test is able to check ON indicator in push-ignition switch operation. ON 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 illuminates when "ON" on CONSULT-III screen is touched.
TRUNK/BACK DOOR	This test is able to check trunk lid opener actuator open operation. This actuator opens when "OPEN" on CONSULT-III screen is touched.

THEFT ALM

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

INFOID:000000003814916

APPLICATION ITEM

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

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
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 -RR	NOTE: This is displayed even when it is not equipped.
REQ SW -RL	NOTE: This is displayed even when it is not equipped.
REQ SW -BD/TR	Indicates [ON/OFF] condition of trunk lid opener request switch.
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch
UNLK SEN -DR	Indicates [ON/OFF] condition of driver door UNLOCK status.
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch (driver side).
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch (passenger side).
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
DOOR SW-BK	NOTE: This is displayed even when it is not equipped.
CDL LOCK SW	Indicates [ON/OFF] condition of lock signal from door lock/unlock switch.
CDL UNLOCK SW	Indicates [ON/OFF] condition of unlock signal from door lock/unlock switch.
KEY CYL LK-SW	NOTE: This is displayed even when it is not equipped.
KEY CYL UN-SW	NOTE: This is displayed even when it is not equipped.
KEY CYL SW-TR	NOTE: 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 LID 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

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

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.
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:0000000003814917

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. Switches 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

BCM

BCM : Description

INFOID:000000003814918

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-22, "CAN Communication Signal Chart"](#).

BCM : DTC Logic

INFOID:000000003814919

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.	CAN communication system

BCM : Diagnosis Procedure

INFOID:000000003814920

1.PERFORM SELF DIAGNOSTIC

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

Is "U1000: CAN COMM CIRCUIT" displayed?

YES >> Refer to [LAN-14, "Trouble Diagnosis Flow Chart"](#).

NO >> Refer to [GI-35, "Intermittent Incident"](#).

IPDM E/R

IPDM E/R : Description

INFOID:000000003814921

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-22, "CAN Communication Signal Chart"](#).

IPDM E/R : DTC Logic

INFOID:000000003814922

DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC Detection Condition	Possible cause
U1000	CAN COMM CIRCUIT	When IPDM E/R cannot communicate CAN communication signal continuously for 2 seconds or more	CAN communication system

IPDM E/R : Diagnosis Procedure

INFOID:000000003814923

1.PERFORM SELF DIAGNOSTIC

U1000 CAN COMM CIRCUIT

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

1. Turn ignition switch ON and wait for 2 seconds or more.
2. Check "Self Diagnostic Result" of IPDM E/R.

Is "CAN COMM CIRCUIT" displayed?

YES >> Refer to [LAN-14, "Trouble Diagnosis Flow Chart"](#).

NO >> Refer to [GI-35, "Intermittent Incident"](#).

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U1010 CONTROL UNIT (CAN)

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

U1010 CONTROL UNIT (CAN)

BCM

BCM : DTC Logic

INFOID:0000000003814924

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

BCM : Diagnosis Procedure

INFOID:0000000003814925

1.REPLACE BCM

When DTC "U1010: CONTROL UNIT (CAN)" is detected, replace BCM.

>> Replace BCM. Refer to [BCS-78. "Exploded View"](#).

BCM : Special Repair Requirement

INFOID:0000000003814926

1.REQUIRED WORK WHEN REPLACING BCM

Initialize control unit. Refer to CONSULT-III operation manual NATS-IVIS/NVIS.

>> Work end.

P1610 LOCK MODE

Description

INFOID:000000003814927

When the starting operation is carried more than five times consecutively under the following conditions, NATS will shift to the mode which prevents the engine from being started.

- Unregistered Intelligent Key is used.
- BCM or ECM is malfunctioning.

DTC Logic

INFOID:000000003814928

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1610	LOCK MODE	When the starting operation is carried out five or more times consecutively under the following conditions. • Unregistered Intelligent Key • BCM or ECM is malfunctioning.	—

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-31. "Diagnosis Procedure"](#).
 NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003814929

1.CHECK ENGINE START FUNCTION

1. Perform the check for DTC except DTC P1610.
2. Use CONSULT-III to erase DTC after fixing.
3. Turn ignition switch OFF.
4. Turn ignition switch ON when registered Intelligent Key is inserted into key slot and wait for 5 seconds.
5. Turn the ignition switch OFF and wait 5 seconds.
6. Repeat steps 4 and 5 twice (total of 3 cycles).
7. Check that engine can start when registered Intelligent Key is inserted into key slot.

>> INSPECTION END

P1611 ID DISCORD, IMMU-ECM

Description

INFOID:000000003814930

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:000000003814931

DTC DETECTION LOGIC

NOTE:

- If DTC B1611 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "BCM : DTC Logic"](#).
- If DTC B1611 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-30, "BCM : DTC Logic"](#).

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions.
 - 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-32, "Diagnosis Procedure"](#).
 NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003814932

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-IVIS/NVIS".

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

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

2.REPLACE BCM

1. Replace BCM. Refer to [BCS-78, "Removal and Installation"](#).
2. Perform initialization with CONSULT-III.
 For initialization, refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".

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

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

3.REPLACE ECM

1. Replace ECM. Refer to [EC-14, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description"](#).
2. Perform initialization with CONSULT-III.
 For initialization, refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".

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

- YES >> INSPECTION END

P1611 ID DISCORD, IMMU-ECM

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

NO >> GO TO 4.

4.CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#).

>> INSPECTION END

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P1612 CHAIN OF ECM-IMMU

Description

INFOID:000000003814933

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:000000003814934

DTC DETECTION LOGIC

NOTE:

- If DTC P1612 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "BCM : DTC Logic"](#).
- If DTC P1612 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-30, "BCM : DTC Logic"](#).

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions.
 - 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-34, "Diagnosis Procedure"](#).
 NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003814935

1.REPLACE BCM

1. Replace BCM. Refer to [BCS-78, "Removal and Installation"](#).
2. Perform initialization with CONSULT-III.
For initialization, refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".

Does the engine start?

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

2.REPLACE ECM

Replace ECM. Refer to [EC-14, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description"](#).

>> INSPECTION END

P1614 CHAIN OF IMMU-KEY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

P1614 CHAIN OF IMMU-KEY

Description

INFOID:000000003814936

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:000000003814937

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1614	CHAIN OF IMMU-KEY	Inactive communication between key slot and BCM.	• Harness or connectors (The key slot circuit is open or shorted) • Key slot • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

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

Is DTC detected?

YES >> Go to [SEC-35, "Diagnosis Procedure"](#).
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE 2

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

Is DTC detected?

YES >> Go to [SEC-35, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003814938

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

(+)		(-)	Voltage (V) (Approx.)
Key slot			
Connector	Terminal		
M99	2	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace key slot. Refer to [SEC-204, "Removal and Installation"](#).
NO >> GO TO 3.

P1614 CHAIN OF IMMU-KEY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

3.CHECK KEY SLOT CIRCUIT

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

Key slot		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M99	2	M122	80	Existed

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

Key slot		Ground	Continuity
Connector	Terminal		
M99	2		Not existed

Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-78, "Removal and Installation"](#).
NO >> Repair or replace harness.

4.CHECK PUSH-BUTTON 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 connector.
3. Check voltage between key slot harness connector and ground.

(+) Key slot		(-)	Voltage (V) (Approx.)
Connector	Terminal		
M99	3	Ground	Battery voltage

Is the inspection result normal?

- YES >> Replace key slot. Refer to [SEC-204, "Removal and Installation"](#).
NO >> GO TO 6.

6.CHECK KEY SLOT COMMUNICATION SIGNAL CIRCUIT

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

Key slot		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M99	3	M122	81	Existed

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

Key slot		Ground	Continuity
Connector	Terminal		
M99	3		Not existed

Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-78, "Removal and Installation"](#).
NO >> Repair or replace harness.

7.CHECK KEY SLOT GROUND CIRCUIT

P1614 CHAIN OF IMMU-KEY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

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

Key slot		Ground	Continuity
Connector	Terminal		
M99	7		Existed

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness.

8.CHECK INTERMITTENT INCIDENT

Refer to [GI-35. "Intermittent Incident"](#).

>> INSPECTION END

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SEC

P1615 DIFFERENCE OF KEY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

P1615 DIFFERENCE OF KEY

Description

INFOID:000000003814939

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:000000003814940

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1615	DIFFERENCE OF KEY	The ID verification result between BCM and Intelligent Key is NG. The registration is necessary.	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-38, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003814941

1.PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Reregister all Intelligent Keys.
For initialization and registration of Intelligent Key. Refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".

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

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

2.REPLACE INTELLIGENT KEY

1. Replace Intelligent Key.
2. Perform initialization with CONSULT-III.
For initialization and registration of Intelligent Key. Refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".

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

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

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#).

>> INSPECTION END

B2190 NATS ANTENNA AMP.

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2190 NATS ANTENNA AMP.

Description

INFOID:000000003814942

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:000000003814943

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2190	NATS ANTENNA AMP	Inactive communication between key slot and BCM.	• Harness or connectors (The key slot circuit is open or shorted) • Key slot • BCM

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-39, "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-39, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003814944

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

(+)		(-)	Voltage (V) (Approx.)
Key slot			
Connector	Terminal		
M99	2	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace key slot. Refer to [SEC-204, "Removal and Installation"](#).
NO >> GO TO 3.

B2190 NATS ANTENNA AMP.

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

3.CHECK KEY SLOT CIRCUIT

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

Key slot		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M99	2	M122	80	Existed

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

Key slot		Ground	Continuity
Connector	Terminal		
M99	2		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-78, "Removal and Installation"](#).

NO >> Repair or replace harness.

4.CHECK PUSH-BUTTON 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 connector.
3. Check voltage between key slot harness connector and ground.

(+)		(-)	Voltage (V) (Approx.)
Key slot			
Connector	Terminal		
M99	3	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace key slot. Refer to [SEC-204, "Removal and Installation"](#).

NO >> GO TO 6.

6.CHECK KEY SLOT COMMUNICATION SIGNAL CIRCUIT

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

Key slot		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M99	3	M122	81	Existed

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

Key slot		Ground	Continuity
Connector	Terminal		
M99	3		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-78, "Removal and Installation"](#).

NO >> Repair or replace harness.

7.CHECK KEY SLOT GROUND CIRCUIT

B2190 NATS ANTENNA AMP.

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

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

Key slot		Ground	Continuity
Connector	Terminal		
M99	7		Existed

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness.

8.CHECK INTERMITTENT INCIDENT

Refer to [GI-35. "Intermittent Incident"](#).

>> INSPECTION END

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SEC

B2191 DIFFERENCE OF KEY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2191 DIFFERENCE OF KEY

Description

INFOID:000000003814945

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:000000003814946

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2191	DIFFERENCE OF KEY	The ID verification result between BCM and Intelligent Key is NG. The registration is necessary.	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-42, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003814947

1.PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Reregister all Intelligent Keys.
For initialization and registration of Intelligent Key. Refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".

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

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

2.REPLACE INTELLIGENT KEY

1. Replace Intelligent Key.
2. Perform initialization with CONSULT-III.
For initialization and registration of Intelligent Key. Refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".

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

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

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#).

>> INSPECTION END

B2192 ID DISCORD, IMMU-ECM

Description

INFOID:000000003814948

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:000000003814949

DTC DETECTION LOGIC

NOTE:

- If DTC B2192 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "BCM : DTC Logic"](#).
- If DTC B2192 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-30, "BCM : DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2192	ID DISCORD, IMMU-ECM	The ID verification result between BCM and ECM is NG. The registration is necessary.	• BCM • ECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions.
 - 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-43, "Diagnosis Procedure"](#).
 NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003814950

1.PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Reregister all Intelligent Keys.
 For initialization and registration of Intelligent Key. Refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".

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

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

2.REPLACE BCM

1. Replace BCM. Refer to [BCS-78, "Removal and Installation"](#).
2. Perform initialization with CONSULT-III.
 For initialization, refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".

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

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

3.REPLACE ECM

1. Replace ECM. Refer to [EC-14, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description"](#).
2. Perform initialization with CONSULT-III.

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

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

4.CHECK INTERMITTENT INCIDENT

Refer to [GI-35. "Intermittent Incident"](#).

>> INSPECTION END

B2193 CHAIN OF ECM-IMMU

Description

INFOID:000000003814951

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:000000003814952

DTC DETECTION LOGIC

NOTE:

- If DTC B2193 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "BCM : DTC Logic"](#).
- If DTC B2193 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-30, "BCM : DTC Logic"](#).

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

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions.
 - 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-45, "Diagnosis Procedure"](#).
 NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003814953

1. REPLACE BCM

1. Replace BCM. Refer to [BCS-78, "Removal and Installation"](#).
2. Perform initialization with CONSULT-III.
For initialization, refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".

Does the engine start?

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

2. REPLACE ECM

Replace ECM. Refer to [EC-14, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description"](#).

>> INSPECTION END

B2013 ID DISCORD, IMMU-STRG**Description**

INFOID:000000003814954

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:000000003814955

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2013	ID DISCORD, IMMU-STRG	The ID verification result between BCM and steering lock unit is NG. The registration is necessary.	Steering 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-46, "Diagnosis Procedure"](#).
 NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003814956

1.PERFORM INITIALIZATION

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

Does steering lock operate?

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

2.REPLACE STEERING LOCK UNIT

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

Does steering lock operate?

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

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#).

>> INSPECTION END

B2014 CHAIN OF STRG-IMMU

Description

INFOID:000000003814957

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:000000003814958

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2014	CHAIN OF STRG-IMMU	Inactive communication between steering lock unit and BCM	- Harness or connectors (Steering lock unit circuit is open or shorted) - Steering lock unit - BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000003814959

1.CHECK STEERING LOCK UNIT POWER SUPPLY

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

(+)		(-)	Condition		Voltage (V) (Approx.)
Steering lock unit					
Connector	Terminal				
M12	7	Ground	Ignition switch	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

- Turn ignition switch OFF.
- Disconnect BCM connector.
- Check continuity between steering lock unit harness connector and BCM harness connector.

Steering lock unit		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M12	7	M122	106	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M12	7		Not existed

Is the inspection normal?

YES >> Replace BCM. Refer to [BCS-78, "Removal and Installation"](#).

NO >> Repair or replace harness.

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		
M12	5		Existed
	6		

Is the inspection normal?

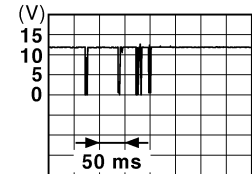
YES >> GO TO 4.

NO >> Repair or replace harness.

4.CHECK STEERING LOCK UNIT COMMUNICATION SIGNAL

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

(+) Steering lock unit		(-)	Condition	Voltage (V) (Approx.)
Connector	Terminal			
M12	2	Ground	Steering lock unit	Lock status
			Steering lock unit	Lock or unlock
				For 15 seconds after unlock
			15 seconds or later after unlock.	0



JMKIA0066GB

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

B2014 CHAIN OF STRG-IMMU

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Steering lock unit		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M12	2	M122	111	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M12	2		Not existed

Is the inspection normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

6.CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#).

>> INSPECTION END

SEC

B2555 STOP LAMP

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2555 STOP LAMP

Description

INFOID:000000003814960

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:000000003814961

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2555	STOP LAMP	BCM makes a comparison between the upper voltage and lower voltage of stop lamp switch. It judges from their values to detect the malfunctioning circuit.	• Harness or connectors (Stop lamp switch circuit is open or shorted) • Stop lamp switch • 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-50, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003814962

1.CHECK STOP LAMP SWITCH INPUT SIGNAL

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

(+)		(-)	Voltage (V) (Approx.)
BCM			
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 connector.
2. Check voltage between stop lamp harness connector and ground.

(+)		(-)	Voltage (V) (Approx.)
Stop lamp switch			
Connector	Terminal		
E115	1	Ground	Battery voltage

Is the inspection result normal?

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

B2555 STOP LAMP

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

3.CHECK STOP LAMP SWITCH CIRCUIT

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

Stop lamp switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E115	2	M123	118	Existed

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

Stop lamp switch		Ground	Continuity
Connector	Terminal		
E115	2		Not existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4.CHECK STOP LAMP SWITCH

Refer to [SEC-51, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace stop lamp switch. Refer to [BR-17, "Removal and Installation"](#).

5.CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#).

>> INSPECTION END

Component Inspection

INFOID:000000003814963

1.CHECK STOP LAMP SWITCH

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

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

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace stop lamp switch. Refer to [BR-17, "Removal and Installation"](#).

B2556 PUSH-BUTTON IGNITION SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2556 PUSH-BUTTON IGNITION SWITCH

Description

INFOID:000000003814964

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:000000003814965

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 at ON for 100 seconds or more	• Harness or connectors (Push-button ignition switch circuit is shorted.) • Push-button ignition switch • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. 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-52, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003814966

1.CHECK PUSH-BUTTON IGNITION SWITCH INPUT SIGNAL

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

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

Is the inspection normal?

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

2.CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT

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

Push-button ignition switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M101	4	M122	89	Existed

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

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

Is the inspection normal?

B2556 PUSH-BUTTON IGNITION SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

YES >> Replace BCM. Refer to [BCS-78. "Removal and Installation"](#).

NO >> Repair or replace harness.

3.CHECK PUSH-BUTTON IGNITION SWITCH GROUND CIRCUIT

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

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

Is the inspection normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4.CHECK PUSH-BUTTON IGNITION SWITCH

Refer to [SEC-53. "Component Inspection"](#).

Is the inspection normal?

YES >> GO TO 5.

NO >> Replace push-button ignition switch. Refer to [SEC-205. "Removal and Installation"](#).

5.CHECK INTERMITTENT INCIDENT

Refer to [GI-35. "Intermittent Incident"](#).

>> INSPECTION END

Component Inspection

INFOID:000000003814967

1.CHECK PUSH-BUTTON IGNITION SWITCH

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

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

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace push-button ignition switch. Refer to [SEC-205. "Removal and Installation"](#).

B2557 VEHICLE SPEED

Description

INFOID:000000003814968

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

DTC Logic

INFOID:000000003814969

DTC DETECTION LOGIC

NOTE:

- If DTC B2557 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "BCM : DTC Logic"](#).
- If DTC B2557 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-30, "BCM : DTC Logic"](#).

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B2557	VEHICLE SPEED	BCM detects the following difference between the vehicle speed from “combination meter” and the one from “ABS actuator and electric unit” for 10 seconds continuously. • One is 10 km/h (6.2 MPH) or more and the other is 4 km/h (2.5 MPH) or less.	• Wheel sensor • Combination meter • 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 (6.2 MPH) or more and wait for at least 10 seconds.
2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-54, "Diagnosis Procedure"](#).
- NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003814970

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

Check “Self diagnostic result” with CONSULT-III. Refer to [BRC-48, "DTC No. Index"](#).

Is the inspection result normal?

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

2.CHECK DTC WITH “COMBINATION METER”

Check “Self diagnostic result” with CONSULT-III. Refer to [MWI-67, "DTC Index"](#).

Is the inspection result normal?

- YES >> GO TO 3.
- NO >> Repair or replace the malfunctioning parts.

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#).

>> INSPECTION END

B2560 STARTER CONTROL RELAY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2560 STARTER CONTROL RELAY

Description

INFOID:000000003814971

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

DTC Logic

INFOID:000000003814972

DTC DETECTION LOGIC

NOTE:

- If DTC B2560 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "BCM : DTC Logic"](#)
- If DTC B2560 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-30, "BCM : 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.
 - 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-55, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003814973

1.CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III. Refer to [SEC-191, "DTC Index"](#).

Is the inspection result normal?

- YES >> GO TO 2.
NO >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).

2.CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#)

>> INSPECTION END

B2601 SHIFT POSITION**Description**

INFOID:000000003814974

BCM confirms the shift position with the following 4 signals.

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

DTC Logic

INFOID:000000003814975

DTC DETECTION LOGIC**NOTE:**

- If DTC B2601 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "BCM : DTC Logic"](#).
- If DTC B2601 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-30, "BCM : DTC Logic"](#).
- If DTC B2601 is displayed with DTC B2603, first perform the trouble diagnosis for DTC B2603. Refer to [SEC-67, "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	• Harness or connectors (Control device circuit is open or shorted) • Control 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.
 - Selector lever is in the P position.
 - Do not 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:000000003814976

1.CHECK CONTROL DEVICE POWER SUPPLY

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

(+)		(-)	Voltage (V) (Approx.)
Control device (detention switch)			
Connector	Terminal		
M57	8	Ground	Battery voltage

Is the inspection result normal?

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

2.CHECK CONTROL DEVICE POWER SUPPLY CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between control device (detention switch) harness connector and BCM harness connector.

B2601 SHIFT POSITION

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Control device (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M57	8	M122	96	Existed

3. Check continuity between control device (detention switch) harness connector and ground.

Control device (detention switch)		Ground	Continuity
Connector	Terminal		
M57	8		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-78, "Removal and Installation"](#).

NO >> Repair or replace harness.

3.CHECK CONTROL DEVICE CIRCUIT (BCM)

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

Control device (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M57	9	M122	99	Existed

3. Check continuity between control device (detention switch) harness connector and ground.

Control device (detention switch)		Ground	Continuity
Connector	Terminal		
M57	9		Not existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4.CHECK CONTROL DEVICE CIRCUIT (IPDM E/R)

1. Check continuity between control device (detention switch) harness connector and IPDM E/R harness connector.

Control device (detention switch)		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M57	9	E11	43	Existed

2. Check continuity between control device (detention switch) harness connector and ground.

Control device (detention switch)		Ground	Continuity
Connector	Terminal		
M57	9		Not existed

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

5.CHECK CONTROL DEVICE (DETENTION SWITCH)

Refer to [SEC-58, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace control device. Refer to [TM-155, "Removal and Installation"](#) (VQ35DE) or [TM-317, "Removal and Installation"](#) (VQ25DE).

B2601 SHIFT POSITION

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

6. CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#).

>> INSPECTION END

Component Inspection

INFOID:000000003814977

1. CHECK CONTROL DEVICE (DETENTION SWITCH)

1. Turn ignition switch OFF.
2. Disconnect control device connector.
3. Check continuity between control device (detention switch) terminals.

Control device (detention switch)		Condition		Continuity
Terminal				
8	9	Selector lever	P position	Not existed
			Other than above	Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace control device. Refer to [TM-155, "Removal and Installation"](#) (VQ35DE) or [TM-317, "Removal and Installation"](#) (VQ25DE).

B2602 SHIFT POSITION

Description

INFOID:000000003814978

BCM confirms the shift position with the following 4 signals.

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

DTC Logic

INFOID:000000003814979

DTC DETECTION LOGIC

NOTE:

- If DTC B2602 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "BCM : DTC Logic"](#).
- If DTC B2602 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-30, "BCM : DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2602	SHIFT POSITION	BCM detects the following status for 10 seconds. • Shift position is in the P position • Vehicle speed is 4 km/h (2.5 MPH) or more • Ignition switch is in the ON position	• Harness or connectors (Control device circuit is open or shorted) • Control device (detention switch) • ABS actuator and electric unit (control unit) • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine under the following conditions and wait for at least 10 seconds.
 - 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-59, "Diagnosis Procedure"](#).
 NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003814980

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

Check "Self diagnostic result" with CONSULT-III. Refer to [BRC-48, "DTC No. Index"](#).

Is the inspection result normal?

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

2.CHECK CONTROL DEVICE POWER SUPPLY

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

(+)		(-)	Voltage (V) (Approx.)
Control device (detention switch)			
Connector	Terminal		
M57	8	Ground	Battery voltage

Is the inspection result normal?

B2602 SHIFT POSITION

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

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

3.CHECK CONTROL DEVICE POWER SUPPLY CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between control device (detention switch) harness connector and BCM harness connector.

Control device (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M57	8	M122	96	Existed

3. Check continuity between control device (detention switch) harness connector and ground.

Control device (detention switch)		Ground	Continuity
Connector	Terminal		
M57	8		No existed

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-78, "Removal and Installation"](#).
NO >> Repair or replace harness.

4.CHECK CONTROL DEVICE CIRCUIT

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

Control device (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M57	9	M122	99	Existed

3. Check continuity between control device (detention switch) harness connector and ground.

Control device (detention switch)		Ground	Continuity
Connector	Terminal		
M57	9		No existed

Is the inspection result normal?

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

5.CHECK CONTROL DEVICE (DETENTION SWITCH)

Refer to [SEC-58, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 6.
NO >> Replace control device. Refer to [TM-155, "Removal and Installation"](#) (VQ35DE) or [TM-317, "Removal and Installation"](#) (VQ25DE).

6.CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#).

>> INSPECTION END

B2603 SHIFT POSITION STATUS

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2603 SHIFT POSITION STATUS

Description

INFOID:000000003814981

BCM confirms the shift position with the following 4 signals.

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

DTC Logic

INFOID:000000003814982

DTC DETECTION LOGIC

NOTE:

- If DTC B2603 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "BCM : DTC Logic"](#).
- If DTC B2603 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-30, "BCM : DTC Logic"](#).
- If DTC B2603 is displayed with DTC B210F for IPDM E/R, first perform the trouble diagnosis for DTC B210F. Refer to [SEC-107, "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 the ON position. • Park/neutral position (PNP) switch: approx. 0 V • Control device (detention switch): approx. 0 V	• Harness or connector (Control device circuit is open or shorted) • Harness or connectors [Park/neutral position (PNP) switch circuit is open or shorted] • Park/neutral position (PNP) switch • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to [SEC-61, "VQ35DE MODELS : Diagnosis Procedure"](#) (VQ35DE) or [SEC-62, "VQ25DE MODELS : Diagnosis Procedure"](#) (VQ25DE).

NO >> INSPECTION END

VQ35DE MODELS

VQ35DE MODELS : Diagnosis Procedure

INFOID:000000003814983

1.CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III for IPDM E/R.

Is DTC B210F detected?

YES >> Refer to [SEC-107, "DTC Logic"](#).

NO >> GO TO 2.

2.CHECK TCM CIRCUIT

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

B2603 SHIFT POSITION STATUS

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

TCM		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
F23	20	F12	72	Existed

- Check continuity between TCM harness connector and ground.

TCM		Ground	Continuity
Connector	Terminal		
F23	20		Not existed

Is the inspection result normal?

YES >> Replace TCM. Refer to [TM-153, "Exploded View"](#).

NO >> Repair or replace harness.

VQ25DE MODELS

VQ25DE MODELS : Diagnosis Procedure

INFOID:000000003867329

1.CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III for IPDM E/R.

Is DTC B210F detected?

YES >> Refer to [SEC-107, "DTC Logic"](#).

NO >> GO TO 2.

2.CHECK PNP SWITCH INPUT SIGNAL

- Turn ignition switch OFF.
- Disconnect park/neutral position switch connector.
- Turn ignition switch ON.
- Check voltage between park/neutral position switch harness connector and ground.

(+)		(-)	Voltage (V) (Approx.)
Park/neutral position switch			
Connector	Terminal		
F57	1	Ground	Battery voltage

Is the inspection normal?

YES >> GO TO 4.

NO >> GO TO 3.

3.CHECK PNP SWITCH POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- Disconnect IPDM E/R connector.
- Check continuity between park/neutral position switch harness connector and IPDM E/R harness connector.

Park/neutral position switch		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
F57	1	F12	74	Existed

- Check continuity between park/neutral position switch harness connector and ground.

Park/neutral position switch		Ground	Continuity
Connector	Terminal		
F57	1		Not existed

Is the inspection result normal?

YES >> Check the following.

- 10 A fuse (No. 42, located in the IPDM E/R)

B2603 SHIFT POSITION STATUS

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

- Harness for open or short between park/neutral position switch and IPDM E/R

NO >> Repair or replace harness.

4.CHECK IPDM E/R INPUT SIGNAL

1. Turn ignition switch OFF.
2. Connect park/neutral position switch connector.
3. Disconnect IPDM E/R connector.
4. Turn ignition switch ON.
5. Check voltage between IPDM E/R harness connector and ground.

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

Is the inspection normal?

YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).

NO >> GO TO 5.

5.CHECK PNP SWITCH CIRCUIT

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

Park/neutral position switch		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
F57	2	F12	72	Existed

4. Check continuity between park/neutral position switch harness connector and ground.

Park/neutral position switch		Ground	Continuity
Connector	Terminal		
F57	2		Not existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

6.CHECK PNP SWITCH

Refer to [TM-214, "Component Inspection \(Park/Neutral Position Switch\)"](#).

Is the inspection result normal?

YES >> GO TO 7.

NO >> Replace park/neutral position switch. Refer to [TM-315, "Exploded View"](#).

7.CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#).

>> INSPECTION END

B2604 PNP SWITCH

Description

INFOID:000000003814984

BCM confirms the shift position with the following 4 signals.

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

DTC Logic

INFOID:000000003814985

DTC DETECTION LOGIC

NOTE:

- If DTC B2604 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "BCM : DTC Logic"](#).
- If DTC B2604 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-30, "BCM : DTC Logic"](#).
- If DTC B2604 is displayed with DTC B210F for IPDM E/R, first perform the trouble diagnosis for DTC B210F. Refer to [SEC-107, "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. • 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.	• Harness or connectors [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 second.
 - 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-64, "VQ35DE MODELS : Diagnosis Procedure"](#) (VQ35DE) or [SEC-65, "VQ25DE MODELS : Diagnosis Procedure"](#) (VQ25DE).

NO >> INSPECTION END

VQ35DE MODELS**VQ35DE MODELS : Diagnosis Procedure**

INFOID:000000003814986

1.CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III for IPDM E/R.

Is DTC B210F detected?

YES >> Refer to [SEC-107, "DTC Logic"](#).

NO >> GO TO 2.

2.CHECK TCM CIRCUIT

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

B2604 PNP SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

TCM		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
F23	20	F12	72	Existed

4. Check continuity between TCM harness connector and ground.

TCM		Ground	Continuity
Connector	Terminal		
F23	20		Not existed

Is the inspection result normal?

YES >> Replace TCM. Refer to [TM-153, "Exploded View"](#).

NO >> Repair or replace harness.

VQ25DE MODELS

VQ25DE MODELS : Diagnosis Procedure

INFOID:000000003867330

1.CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III for IPDM E/R.

Is DTC B210F detected?

YES >> Refer to [SEC-107, "DTC Logic"](#).

NO >> GO TO 2.

2.CHECK PNP SWITCH INPUT SIGNAL

- Turn ignition switch OFF.
- Disconnect park/neutral position switch connector.
- Turn ignition switch ON.
- Check voltage between park/neutral position switch harness connector and ground.

(+)		(-)	Voltage (V) (Approx.)
Park/neutral position switch			
Connector	Terminal		
F57	1	Ground	Battery voltage

Is the inspection normal?

YES >> GO TO 4.

NO >> GO TO 3.

3.CHECK PNP SWITCH POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- Disconnect IPDM E/R connector.
- Check continuity between park/neutral position switch harness connector and IPDM E/R harness connector.

Park/neutral position switch		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
F57	1	F12	74	Existed

4. Check continuity between park/neutral position switch harness connector and ground.

Park/neutral position switch		Ground	Continuity
Connector	Terminal		
F57	1		Not existed

Is the inspection result normal?

YES >> Check the following.

- 10 A fuse (No. 42, located in the IPDM E/R)

B2604 PNP SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

- Harness for open or short between park/neutral position switch and IPDM E/R

NO >> Repair or replace harness.

4.CHECK IPDM E/R INPUT SIGNAL

1. Turn ignition switch OFF.
2. Connect park/neutral position switch connector.
3. Disconnect IPDM E/R connector.
4. Turn ignition switch ON.
5. Check voltage between IPDM E/R harness connector and ground.

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

Is the inspection normal?

YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).

NO >> GO TO 5.

5.CHECK PNP SWITCH CIRCUIT

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

Park/neutral position switch		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
F57	2	F12	72	Existed

4. Check continuity between park/neutral position switch harness connector and ground.

Park/neutral position switch		Ground	Continuity
Connector	Terminal		
F57	2		Not existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

6.CHECK PNP SWITCH

Refer to [TM-214, "Component Inspection \(Park/Neutral Position Switch\)"](#).

Is the inspection result normal?

YES >> GO TO 7.

NO >> Replace park/neutral position switch. Refer to [TM-315, "Exploded View"](#).

7.CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#).

>> INSPECTION END

B2605 PNP SWITCH

Description

INFOID:000000003814987

BCM confirms the shift position with the following 4 signals.

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

DTC Logic

INFOID:000000003814988

DTC DETECTION LOGIC

NOTE:

- If DTC B2605 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "BCM : DTC Logic"](#).
- If DTC B2605 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-30, "BCM : 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 • 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.	• Harness or connectors [Park/neutral position (PNP) switch circuit is open or shorted] • BCM • 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.
 - 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-67, "Diagnosis Procedure"](#).

NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003814989

1.CHECK BCM INPUT SIGNAL

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

(+)		(-)	Condition		Voltage (V) (Approx.)
BCM					
Connector	Terminal				
M123	140	Ground	Selector lever	P or N position	Battery voltage
				Other than above	0

Is the inspection normal?

YES >> Replace BCM. Refer to [BCS-78, "Removal and Installation"](#).

NO >> GO TO 2.

2.CHECK PNP SWITCH CIRCUIT

1. Turn ignition switch OFF.

B2605 PNP SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

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

IPDM E/R		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E10	30	M123	140	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E10	30		Not existed

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-34. "Removal and Installation"](#).
NO >> Repair or replace harness.

B2606 STEERING LOCK RELAY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2606 STEERING LOCK RELAY

Description

INFOID:000000003814990

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:000000003814991

DTC DETECTION LOGIC

NOTE:

- If DTC B2606 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "BCM : DTC Logic"](#).
- If DTC B2606 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-30, "BCM : 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. • Steering lock unit ON signal transmitted by IPDM E/R • The steering lock unit status feedback	Steering lock relay (Built into IPDM E/R)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions.
 - Selector lever is in the P or N position.
 - Do not depress brake pedal.
2. Turn ignition switch OFF.
3. Press driver side door switch and wait for at least 1 second.
4. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-69, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003814992

1.CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III. Refer to [SEC-191, "DTC Index"](#).

Is the inspection result normal?

- YES >> GO TO 2.
NO >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).

2.CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#).

>> INSPECTION END

B2607 STEERING LOCK RELAY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2607 STEERING LOCK RELAY

Description

INFOID:000000003814993

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:000000003814994

DTC DETECTION LOGIC

NOTE:

- If DTC B2607 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "BCM : DTC Logic"](#).
- If DTC B2607 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-30, "BCM : 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. • Steering lock unit ON signal transmitted by IPDM E/R • The steering lock unit status feedback	• Harness or connectors (Steering lock unit power supply circuit is open or shorted) • Steering lock relay (Built into IPDM E/R)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions.
 - Selector lever is in the P or N position.
 - Do not depress brake pedal.
2. Turn ignition switch OFF.
3. Press driver side door switch and wait for at least 1 second.
4. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000003814995

1.CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III. Refer to [SEC-191, "DTC Index"](#).

Is the inspection result normal?

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

2.CHECK STEERING LOCK UNIT POWER SUPPLY CIRCUIT

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

(+)		(-)	Condition	Voltage (V) (Approx.)
Steering lock unit				
Connector	Terminal			
M12	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.

B2607 STEERING LOCK RELAY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

3. CHECK STEERING LOCK UNIT CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. 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	
M12	1	E10	11	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M12	1		Not existed

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).
NO >> Repair or replace harness.

4. CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#).

>> INSPECTION END

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B2608 STARTER RELAY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2608 STARTER RELAY

Description

INFOID:000000003814996

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

DTC Logic

INFOID:000000003814997

DTC DETECTION LOGIC

NOTE:

- If DTC B2608 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "BCM : DTC Logic"](#).
- If DTC B2608 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-30, "BCM : DTC Logic"](#).
- If DTC B2608 is displayed with DTC B210D for IPDM E/R, first perform the trouble diagnosis for DTC B210D. Refer to [SEC-104, "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.	• 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.
 - 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-72, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003814998

1.CHECK BCM POWER SUPPLY CIRCUIT

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

(+)		(-)	Condition		Voltage (V) (Approx.)
BCM					
Connector	Terminal				
M121	52	Ground	Selector lever	N or P position	Battery voltage
				Other than above	0

Is the inspection result normal?

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

2.CHECK STARTER RELAY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector and IPDM E/R connector.
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	
E11	46	M121	52	Existed

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

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

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).

NO >> Repair or replace harness.

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#).

>> INSPECTION END

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B2609 STEERING STATUS**Description**

INFOID:000000003814999

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

DTC Logic

INFOID:000000003815000

DTC DETECTION LOGIC**NOTE:**

- If DTC B2609 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "BCM : DTC Logic"](#).
- If DTC B2609 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-30, "BCM : 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.	• 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 • BCM

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

1. Turn ignition switch ON under the following conditions and wait for at least 1 second.
 - 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-74, "Diagnosis Procedure"](#).
 NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE 2

1. Turn ignition switch ON.
2. Turn ignition switch OFF.
3. Press driver side door switch and wait for at least 1 second.
4. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000003815001

1.INSPECTION START

Check the case in which DTC is detected.

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

In which case is DTC detected?

Case1 >> GO TO 2.
 Case2 >> GO TO 6.

2.CHECK BCM OUTPUT SIGNAL

B2609 STEERING STATUS

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

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

(+)		(-)	Voltage (V) (Approx.)
Steering lock unit			
Connector	Terminal		
M12	8	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

3.CHECK STEERING LOCK UNIT CIRCUIT-1

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

Steering lock unit		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M12	8	M122	98	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M12	8		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-78, "Removal and Installation"](#).

NO >> Repair or replace harness.

4.CHECK IPDM E/R OUTPUT SIGNAL

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

(+)		(-)	Voltage (V) (Approx.)
Steering lock unit			
Connector	Terminal		
M12	8	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace steering lock unit.

NO >> GO TO 5.

5.CHECK STEERING LOCK UNIT CIRCUIT-2

1. Disconnect IPDM E/R connector.
2. 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	
M12	8	E10	33	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M12	8		Not existed

B2609 STEERING STATUS

[INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).

NO >> Repair or replace harness.

6.CHECK BCM OUTPUT SIGNAL

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

(+)		(-)	Voltage (V) (Approx.)
Steering lock unit			
Connector	Terminal		
M12	3	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 8.

NO >> GO TO 7.

7.CHECK STEERING LOCK UNIT CIRCUIT-3

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

Steering lock unit		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M12	3	M122	97	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M12	3		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-78, "Removal and Installation"](#).

NO >> Repair or replace harness.

8.CHECK IPDM E/R OUTPUT SIGNAL

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

(+)		(-)	Voltage (V) (Approx.)
Steering lock unit			
Connector	Terminal		
M12	3	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace steering lock unit.

NO >> GO TO 9.

9.CHECK STEERING LOCK UNIT CIRCUIT-4

1. Disconnect IPDM E/R connector.
2. 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	
M12	3	E10	32	Existed

B2609 STEERING STATUS

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M12	3		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).

NO >> Repair or replace harness.

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B260B STEERING LOCK UNIT

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B260B STEERING LOCK UNIT

Description

INFOID:0000000003815002

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

DTC Logic

INFOID:0000000003815003

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.	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-78. "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003815004

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 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:0000000003815005

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

DTC Logic

INFOID:0000000003815006

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.	Steering lock unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Turn ignition switch OFF.
3. Press driver side 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:0000000003815007

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-79, "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:000000003815008

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

DTC Logic

INFOID:000000003815009

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.	Steering lock unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000003815010

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-80, "DTC Logic"](#).

Is the DTC B260D displayed again?

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

B260F ENGINE STATUS

Description

INFOID:0000000003815011

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

DTC Logic

INFOID:0000000003815012

DTC DETECTION LOGIC

NOTE:

- If DTC B260F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "BCM : DTC Logic"](#).
- If DTC B260F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-30, "BCM : DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260F	INTERRUPTION OF ENGINE STATUS SIGNAL	BCM has not yet received 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.
 - 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-81, "Diagnosis Procedure"](#).
 NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003815013

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-81, "DTC Logic"](#).

Is the DTC B260F displayed again?

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

2.REPLACE ECM

Replace ECM. Refer to [EC-14, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description"](#).

>> INSPECTION END

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#).

>> INSPECTION END

B26E1 NO RECEPTION OF ENGINE STATUS SIGNAL

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B26E1 NO RECEPTION OF ENGINE STATUS SIGNAL

Description

INFOID:0000000003815014

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

DTC Logic

INFOID:0000000003815015

DTC DETECTION LOGIC

NOTE:

- If DTC B26E1 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "BCM : DTC Logic"](#).
- If DTC B26E1 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-30, "BCM : DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26E1	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.
 - 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-82, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003815016

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-82, "DTC Logic"](#).

Is the DTC B26E1 displayed again?

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

2.REPLACE ECM

Replace ECM. Refer to [EC-14, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description"](#).

>> INSPECTION END

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#).

>> INSPECTION END

B26E9 STEERING STATUS

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B26E9 STEERING STATUS

Description

INFOID:000000003815017

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

DTC Logic

INFOID:000000003815018

DTC DETECTION LOGIC

NOTE:

- If DTC B26E9 is displayed with DTC B2609, first perform the trouble diagnosis for DTC B2609. Refer to [SEC-74, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26E9	S/L STATUS	BCM requests lock to steering lock unit, then steering lock unit transmits a recognition signal to BCM, but steering lock unit remains unlocked.	Steering lock unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- Turn ignition switch ON.
- Turn ignition switch OFF.
- Press driver side door switch and wait for at least 1 second.
- Turn ignition switch ON.
- Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000003815019

1.INSPECTION START

- Turn ignition switch ON.
- Check "Self diagnostic result" with CONSULT-III.
- Touch "ERASE".
- Perform DTC Confirmation Procedure.
Refer to [SEC-83, "DTC Logic"](#).

Is the DTC B26E9 displayed again?

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

2.REPLACE STEERING LOCK UNIT

- Replace steering lock unit.
- Perform DTC confirmation procedure. Refer to [SEC-83, "DTC Logic"](#).

Is the DTC B26E9 displayed again?

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

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#).

>> INSPECTION END

B26EA KEY REGISTRATION**Description**

INFOID:000000003815020

When the registered Intelligent Key is carried, the door lock/unlock operation and the push-button ignition switch operation become possible.

DTC Logic

INFOID:000000003815021

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26EA	KEY REGISTRATION	Intelligent Key is not registered successfully.	• Improper registration operation • Intelligent Key • BCM

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

1. Perform initialization with CONSULT-III. Reregister all Intelligent Keys.
For initialization and registration of Intelligent Key. Refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Go to [SEC-84, "Diagnosis Procedure"](#)
 NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003815022

1.PERFORM INITIALIZATION

1. Perform initialization with CONSULT-III. Reregister all Intelligent Keys.
For initialization and registration of Intelligent Key. Refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

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

2.REPLACE INTELLIGENT KEY

1. Replace Intelligent Key. Reregister all Intelligent Keys
2. Perform initialization with CONSULT-III. For initialization, refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".
3. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Replace BCM. Refer to [BCS-78, "Removal and Installation"](#).
 NO >> INSPECTION END

B2612 STEERING STATUS

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2612 STEERING STATUS

Description

INFOID:000000003815023

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

DTC Logic

INFOID:000000003815024

DTC DETECTION LOGIC

NOTE:

- If DTC B2612 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "BCM : DTC Logic"](#).
- If DTC B2612 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-30, "BCM : DTC Logic"](#).

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B2612	STEERING STATUS	BCM detects the difference between the following status for 1 second • Steering lock or unlock • Feedback of steering lock status from IPDM E/R (CAN)	• 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 • BCM

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.
 - 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 >> 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-85, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003815025

1.INSPECTION START

Check the case in which DTC is detected.

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

In which case is DTC detected?

- Case1 >> GO TO 2.
Case2 >> GO TO 6.

2.CHECK BCM OUTPUT SIGNAL

1. Turn ignition switch OFF.

B2612 STEERING STATUS

[INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

2. Disconnect steering lock unit connector and IPDM E/R connector.
3. Check voltage between steering lock unit harness connector and ground.

(+)		(-)	Voltage (V) (Approx.)
Steering lock unit			
Connector	Terminal		
M12	8	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

3.CHECK STEERING LOCK UNIT CIRCUIT-1

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

Steering lock unit		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M12	8	M122	98	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M12	8		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-78, "Removal and Installation"](#).

NO >> Repair or replace harness.

4.CHECK IPDM E/R OUTPUT SIGNAL

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

(+)		(-)	Voltage (V) (Approx.)
Steering lock unit			
Connector	Terminal		
M12	8	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace steering lock unit.

NO >> GO TO 5.

5.CHECK STEERING LOCK UNIT CIRCUIT-2

1. Disconnect IPDM E/R connector.
2. 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	
M12	8	E10	33	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M12	8		Not existed

B2612 STEERING STATUS

[INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).

NO >> Repair or replace harness.

6.CHECK BCM OUTPUT SIGNAL

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

(+)		(-)	Voltage (V) (Approx.)
Steering lock unit			
Connector	Terminal		
M12	3	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 8.

NO >> GO TO 7.

7.CHECK STEERING LOCK UNIT CIRCUIT-3

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

Steering lock unit		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M12	3	M122	97	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M12	3		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-78, "Removal and Installation"](#)

NO >> Repair or replace harness.

8.CHECK IPDM E/R OUTPUT SIGNAL

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

(+)		(-)	Voltage (V) (Approx.)
Steering lock unit			
Connector	Terminal		
M12	3	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace steering lock unit.

NO >> GO TO 9.

9.CHECK STEERING LOCK UNIT CIRCUIT-4

1. Disconnect IPDM E/R connector.
2. 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	
M12	3	E10	32	Existed

B2612 STEERING STATUS

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M12	3		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).

NO >> Repair or replace harness.

B2617 STARTER RELAY CIRCUIT

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2617 STARTER RELAY CIRCUIT

Description

INFOID:000000003815026

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 the START position. IPDM E/R transmits the starter relay ON signal to BCM via CAN communication.

DTC Logic

INFOID:000000003815027

DTC DETECTION LOGIC

NOTE:

- If DTC B2617 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "BCM : DTC Logic"](#).
- If DTC B2617 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-30, "BCM : DTC Logic"](#).
- If DTC B2617 is displayed with DTC B2611, first perform the trouble diagnosis for DTC B2611. Refer to [SEC-89, "DTC Logic"](#).
- If DTC B2617 is displayed with DTC B210E for IPDM E/R, first perform the trouble diagnosis for DTC B210E. Refer to [SEC-105, "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	• 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.
 - 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-89, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003815028

1.CHECK STARTER RELAY

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

(+) BCM		(-)	Condition	Voltage (V) (Approx.)
Connector	Terminal			
M121	52	Ground	Selector lever	N or P position Battery voltage
			Other than above	0

Is the inspection result normal?

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

2.CHECK STARTER RELAY CIRCUIT

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

B2617 STARTER RELAY CIRCUIT

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

IPDM E/R		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E11	46	M121	52	Existed

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

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

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).

NO >> Repair or replace harness.

3. CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#).

>> INSPECTION END

B2619 BCM

Description

INFOID:000000003815029

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:000000003815030

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.	BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000003815031

1.INSPECTION START

- Turn ignition switch ON.
- Check "Self diagnostic result" with CONSULT-III.
- Touch "ERASE".
- Perform DTC Confirmation Procedure.**
See [SEC-91, "DTC Logic"](#).

Is the DTC B2619 displayed again?

- YES >> Replace BCM. Refer to [BCS-78, "Removal and Installation"](#).
 NO >> INSPECTION END

B261A PUSH-BUTTON IGNITION SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B261A PUSH-BUTTON IGNITION SWITCH

Description

INFOID:000000003815032

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

DTC Logic

INFOID:000000003815033

DTC DETECTION LOGIC

NOTE:

- If DTC B261A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "BCM : DTC Logic"](#).
- If DTC B261A is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-30, "BCM : DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B261A	PUSH-BUTTON IGNITION SWITCH	BCM detects the difference between the following for 1 second or more • Power supply position with push-button ignition switch • Power supply position from IPDM E/R (CAN)	• 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

1. Press push-button ignition switch for 1 second under the following condition.
 - 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-92, "Diagnosis Procedure"](#)

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE 2

1. Insert Intelligent Key into the key slot.
2. Press the push-button ignition switch under the following conditions and wait for at least 1 second.
 - Selector lever is in the P or N position.
 - Do not depress brake pedal.
3. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Go to [SEC-92, "Diagnosis Procedure"](#).

NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003815034

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.

B261A PUSH-BUTTON IGNITION SWITCH

[INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

- Disconnect push-button ignition switch connector and IPDM E/R connector.
- Check voltage between push-button ignition switch harness connector and ground.

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

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 3.

3.CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT 1

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

Push-button ignition switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M101	4	M122	89	Existed

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

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

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-78. "Removal and Installation"](#).

NO >> Repair or replace harness.

4.CHECK PUSH-BUTTON IGNITION SWITCH OUTPUT SIGNAL 2

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

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

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 5.

5.CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT 2

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

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

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

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

B261A PUSH-BUTTON IGNITION SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).

NO >> Repair or replace harness.

6. CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#).

>> INSPECTION END

B261E VEHICLE TYPE

Description

INFOID:000000003815035

There are two types of vehicles.

- HEV
- Conventional

DTC Logic

INFOID:000000003815036

DTC DETECTION LOGIC

NOTE:

- If DTC B261E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "BCM : DTC Logic"](#).
- If DTC B261E is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-30, "BCM : DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B261E	VEHICLE TYPE	Difference of BCM configuration	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-95, "Diagnosis Procedure"](#).
 NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003815037

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-95, "DTC Logic"](#).

Is the 1st trip DTC B261E displayed again?

- YES >> Replace BCM. Refer to [BCS-78, "Removal and Installation"](#).
 NO >> INSPECTION END

B2108 STEERING LOCK RELAY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2108 STEERING LOCK RELAY

Description

INFOID:000000003815038

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:000000003815039

DTC DETECTION LOGIC

NOTE:

If DTC B2108 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "IPDM E/R : 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 in the ON position for about 1 second even if the IPDM E/R receives steering lock relay ON/OFF signal from BCM.	IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000003815040

1.CHECK STEERING LOCK RELAY

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

(+)		(-)	Condition		Voltage (V) (Approx.)
IPDM E/R					
Connector	Terminal				
E10	11	Ground	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

Is the inspection normal?

- YES >> GO TO 2.
NO >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).

2.CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#).

>> INSPECTION END

B2109 STEERING LOCK RELAY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2109 STEERING LOCK RELAY

Description

INFOID:000000003815041

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:000000003815042

DTC DETECTION LOGIC

NOTE:

- If DTC B2109 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "IPDM E/R : DTC Logic"](#).
- When IPDM E/R power supply voltage is low (Approx. 7 - 8 V for about 1 second), the DTC B2109 may be detected.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2109	STRG LCK RELAY OFF	IPDM E/R detects that the relay is stuck in the OFF position for about 1 second even if the IPDM E/R receives steering lock relay ON/OFF signal from BCM.	• Harness or connector (Power supply circuit) • IPDM E/R • Battery

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.
 - 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-97, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003815043

1.CHECK POWER SUPPLY CIRCUIT

Check IPDM E/R power supply circuit. Refer to [PCS-19, "Diagnosis Procedure"](#).

Is the circuit normal?

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

2.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-34, "Removal and Installation"](#).
NO >> Check the following.
 - Harness for open or short between IPDM E/R and battery
 - Fuse

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B210A STEERING LOCK CONDITION SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B210A STEERING LOCK CONDITION SWITCH

Description

INFOID:000000003815044

There are 2 switches in the steering lock 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:000000003815045

DTC DETECTION LOGIC

NOTE:

If DTC B210A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "IPDM E/R : DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210A	STRG LCK STATE SW	IPDM E/R detects the difference between steering condition switches 1 and 2 for 1 second	• 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.
 - 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-98, "Diagnosis Procedure"](#).
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE 2

1. Turn ignition switch ON.
2. Turn ignition switch OFF.
3. Press driver side door switch and wait for at least 1 second.
4. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000003815046

1.INSPECTION START

Check the case in which DTC is detected.

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

In which case is DTC detected?

- Case1 >> GO TO 2.
Case2 >> GO TO 6.

2.CHECK BCM OUTPUT SIGNAL

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

B210A STEERING LOCK CONDITION SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

(+)		(-)	Voltage (V) (Approx.)
Steering lock unit			
Connector	Terminal		
M12	8	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

3.CHECK STEERING LOCK UNIT CIRCUIT-1

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

Steering lock unit		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M12	8	M122	98	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M12	8		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-78, "Removal and Installation"](#).

NO >> Repair or replace harness.

4.CHECK IPDM E/R OUTPUT SIGNAL

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

(+)		(-)	Voltage (V) (Approx.)
Steering lock unit			
Connector	Terminal		
M12	8	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace steering lock unit.

NO >> GO TO 5.

5.CHECK STEERING LOCK UNIT CIRCUIT-2

1. Disconnect IPDM E/R connector.
2. 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	
M12	8	E10	33	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M12	8		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#)

B210A STEERING LOCK CONDITION SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

NO >> Repair or replace harness.

6.CHECK BCM OUTPUT SIGNAL

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

(+)		(-)	Voltage (V) (Approx.)
Steering lock unit			
Connector	Terminal		
M12	3	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 8.

NO >> GO TO 7.

7.CHECK STEERING LOCK UNIT CIRCUIT-3

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

Steering lock unit		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M12	3	M122	97	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M12	3		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-78. "Removal and Installation"](#).

NO >> Repair or replace harness.

8.CHECK IPDM E/R OUTPUT SIGNAL

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

(+)		(-)	Voltage (V) (Approx.)
Steering lock unit			
Connector	Terminal		
M12	3	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace steering lock unit.

NO >> GO TO 9.

9.CHECK STEERING LOCK UNIT CIRCUIT-4

1. Disconnect IPDM E/R connector.
2. 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	
M12	3	E10	32	Existed

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

B210A STEERING LOCK CONDITION SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Steering lock unit		Ground	Continuity
Connector	Terminal		
M12	3		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).

NO >> Repair or replace harness.

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B210B STARTER CONTROL RELAY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B210B STARTER CONTROL RELAY

Description

INFOID:000000003815047

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

DTC Logic

INFOID:000000003815048

DTC DETECTION LOGIC

NOTE:

If DTC B210B is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "IPDM E/R : 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 in the ON position even if the followings conditions are met for about 1 second. • Starter control relay ON/OFF signal from BCM • Park neutral position (PNP) switch input signal	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.
 - 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-102, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003815049

1.INSPECTION START

1. Turn ignition switch ON.
2. Check "Self diagnostic result" for IPDM E/R with CONSULT-III.
3. Touch "ERASE".
4. **Perform DTC Confirmation Procedure.**
See [SEC-191, "DTC Index"](#).

Is the DTC B210B displayed again?

- YES >> Replace IPDM E/R. Refer [PCS-34, "Removal and Installation"](#).
NO >> INSPECTION END

B210C STARTER CONTROL RELAY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B210C STARTER CONTROL RELAY

Description

INFOID:000000003815050

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

DTC Logic

INFOID:000000003815051

DTC DETECTION LOGIC

NOTE:

- If DTC B210C is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "IPDM E/R : DTC Logic"](#).
- When IPDM E/R power supply voltage is low (Approx. 7 - 8 V for about 1 second), the DTC B210C may be detected.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210C	START CONT RLY OFF	IPDM E/R detects that the relay is stuck in the OFF position even if the followings conditions are met for about 1 second. • Starter control relay ON/OFF signal from BCM • Park neutral position (PNP) switch input signal	• IPDM E/R • Battery

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.
 - 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-103, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003815052

1.INSPECTION START

1. Turn ignition switch ON.
2. Check "Self diagnostic result" for IPDM E/R with CONSULT-III.
3. Touch "ERASE".
4. **Perform DTC Confirmation Procedure.**
See [SEC-103, "DTC Logic"](#).

Is the DTC B210C displayed again?

- YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).
NO >> INSPECTION END

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B210D STARTER RELAY

Description

INFOID:000000003815053

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 the START position. IPDM E/R transmits the starter relay ON signal to BCM via CAN communication.

DTC Logic

INFOID:000000003815054

DTC DETECTION LOGIC

NOTE:

- If DTC B210D is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "IPDM E/R : DTC Logic"](#).
- If DTC B210D is displayed with DTC B2617, first perform the trouble diagnosis for DTC B2617. Refer to [SEC-89, "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 in the ON position even if the followings conditions are met for about 1 second. • Starter control relay ON/OFF signal from BCM • Park neutral position (PNP) switch input	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.
 - 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-104, "Diagnosis Procedure"](#).
 NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003815055

1.INSPECTION START

1. Turn ignition switch ON.
2. Check "Self diagnostic result" for IPDM E/R with CONSULT-III.
3. Touch "ERASE".
4. **Perform DTC Confirmation Procedure.**
See [SEC-104, "DTC Logic"](#).

Is the DTC B210D displayed again?

YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).
 NO >> INSPECTION END

B210E STARTER RELAY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B210E STARTER RELAY

Description

INFOID:000000003815056

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 the START position. IPDM E/R transmits the starter relay ON signal to BCM via CAN communication.

DTC Logic

INFOID:000000003815057

DTC DETECTION LOGIC

NOTE:

- If DTC B210E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "IPDM E/R : DTC Logic"](#).
- If DTC B210E is displayed with DTC B2110 for IPDM E/R, first perform the trouble diagnosis for DTC B2110. Refer to [SEC-109, "DTC Logic"](#).
- If DTC B210E is displayed with DTC B2617 for BCM, first perform the trouble diagnosis for DTC B2617. Refer to [SEC-89, "DTC Logic"](#).
- When IPDM E/R power supply voltage is low (Approx. 7 - 8 V for about 1 second), the DTC B210F may be detected.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210E	STARTER RELAY OFF	IPDM E/R detects that the relay is stuck in the OFF position even if the followings conditions are met for about 1 second. • Starter control relay ON/OFF signal from BCM • Park neutral position (PNP) switch input	• IPDM E/R • Battery

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions and wait for at least 1 second.
 - 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-105, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003815058

1.CHECK STARTER RELAY OUTPUT SIGNAL

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

(+) BCM		(-)	Condition			Voltage (V) (Approx.)
Connector	Terminal		Ignition switch	Brake pedal	Selector lever	
M121	52	Ground	ON	Depressed	P or N	Battery voltage
					Other than above	0

Is the inspection result normal?

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

2.CHECK STARTER RELAY OUTPUT SIGNAL CIRCUIT

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

B210E STARTER RELAY

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

BCM		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M121	52	E11	46	Existed

3. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M121	52		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).

NO >> Repair or replace harness.

3. CHECK STARTER RELAY 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.

(+)		(-)	Voltage (V) (Approx.)
IPDM E/R			
Connector	Terminal		
E10	36	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).

NO >> Check harness for open or short between IPDM E/R and battery. Refer to [SEC-186, "Wiring Diagram - IPDM E/R -"](#).

B210F PNP/CLUTCH INTERLOCK SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B210F PNP/CLUTCH INTERLOCK SWITCH

Description

INFOID:0000000003815059

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

- Park/neutral position (PNP) switch
- Shift position signal from BCM (CAN)

DTC Logic

INFOID:0000000003815060

DTC DETECTION LOGIC

NOTE:

If DTC B210F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "IPDM E/R : DTC Logic"](#)

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210F	INTER LOCK/PNP SW ON	IPDM E/R detects the difference between the signals below for 1 second or more. • PNP switch input signal • Shift position signal from BCM (CAN)	• Harness or connectors [Park/neutral position (PNP) switch circuit is open or shorted • Park/neutral position (PNP) switch • BCM • 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.
 - 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-107, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003815061

1.CHECK BCM INPUT SIGNAL

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

(+) BCM		(-)	Condition	Voltage (V) (Approx.)
Connector	Terminal			
M123	140	Ground	Selector lever	P or N position Battery voltage
			Other than above	0

Is the inspection normal?

- YES >> Replace BCM. Refer to [BCS-78, "Removal and Installation"](#).
NO >> GO TO 2.

2.CHECK PNP SWITCH CIRCUIT

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

B210F PNP/CLUTCH INTERLOCK SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

IPDM E/R		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E10	30	M123	140	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E10	30		Not existed

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).
NO >> Repair or replace harness.

B2110 PNP/CLUTCH INTERLOCK SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2110 PNP/CLUTCH INTERLOCK SWITCH

Description

INFOID:000000003815062

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

- Park/neutral position (PNP) switch
- Shift position signal from BCM (CAN)

DTC Logic

INFOID:000000003815063

DTC DETECTION LOGIC

NOTE:

If DTC B2110 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-28, "IPDM E/R : DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2110	INTER LOCK/PNP SW	IPDM E/R detects the difference between the signals below for 1 second or more. • PNP switch input signal • Shift position signal from BCM (CAN)	• Harness or connectors [Park/neutral position (PNP) switch circuit is open or shorted • Park/neutral position (PNP) switch • IPDM E/R • BCM

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.
 - 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-109, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000003815064

SEC

1.CHECK BCM INPUT SIGNAL

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

(+) BCM		(-)	Condition	Voltage (V) (Approx.)
Connector	Terminal			
M123	140	Ground	Selector lever	P or N position Battery voltage
			Other than above	0

Is the inspection normal?

- YES >> Replace BCM. Refer to [BCS-78, "Removal and Installation"](#).
NO >> GO TO 2.

2.CHECK PNP SWITCH CIRCUIT

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

B2110 PNP/CLUTCH INTERLOCK SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

IPDM E/R		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E10	30	M123	140	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E10	30		Not existed

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).
NO >> Repair or replace harness.

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM : Diagnosis Procedure

INFOID:000000003910623

1.CHECK FUSE AND FUSIBLE LINK

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

Signal name	Fuse and fusible link No.
Battery power supply	I
	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.

IPDM E/R

IPDM E/R : Diagnosis Procedure

INFOID:000000003910624

1.CHECK FUSES AND FUSIBLE LINK

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

Signal name	Fuses and fusible link No.
Battery power supply	E
	50
	51

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POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

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			
Connector	Terminal	Ground	Battery voltage
E9	1		

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		
E10	12		Existed
E11	41		

Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.

HOOD SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

HOOD SWITCH

Description

INFOID:000000003896669

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

Component Function Check

INFOID:000000003896670

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 >> Hood switch is OK.
NO >> Go to [SEC-113. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000003896671

1.CHECK HOOD SWITCH SIGNAL

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

(+) IPDM E/R		(-)	Condition	Voltage (V) (Approx.)
Connector	Terminal			
E346	104	Ground	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 connector 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	
E346	104	E349	2	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E346	104		Not existed

Is the inspection result normal?

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

3.CHECK IPDM E/R OUTPUT

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

HOOD SWITCH

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

(+)		(-)	Voltage (V) (Approx.)
IPDM E/R			
Connector	Terminal		
E346	104	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).

4.CHECK HOOD SWITCH

Refer to [SEC-114, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace hood lock. Refer to [DLK-220, "Removal and Installation"](#).

5.CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#).

>> INSPECTION END

Component Inspection

INFOID:000000003896672

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	Press	Not existed
			Release	Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace hood lock. Refer to [DLK-220, "Removal and Installation"](#).

SECURITY INDICATOR LAMP

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

SECURITY INDICATOR LAMP

Description

INFOID:0000000003815070

- Security indicator lamp is located on combination meter.
- NVIS (Nissan Vehicle Immobilizer System-NATS) and vehicle security system conditions are indicated by blink or illumination of security indicator lamp.

Component Function Check

INFOID:0000000003815071

1.CHECK FUNCTION

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

Test item		Description	
THEFT IND	ON	Vehicle security indicator	Illuminates
	OFF		Does not illuminate

Is the inspection result normal?

YES >> INSPECTION END

NO >> Go to [SEC-115, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000003815072

1.CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT

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

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check the following.

- 10A fuse [No. 11, located in the fuse block (J/B)]
- Harness for open or short between combination meter and fuse.

2.CHECK COMBINATION METER CIRCUIT

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

Combination meter		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M34	28	M123	141	Existed

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

Combination meter		Ground	Continuity
Connector	Terminal		
M34	28		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

SECURITY INDICATOR LAMP

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

3.CHECK SECURITY INDICATOR LAMP

Refer to [SEC-116, "Component Inspection"](#).

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-78, "Removal and Installation"](#).

NO >> Replace combination meter. Refer to [MWI-126, "Removal and Installation"](#).

Component Inspection

INFOID:000000003815073

1.CHECK SECURITY INDICATOR LAMP

1. Disconnect combination meter connector.
2. Check continuity between combination meter terminals.

Terminal		Continuity
Combination meter		
(+)	(-)	
1	28	Existed
28	1	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace combination meter. Refer to [MWI-126, "Removal and Installation"](#).

KEY WARNING LAMP

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

KEY WARNING LAMP

Description

INFOID:0000000003815074

- Key warning lamp is located on combination meter.
- Performs operation method guide and warning together with buzzer.

Component Function Check

INFOID:0000000003815075

1.CHECK FUNCTION

Check the operation with "INDICATOR" in "Active Test" mode with CONSULT-III.

Test item	Condition	
INDICATOR	RED ON	Key warning lamp (red) illuminates
	RED IND	Key warning lamp (red) blinks

Is the inspection result normal?

- YES >> Key warning lamp in combination meter is OK.
NO >> Refer to [SEC-117, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000003815076

1.CHECK KEY WARNING LAMP

Refer to [MWI-4, "Work flow"](#).

Is the inspection result normal?

- Yes >> GO TO 2.
No >> Repair or replace key warning lamp circuit.

2.CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#).

>> INSPECTION END

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HORN FUNCTION

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

HORN FUNCTION

Description

INFOID:000000003840063

Perform answer-back for each operation with horn.

Component Function Check

INFOID:000000003840064

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	ON (for 20 ms)

Is the operation normal?

YES >> Horn function is OK.

NO >> Go to [SEC-118, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000003840065

1.CHECK HORN FUNCTION

Check horn function with horn switch

Do the horns sound?

YES >> GO TO 2.

NO >> Go to [HRN-2, "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 relayconnector and ground.

Horn relay		Ground	Test item		Voltage (V) (Approx.)
Connector	Terminal		HORN		
E5	1			ON	Battery voltage → 0 → Battery voltage
				Other than above	Battery voltage

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

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

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E11	44		Not existed

Is the inspection result normal?

HORN FUNCTION

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

YES >> Replace IPDM E/R. Refer to [PCS-34, "Removal and Installation"](#).

NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#).

Is the inspection result normal?
>> INSPECTION END

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HAZARD FUNCTION

Description

INFOID:000000003840060

Perform answer-back for each operation with number of blinks.

Component Function Check

INFOID:000000003840061

1.CHECK FUNCTION

Check hazard warning lamp ("FLASHER") in Active Test.

Is the inspection result normal?

YES >> Hazard warning lamp circuit is OK.

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

Diagnosis Procedure

INFOID:000000003840062

1.CHECK HAZARD SWITCH CIRCUIT

Refer to [EXL-72, "Component Function Check"](#) (For xenon type) or [EXL-241, "Component Function Check"](#) (For halogen type)

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace hazard warning switch circuit. Refer to [EXL-328, "Symptom Table"](#).

2.CHECK INTERMITTENT INCIDENT

Refer to [GI-35, "Intermittent Incident"](#).

>> INSPECTION END

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< COMPONENT DIAGNOSIS >

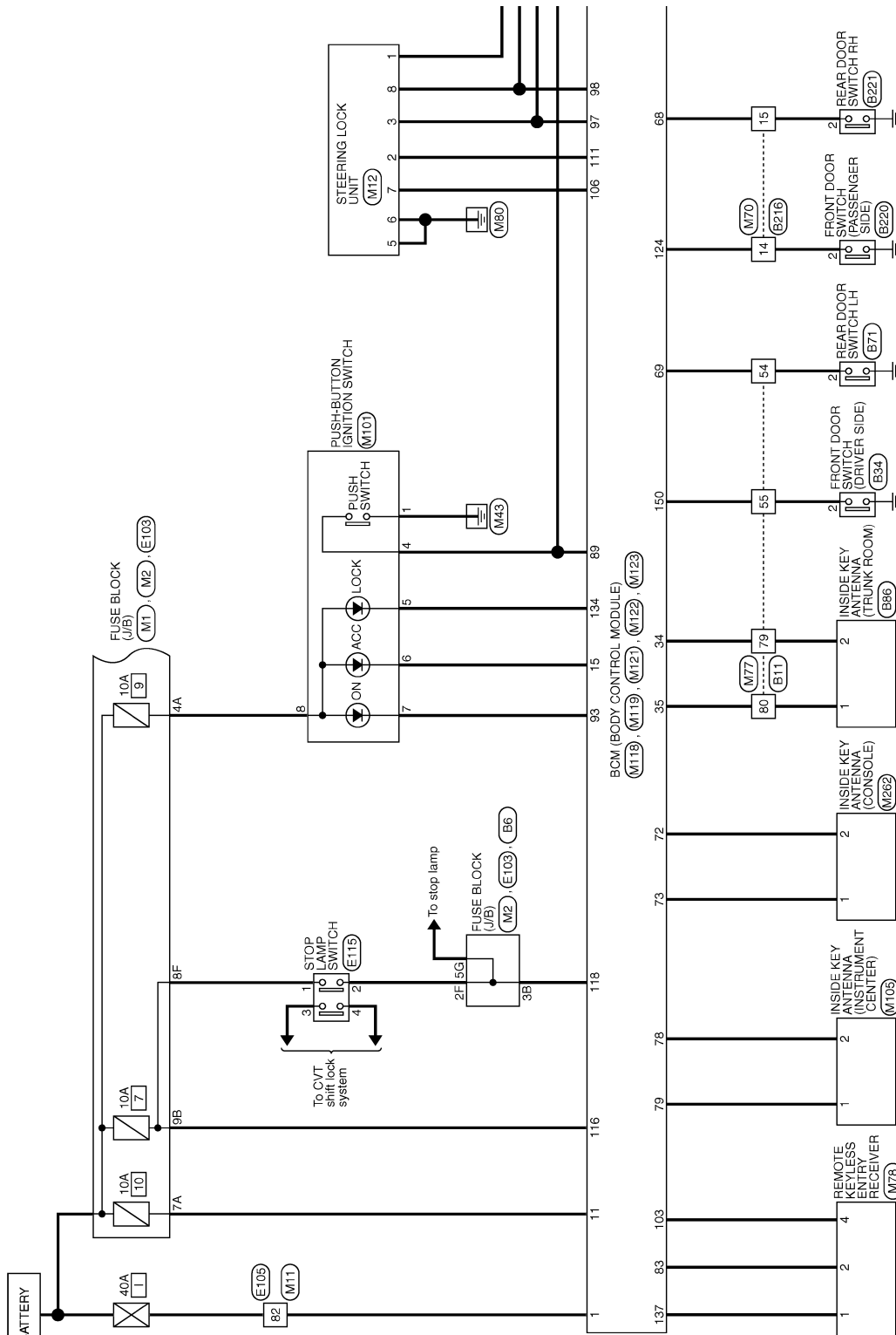
[INTELLIGENT KEY SYSTEM]

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

Wiring Diagram - INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION -

INFOID:000000003845527

INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION



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[INTELLIGENT KEY SYSTEM]

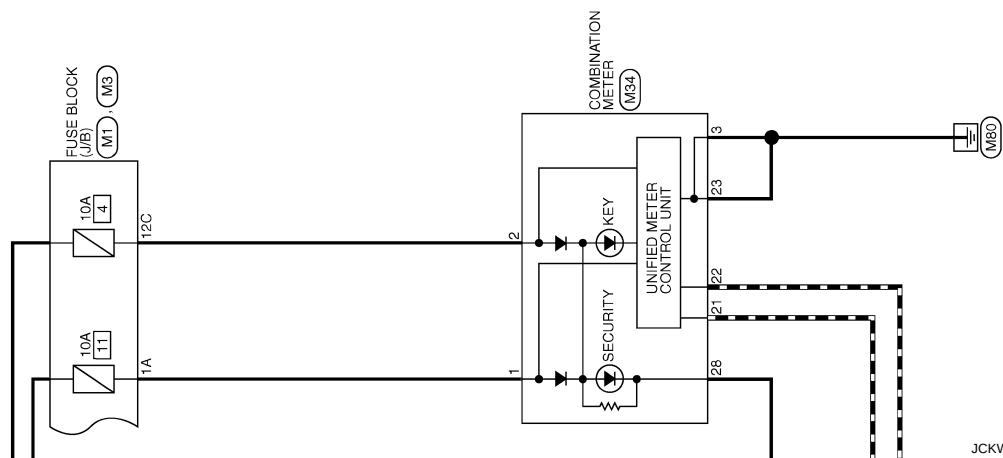
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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]



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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

Connector No.	B86
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FBR-CS



Terminal No.	5G
Color of Wire	P
Signal Name [Specification]	-

Connector No.	B11
Connector Name	WIRE TO WIRE
Connector Type	TH60MH-CS19



Terminal No.	18
Color of Wire	P
Signal Name [Specification]	-
Terminal No.	19
Color of Wire	L
Signal Name [Specification]	-
Terminal No.	43
Color of Wire	P
Signal Name [Specification]	-
Terminal No.	44
Color of Wire	L
Signal Name [Specification]	-
Terminal No.	54
Color of Wire	BR
Signal Name [Specification]	-
Terminal No.	55
Color of Wire	SB
Signal Name [Specification]	-
Terminal No.	79
Color of Wire	B
Signal Name [Specification]	-
Terminal No.	80
Color of Wire	W
Signal Name [Specification]	-

Connector No.	B34
Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)
Connector Type	A03FW



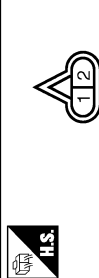
Terminal No.	2
Color of Wire	SB
Signal Name [Specification]	-

Connector No.	B71
Connector Name	REAR DOOR SWITCH LH
Connector Type	A03FW



Terminal No.	2
Color of Wire	BR
Signal Name [Specification]	-

Connector No.	B86
Connector Name	INSIDE KEY ANTENNA (TRUNK ROOM)
Connector Type	RK02FGY



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

Connector No.	B216
Connector Name	WIRE TO WIRE
Connector Type	NS16MBR-CS



Terminal No.	14
Color of Wire	R
Signal Name [Specification]	-
Terminal No.	15
Color of Wire	W
Signal Name [Specification]	-

Connector No.	B220
Connector Name	FRONT DOOR SWITCH (PASSENGER SIDE)
Connector Type	A03FW



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

Connector No.	B221
Connector Name	REAR DOOR SWITCH RH
Connector Type	A03FW



Terminal No.	2
Color of Wire	W
Signal Name [Specification]	-

JCKWM1207G1

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

Connector No.	E10
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4-1V



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

Terminal No.	Color of Wire	Signal Name [Specification]
11	P	-
12	B/W	-
27	W	-
28	SB	-
30	BR	-
32	V	-
33	G	-
36	G	-

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH10MW-CS10-M3



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470
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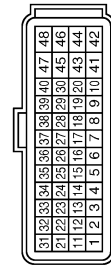
INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

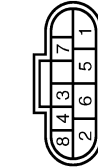
INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

Connector No.	F23
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Type	PH40FB-RZ8-L-RH



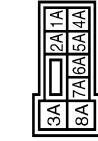
Terminal No.	Color of Wire	Signal Name [Specification]
20	R/B	STARTER RELAY

Connector No.	F57
Connector Name	PARK / NEUTRAL POSITION SWITCH
Connector Type	YDX06FB-HS4



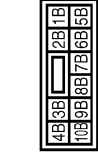
Terminal No.	Color of Wire	Signal Name [Specification]
1	Y	-
2	R/B	-

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS06FW-M2



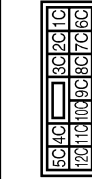
Terminal No.	Color of Wire	Signal Name [Specification]
1A	W/L	-
4A	G/Y	-
7A	Y/R	-

Connector No.	M2
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS10FW-CS

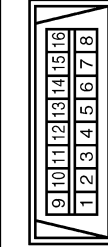


Terminal No.	Color of Wire	Signal Name [Specification]
3B	O/L	-
9B	R/W	-

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FW-CS



Connector No.	M4
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Type	TH10FW-CS10-M3



Terminal No.	Color of Wire	Signal Name [Specification]
12C	O	-

Terminal No.	Color of Wire	Signal Name [Specification]
6	L	-
14	P	-

Terminal No.	Color of Wire	Signal Name [Specification]
11	P	-
12	L	-
13	G/B	-
15	R	-
23	P/L	-
26	G/R	-
27	L/O	-
28	BR	-
29	BR/W	-
46	P	-
48	L	-

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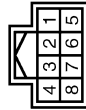
INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

Connector No.	M12
Connector Name	STEERING LOCK UNIT
Connector Type	TH08FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
1	P/L	S/L 12V MECHANICAL(V1)
2	L/Y	S/L COM
3	L/O	S/L CONDITION 1
5	B	GND
6	B	GND
7	G/Y	S/L 12V CRUISE(V2)
8	G/R	S/L CONDITION 2

Connector No.	M34
Connector Name	COMBINATION METER
Connector Type	TH40FW-HH



Terminal No.	Color of Wire	Signal Name [Specification]
1	W/L	BAT
2	O	IGN
3	B	GROUND
21	L	CAN-H
22	P	CAN-L
23	B	GROUND
28	L/O	SECURITY

Connector No.	M57
Connector Name	CONTROL DEVICE
Connector Type	TK10FW



Terminal No.	Color of Wire	Signal Name [Specification]
8	Y/R	-
9	G/B	-

Connector No.	M70
Connector Name	WIRE TO WIRE
Connector Type	NS18FER-SS



Terminal No.	Color of Wire	Signal Name [Specification]
14	R/B	-
15	R/W	-

Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS19



Connector No.	M78
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Type	JAB04FB



Connector No.	M101
Connector Name	PUSH-BUTTON IGNITION SWITCH
Connector Type	TK03FB



Connector No.	M105
Connector Name	INSIDE KEY ANTENNA (INSTRUMENT CENTER)
Connector Type	FK02FGY



Terminal No.	Color of Wire	Signal Name [Specification]
18	P	-
19	L	-
43	P	-
44	L	-
54	R/B	-
55	SB	-
79	B	-
80	W	-

Terminal No.	Color of Wire	Signal Name [Specification]
1	P	GND
2	L/O	SIGNAL
4	L/R	+12V

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	-
4	BR	-
5	R	-
6	Y	-
7	LG	-
8	G/Y	-

Terminal No.	Color of Wire	Signal Name [Specification]
1	G	-
2	R	-

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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	M03FB-LC



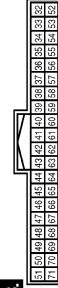
Terminal No.	Color of Wire	Signal Name [Specification]
1	W/B	BAT (F/L)

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS1EFW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
11	Y/R	BAT (FUSE)
13	B	GND
15	Y	ACC IND

Connector No.	M121
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH



Terminal No.	Color of Wire	Signal Name [Specification]
34	B	TRUNK ANT 1 B
35	W	TRUNK ANT 1 A
47	BR/W	IGN RELAY IPDM F/R CONT
52	R	IGN RELAY IPDM F/R CONT
68	R/W	REAR RH DOOR SW
69	R/B	REAR LH DOOR SW

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



Terminal No.	Color of Wire	Signal Name [Specification]
72	B/R	ROOM ANT2-
73	W/R	ROOM ANT2+
78	R	ROOM ANT1-
79	G	ROOM ANT1+
83	L/O	KEYLESS ENTRY RECEIVER SIGNAL
89	BR	PUSH SW
90	P	CAN-L
91	L	CAN-H
93	Y	ON IND
96	Y/R	CONTROL DEVICE POWER SUPPLY
97	L/O	S/L CONDITION 1

98	G/R	S/L CONDITION 2
99	G/B	SHIFT P
103	L/R	KEYLESS ENTRY RECEIVER POWER SUPPLY
106	G/Y	S/L POWER SUPPLY
111	L/Y	S/L COMM

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH



Terminal No.	Color of Wire	Signal Name [Specification]
116	R/W	STOP L LOW SW
118	O/L	STOP L HIGH SW
124	R/B	PASSENGER DOOR SW
134	R	LOCK LED
137	P	RECEIVER/SENSOR GND
140	R/G	SHIFT N/P
141	L/O	SECURITY INDICATOR OUTPUT
150	SB	DRIVER DOOR SW

Connector No.	M262
Connector Name	INSIDE KEY ANTENNA (CONSOLE)
Connector Type	RK02FGY



Terminal No.	Color of Wire	Signal Name [Specification]
1	W/R	-
2	B/R	-

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NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

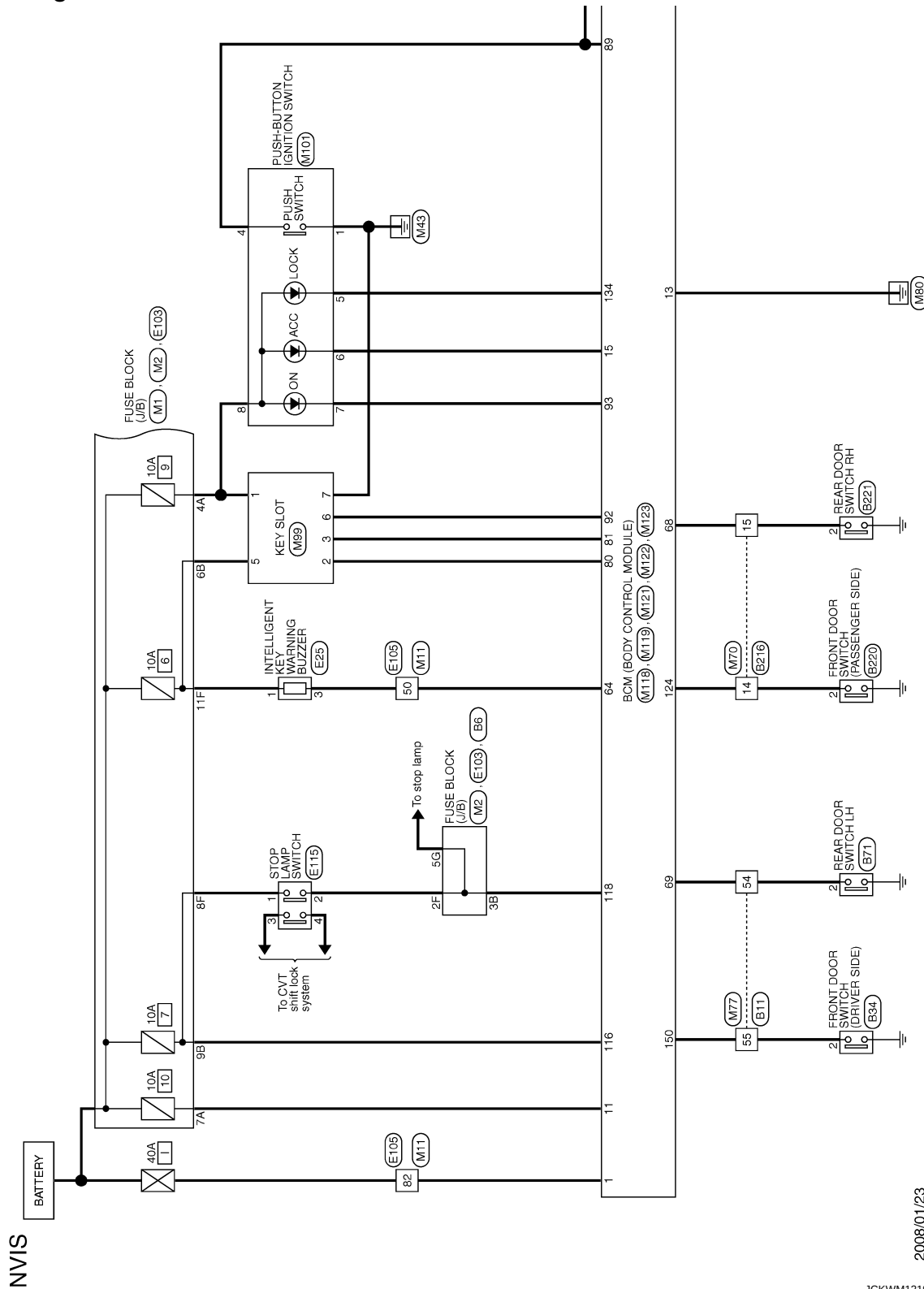
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[INTELLIGENT KEY SYSTEM]

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

Wiring Diagram - NVIS -

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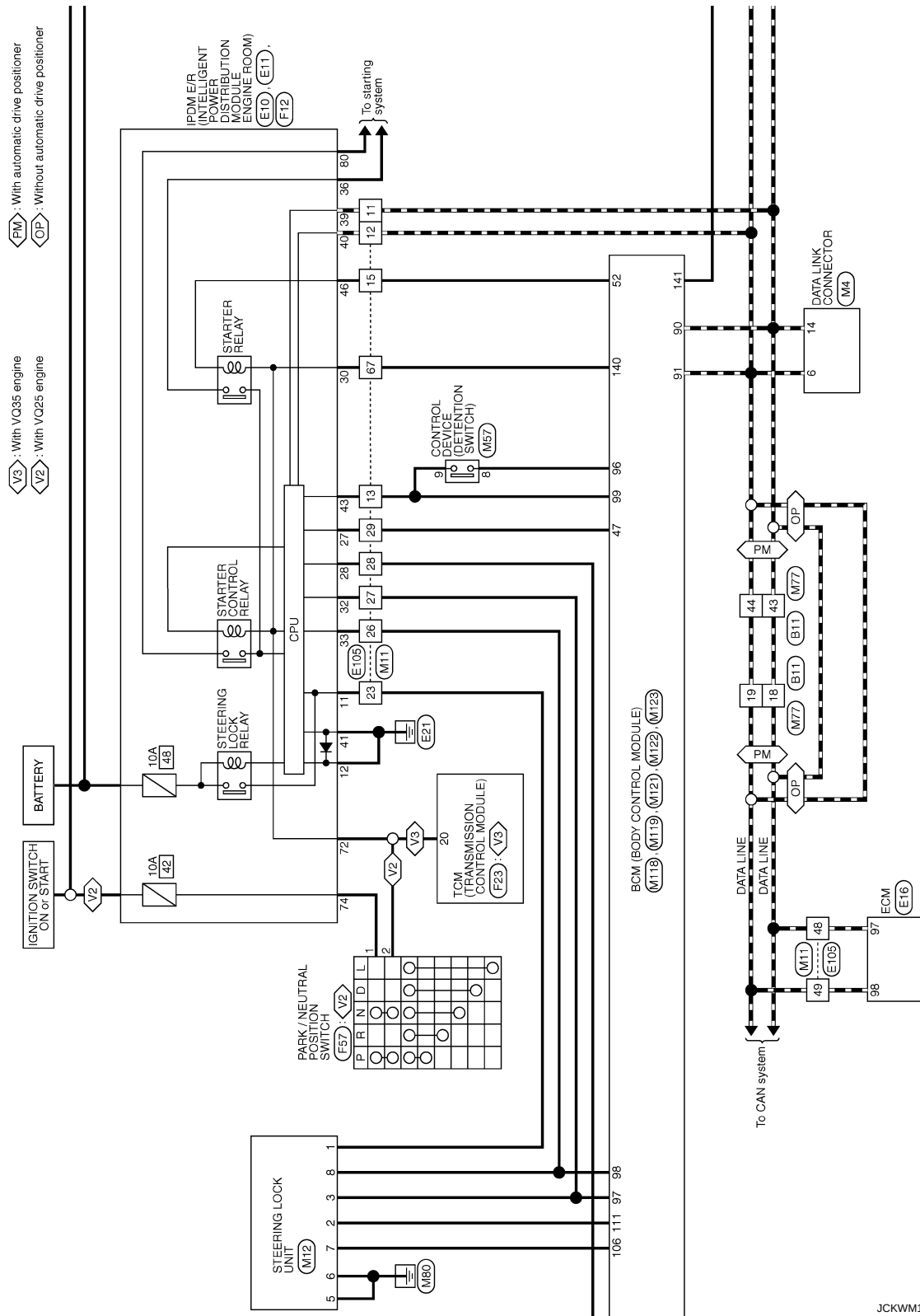
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NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

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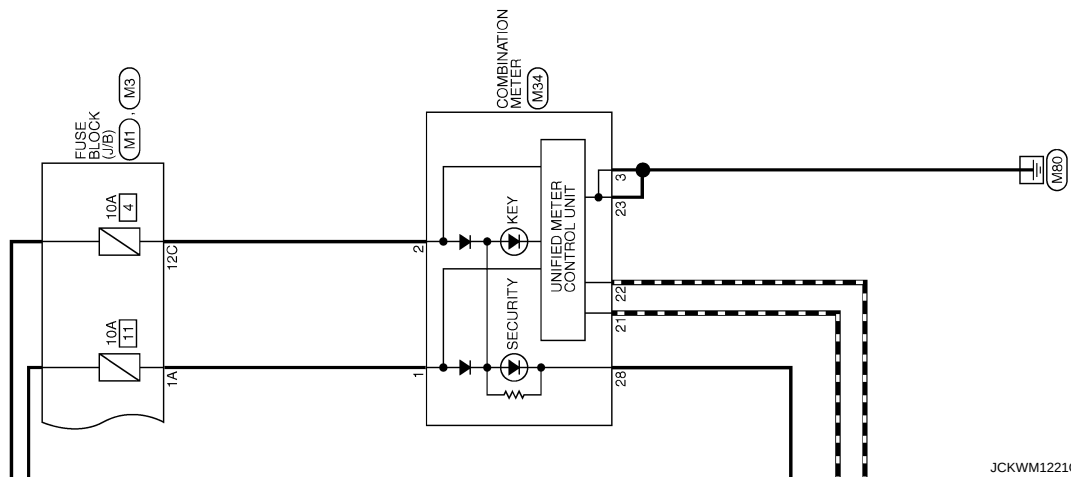
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NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]



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NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

NVIS

Connector No.	B6
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FBR-CS



Terminal No.	Color of Wire	Signal Name [Specification]
5G	P	-

Connector No.	B11
Connector Name	WIRE TO WIRE
Connector Type	TH60MW-CS19



Terminal No.	Color of Wire	Signal Name [Specification]
18	P	-
19	L	-
43	P	-
44	L	-
54	BR	-
55	SB	-

Connector No.	B34
Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)
Connector Type	A03FW



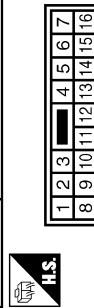
Terminal No.	Color of Wire	Signal Name [Specification]
2	SB	-

Connector No.	B71
Connector Name	REAR DOOR SWITCH LH
Connector Type	A03FW



Terminal No.	Color of Wire	Signal Name [Specification]
2	BR	-

Connector No.	B216
Connector Name	WIRE TO WIRE
Connector Type	NS16MBR-CS



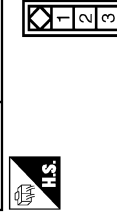
Terminal No.	Color of Wire	Signal Name [Specification]
14	R	-
15	W	-

Connector No.	B220
Connector Name	FRONT DOOR SWITCH (PASSENGER SIDE)
Connector Type	A03FW



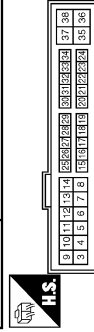
Terminal No.	Color of Wire	Signal Name [Specification]
2	R	-

Connector No.	B221
Connector Name	REAR DOOR SWITCH RH
Connector Type	A03FW



Terminal No.	Color of Wire	Signal Name [Specification]
2	W	-

Connector No.	E10
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH2DFW-CS12-M4-1V



Terminal No.	Color of Wire	Signal Name [Specification]
11	P	-
12	B/W	-
27	W	-
28	SB	-
30	BR	-
32	V	-
33	G	-
36	G	-

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NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

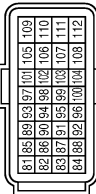
NVIS

Connector No.	E11
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH08FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
39	P	-
40	L	-
41	B	-
43	Y	-
46	BR	-

Connector No.	E16
Connector Name	ECM
Connector Type	RH2JFB-R28-L-LH



Terminal No.	Color of Wire	Signal Name [Specification]
97	P	VEHCAN-L
98	L	VEHCAN-H

Connector No.	E25
Connector Name	INTELLIGENT KEY WARNING BUZZER
Connector Type	RK03BR



Terminal No.	Color of Wire	Signal Name [Specification]
1	G	-
3	GR	-

Connector No.	E103
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS18FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
2F	LG	-
8F	R	-
11F	Y/B	-

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH10MW-CS10-M3



Terminal No.	Color of Wire	Signal Name [Specification]
11	P	-
12	L	-
13	Y	-
15	BR	-
23	P	-
26	G	-
27	V	-
28	SB	-
29	W	-
48	P	-
49	L	-

Connector No.	E115
Connector Name	STOP LAMP SWITCH
Connector Type	MD4FW-LC



Terminal No.	Color of Wire	Signal Name [Specification]
1	R	-
2	LG	-
3	G	-
4	Y	-

Connector No.	F12
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4



Terminal No.	Color of Wire	Signal Name [Specification]
72	R/B	-
74	Y	-
80	B/W	-

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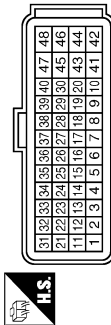
NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

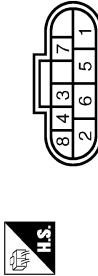
NVIS

Connector No.	F23
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Type	PH40FB-RZ8-L-RH



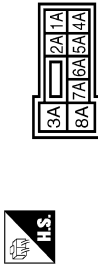
Terminal No.	Color of Wire	Signal Name [Specification]
20	R/B	STARTER RELAY

Connector No.	F57
Connector Name	PARK / NEUTRAL POSITION SWITCH
Connector Type	YDX06FB-JS4



Terminal No.	Color of Wire	Signal Name [Specification]
1	Y	-
2	R/B	-

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS06FW-M2



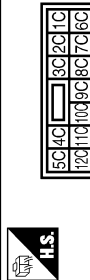
Terminal No.	Color of Wire	Signal Name [Specification]
1A	W/L	-
4A	G/Y	-
7A	Y/R	-

Connector No.	M2
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS10FW-CS

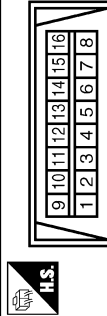


Terminal No.	Color of Wire	Signal Name [Specification]
3B	O/L	-
6B	Y/R	-
9B	R/W	-

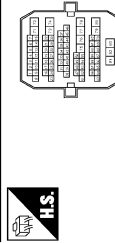
Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FW-CS



Connector No.	M4
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Type	TH10FW-CS10-M3



Terminal No.	Color of Wire	Signal Name [Specification]
12C	O	-

Terminal No.	Color of Wire	Signal Name [Specification]
6	L	-
14	P	-

Terminal No.	Color of Wire	Signal Name [Specification]
11	P	-
12	L	-
13	G/B	-
15	R	-
23	P/L	-
26	G/R	-
27	L/O	-
28	BR	-
29	BR/W	-
46	P	-
48	L	-

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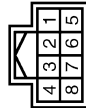
NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

NVIS

Connector No.	M12
Connector Name	STEERING LOCK UNIT
Connector Type	TH08FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
1	P/L	S/L 12V MECHANICAL(V1)
2	L/Y	S/L COM
3	L/O	S/L CONDITION 1
5	B	GND
6	B	GND
7	G/Y	S/L 12V OR(V2)
8	G/R	S/L CONDITION 2

Connector No.	M34
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH



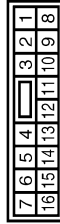
Terminal No.	Color of Wire	Signal Name [Specification]
1	W/L	BAT
2	O	IGN
3	B	GROUND
21	L	CAN-H
22	P	CAN-L
23	B	GROUND
28	L/O	SECURITY

Connector No.	M57
Connector Name	CONTROL DEVICE
Connector Type	TK10FW



Terminal No.	Color of Wire	Signal Name [Specification]
8	Y/R	-
9	G/B	-

Connector No.	M70
Connector Name	WIRE TO WIRE
Connector Type	NS18FER-CS

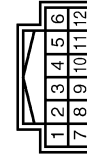


Terminal No.	Color of Wire	Signal Name [Specification]
14	R/B	-
15	R/W	-

Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Type	TH01FW-CS19



Connector No.	M89
Connector Name	KEY SLOT
Connector Type	TH12FW-NH



Connector No.	M101
Connector Name	PUSH-BUTTON IGNITION SWITCH
Connector Type	TK08FER



Connector No.	M118
Connector Name	ECM (BODY CONTROL MODULE)
Connector Type	MD03FB-LC



Terminal No.	Color of Wire	Signal Name [Specification]
18	P	-
19	L	-
43	P	-
44	L	-
54	R/B	-
55	SB	-

Terminal No.	Color of Wire	Signal Name [Specification]
1	G/Y	BAT
2	G/O	CLOCK
3	O	DATA
5	Y/R	ILL BAT
6	R/L	ILL
7	B	GND

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	-
4	BR	-
5	R	-
6	Y	-
7	LG	-
8	G/Y	-

Terminal No.	Color of Wire	Signal Name [Specification]
1	W/B	BAT (F/L)

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NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

NVIS

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-GS



4	5	6	7	8	9	10		
11	12	13	14	15	16	17	18	19

Terminal No.	Color of Wire	Signal Name [Specification]
11	Y/R	BAT (FUSE)
13	B	GND
15	Y	ACC IND

Connector No.	M121
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FGY-NH



51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32
71	70	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52

Terminal No.	Color of Wire	Signal Name [Specification]
47	BR/W	IGN RELAY /PDM E/R CONT
52	R	IGN RELAY /PDM E/R CONT
64	GR	REQUEST SW BUZZER
68	R/W	REAR RH DOOR SW
69	R/B	REAR LH DOOR SW

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



91	90	89	88	87	86	85	84	83	82	81	80	79	78	77	76	75	74	73	72
111	110	109	108	107	106	105	104	103	102	101	100	99	98	97	96	95	94	93	92

VEHICLE SECURITY SYSTEM

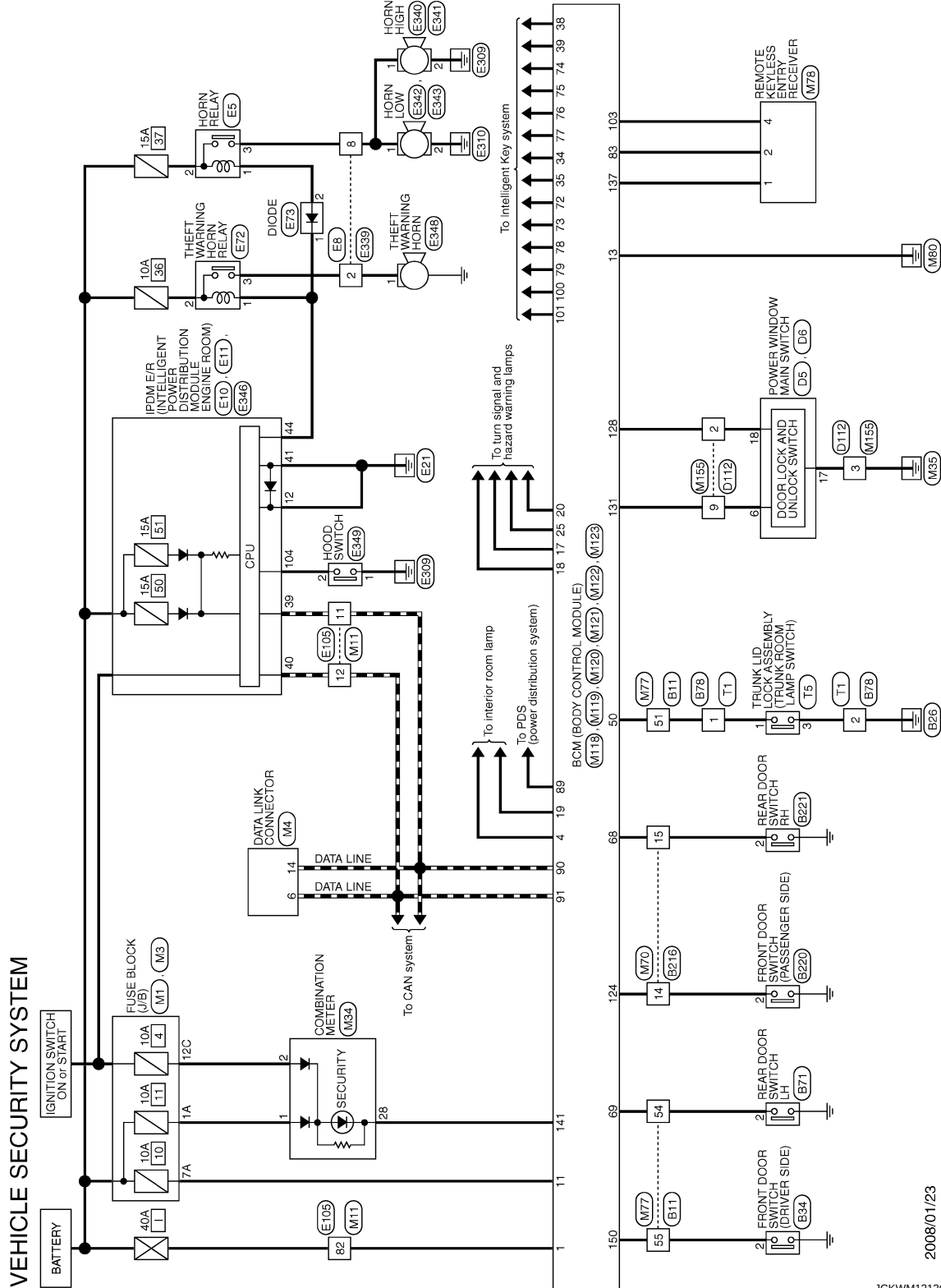
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[INTELLIGENT KEY SYSTEM]

VEHICLE SECURITY SYSTEM

Wiring Diagram - VEHICLE SECURITY SYSTEM -

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VEHICLE SECURITY SYSTEM

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

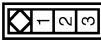
VEHICLE SECURITY SYSTEM

Connector No.	B11
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS19



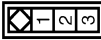
Terminal No.	Color of Wire	Signal Name [Specification]
51	R	-
54	BR	-
55	SB	-

Connector No.	B34
Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)
Connector Type	A03FW



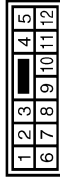
Terminal No.	Color of Wire	Signal Name [Specification]
2	SB	-

Connector No.	B71
Connector Name	REAR DOOR SWITCH LH
Connector Type	A03FW



Terminal No.	Color of Wire	Signal Name [Specification]
2	BR	-

Connector No.	B78
Connector Name	WIRE TO WIRE
Connector Type	NS12MM-CS



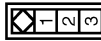
Terminal No.	Color of Wire	Signal Name [Specification]
1	R	-
2	B/R	-

Connector No.	B216
Connector Name	WIRE TO WIRE
Connector Type	NS16MBR-CS



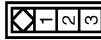
Terminal No.	Color of Wire	Signal Name [Specification]
14	R	-
15	W	-

Connector No.	B220
Connector Name	FRONT DOOR SWITCH (PASSENGER SIDE)
Connector Type	A03FW



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

Connector No.	B221
Connector Name	REAR DOOR SWITCH RH
Connector Type	A03FW



Terminal No.	Color of Wire	Signal Name [Specification]
2	W	-

Connector No.	D5
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS16FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
6	LG	-

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VEHICLE SECURITY SYSTEM

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

VEHICLE SECURITY SYSTEM

Connector No.	D6
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS3FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
17	B	-
18	GR	-

Connector No.	D112
Connector Name	WIRE TO WIRE
Connector Type	NS1FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
2	GR	-
3	B	-
9	LG	-

Connector No.	E5
Connector Name	HORN RELAY
Connector Type	-



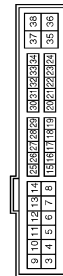
Terminal No.	Color of Wire	Signal Name [Specification]
1	W	-
2	SB	-
3	G	-

Connector No.	E8
Connector Name	WIRE TO WIRE
Connector Type	NS12MR-CS



Terminal No.	Color of Wire	Signal Name [Specification]
2	R	-
8	G	-

Connector No.	E10
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4-TV



Connector No.	E11
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH40FW-NH



Connector No.	E12
Connector Name	THEFT WARNING HORN RELAY
Connector Type	MD3FW-R-LC



Connector No.	E13
Connector Name	DIODE
Connector Type	24335 C902



Terminal No.	Color of Wire	Signal Name [Specification]
12	B/W	-

Terminal No.	Color of Wire	Signal Name [Specification]
39	P	-
40	L	-
41	B	-
44	G	-

Terminal No.	Color of Wire	Signal Name [Specification]
1	G	-
2	W	-
3	R	-

Terminal No.	Color of Wire	Signal Name [Specification]
1	G	-
2	W	-

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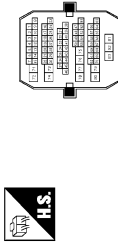
VEHICLE SECURITY SYSTEM

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

VEHICLE SECURITY SYSTEM

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH70MW-CS10-M3



Terminal No.	Color of Wire	Signal Name [Specification]
11	P	-
12	L	-
82	LG	-

Connector No.	E339
Connector Name	WIRE TO WIRE
Connector Type	NS1ZFER-OS



Terminal No.	Color of Wire	Signal Name [Specification]
2	R	-
8	G	-

Connector No.	E340
Connector Name	HORN HIGH
Connector Type	P01FB-A



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

Connector No.	E341
Connector Name	HORN HIGH
Connector Type	P01FB-A



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

Connector No.	E342
Connector Name	HORN LOW
Connector Type	P01FE-A



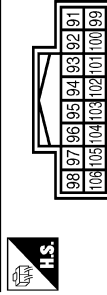
Terminal No.	Color of Wire	Signal Name [Specification]
2	B	-

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



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

Connector No.	E346
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH18FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
104	LG	-

Connector No.	E348
Connector Name	THEFT WARNING HORN
Connector Type	P01FB-A



Terminal No.	Color of Wire	Signal Name [Specification]
1	R	-

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VEHICLE SECURITY SYSTEM

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

VEHICLE SECURITY SYSTEM

Connector No.	E349
Connector Name	HOOD SWITCH
Connector Type	RK2ZMGY



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

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NSGFW-M2



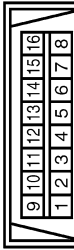
Terminal No.	Color of Wire	Signal Name [Specification]
1A	W/L	-
7A	Y/R	-

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS1ZFW-CS



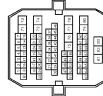
Terminal No.	Color of Wire	Signal Name [Specification]
12C	O	-

Connector No.	M4
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



Terminal No.	Color of Wire	Signal Name [Specification]
6	L	-
14	P	-

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Type	TH70FW-CS10-M3



Terminal No.	Color of Wire	Signal Name [Specification]
11	P	-
12	L	-
82	W/B	-

Connector No.	M34
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH



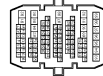
Terminal No.	Color of Wire	Signal Name [Specification]
1	W/L	BAT
2	O	IGN
28	L/O	SECURITY

Connector No.	M70
Connector Name	WIRE TO WIRE
Connector Type	NS16FBR-CS



Terminal No.	Color of Wire	Signal Name [Specification]
14	R/B	-
15	R/W	-

Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS19



Terminal No.	Color of Wire	Signal Name [Specification]
51	W	-
54	R/B	-
55	SB	-

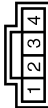
VEHICLE SECURITY SYSTEM

< COMPONENT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

VEHICLE SECURITY SYSTEM

Connector No.	M78
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Type	JAS04FB



Terminal No.	Color of Wire	Signal Name [Specification]
1	P	GND
2	L/O	SIGNAL
4	L/R	+12V

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	M03FB-LC



Terminal No.	Color of Wire	Signal Name [Specification]
1	W/B	BAT (F/L)

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
4	P/W	INTERIOR ROOM LAMP POWER SUPPLY
11	Y/R	BAT (FUSE)
13	B	GND
17	G/B	TURN SIGNAL RH (FRONT D.MIRROR)
18	G/Y	TURN SIGNAL LH (FRONT D.MIRROR)
19	Y	ROOM LAMP-TIMER CONTROL

Connector No.	M120
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS12FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
20	G/B	TURN SIGNAL RH (REAR)
25	G/Y	TURN SIGNAL LH (REAR)

Connector No.	M121
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH



Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



91	L	CAN-H
100	P/L	PASSENGER DOOR REQUEST SW
101	B/W	DRIVER DOOR REQUEST SW
103	L/R	KEYLESS ENTRY RECEIVER POWER SUPPLY

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH



Terminal No.	Color of Wire	Signal Name [Specification]
34	B	TRUNK ANT 1 B
35	W	TRUNK ANT 1 A
38	L/O	RR BUMPER ANT B
39	BR/W	RR BUMPER ANT A
50	W	TRUNK SW
68	R/W	REAR RH DOOR SW
69	R/B	REAR LH DOOR SW

Terminal No.	Color of Wire	Signal Name [Specification]
72	B/R	ROOM ANT2-
73	W/R	ROOM ANT2+
74	B/Y	PASSENGER DOOR ANT-
75	L/G	PASSENGER DOOR ANT+
76	V	DRIVER DOOR ANT-
77	P	DRIVER DOOR ANT+
78	R	ROOM ANT1-
79	G	ROOM ANT1+
83	L/O	KEYLESS ENTRY RECEIVER SIGNAL
89	BR	PUSH SW
90	P	CAN-L

Terminal No.	Color of Wire	Signal Name [Specification]
124	R/B	PASSENGER DOOR SW
128	GR	CENTRAL LOCK SW
131	GR/R	CENTRAL UNLOCK SW
137	P	RECEIVER/SENSOR GND
141	L/O	SECURITY INDICATOR OUTPUT
150	SB	DRIVER DOOR SW

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VEHICLE SECURITY SYSTEM

Connector No.	IM155
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS



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

Terminal No.	Color of Wire	Signal Name [Specification]
2	GR	-
3	B/P	-
9	GR/R	-

Connector No.	TI1
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS



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

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

Connector No.	IT5
Connector Name	TRUNK LID LOCK ASSEMBLY
Connector Type	TBC3FW



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

SEC

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000003880725

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

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	Rear fog lamp switch OFF	Off
	Rear fog lamp switch ON	On
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)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Monitor Item	Condition	Value/Status	
DOOR SW-RL	Rear LH door closed	Off	A
	Rear LH door opened	On	
DOOR SW-BK	NOTE: The item is indicated, but not monitored.	Off	B
CDL LOCK SW	Other than power door lock switch LOCK	Off	C
	Power door lock switch LOCK	On	
CDL UNLOCK SW	Other than power door lock switch UNLOCK	Off	D
	Power door lock switch UNLOCK	On	
KEY CYL LK-SW	NOTE: The item is indicated, but not monitored.	Off	E
KEY CYL UN-SW	NOTE: The item is indicated, but not monitored.	Off	F
KEY CYL SW-TR	NOTE: The item is indicated, but not monitored.	Off	G
HAZARD SW	Hazard switch is OFF	Off	H
	Hazard switch is ON	On	
REAR DEF SW NOTE: At model with BOSE audio system this item is indicated, but is not monitored.	Rear window defogger switch is OFF	Off	I
	Rear window defogger switch is ON	On	
TR CANCEL SW	NOTE: The item is indicated, but not monitored.	Off	J
TR/BD OPEN SW	Trunk lid opener switch OFF	Off	L
	While the trunk lid opener switch is turned ON	On	
TRNK/HAT MNTR	Trunk lid closed	Off	M
	Trunk lid opened	On	
RKE-LOCK	LOCK button of the key is not pressed	Off	N
	LOCK button of the key is pressed	On	
RKE-UNLOCK	UNLOCK button of the key is not pressed	Off	O
	UNLOCK button of the key is pressed	On	
RKE-TR/BD	TRUNK OPEN button of the key is not pressed	Off	P
	TRUNK OPEN button of the key is pressed	On	
RKE-PANIC	NOTE: The item is indicated, but not monitored.	Off	
RKE-P/W OPEN	NOTE: The item is indicated, but not monitored.	Off	
RKE-MODE CHG	LOCK/UNLOCK button of the key is not pressed and held simultaneously	Off	
	LOCK/UNLOCK button of the key is pressed and held simultaneously	On	
OPTICAL SENSOR	Bright outside of the vehicle	Close to 5 V	
	Dark outside of the vehicle	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)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Monitor Item	Condition	Value/Status
REQ SW -RR	NOTE: The item is indicated, but not monitored.	Off
REQ SW -RR	NOTE: The item is indicated, but not monitored.	Off
REQ SW -BD/TR	Trunk lid opener request switch is not pressed	Off
	Trunk lid opener request switch is pressed	On
PUSH SW	Push-button ignition switch (push switch) is not pressed	Off
	Push-button ignition switch (push switch) is pressed	On
IGN RLY2 -F/B	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On
CLUCH SW	NOTE: The item is indicated, but not monitored.	Off
BRAKE SW 1	The brake pedal is not depressed	On
	The brake pedal is depressed	Off
DETE/CANCL SW	Selector lever in P position	Off
	Selector lever in any position other than P	On
SFT PN/N SW	Selector lever in any position other than P and N	Off
	Selector lever in P or N position	On
S/L -LOCK	Steering is locked	Off
	Steering is unlocked	On
S/L -UNLOCK	Steering is unlocked	Off
	Steering is locked	On
S/L RELAY-F/B	Ignition switch in OFF or ACC position	Off
	Ignition switch in 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
IGN RLY1 -F/B	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On
DETE SW -IPDM	Selector lever in P position	Off
	Selector lever in any position other than P	On
SFT PN -IPDM	Selector lever in any position other than P and N	Off
	Selector lever in P or N position	On
SFT P -MET	Selector lever in any position other than P	Off
	Selector lever in P position	On
SFT N -MET	Selector lever in any position other than N	Off
	Selector lever in N position	On
ENGINE STATE	Engine stopped	Stop
	While the engine stalls	Stall
	At engine cranking	Crank
	Engine running	Run
S/L LOCK-IPDM	Steering is locked	Off
	Steering is unlocked	On

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Monitor Item	Condition	Value/Status	
S/L UNLK-IPDM	Steering is unlocked	Off	A
	Steering is locked	On	
S/L RELAY-REQ	Ignition switch in OFF or ACC position	Off	B
	Ignition switch in ON position	On	
VEH SPEED 1	While driving	Equivalent to speedometer reading	C
VEH SPEED 2	While driving	Equivalent to speedometer reading	
DOOR STAT-DR	Driver door is locked	LOCK	D
	Wait with selective UNLOCK operation (5 seconds)	READY	
	Driver door is unlocked	UNLOCK	
DOOR STAT-AS	Passenger door is locked	LOCK	E
	Wait with selective UNLOCK operation (5 seconds)	READY	
	Passenger door is unlocked	UNLOCK	
ID OK FLAG	Ignition switch in ACC or ON position	Reset	F
	Ignition switch in OFF position	Set	
PRMT ENG STRT	The engine start is prohibited	Reset	G
	The engine start is permitted	Set	
PRMT RKE STRT	NOTE: The item is indicated, but not monitored.	Reset	H
KEY SW -SLOT	The key is not inserted into key slot	Off	
	The key is inserted into key slot	On	I
RKE OPE COUN1	During the operation of the key	Operation frequency of the key	
RKE OPE COUN2	NOTE: The item is indicated, but not monitored.	—	J
CONFIRM ID ALL	The key ID that the key slot receives does not accord with any key ID registered to BCM.	Yet	
	The key ID that the key slot receives accords with any key ID registered to BCM.	Done	L
CONFIRM ID4	The key ID that the key slot receives does not accord with the fourth key ID registered to BCM.	Yet	
	The key ID that the key slot receives accords with the fourth key ID registered to BCM.	Done	M
CONFIRM ID3	The key ID that the key slot receives does not accord with the third key ID registered to BCM.	Yet	
	The key ID that the key slot receives accords with the third key ID registered to BCM.	Done	N
CONFIRM ID2	The key ID that the key slot receives does not accord with the second key ID registered to BCM.	Yet	
	The key ID that the key slot receives accords with the second key ID registered to BCM.	Done	O
CONFIRM ID1	The key ID that the key slot receives does not accord with the first key ID registered to BCM.	Yet	
	The key ID that the key slot receives accords with the first key ID registered to BCM.	Done	P
TP 4	The ID of fourth key is not registered to BCM	Yet	
	The ID of fourth key is registered to BCM	Done	
TP 3	The ID of third key is not registered to BCM	Yet	
	The ID of third key is registered to BCM	Done	

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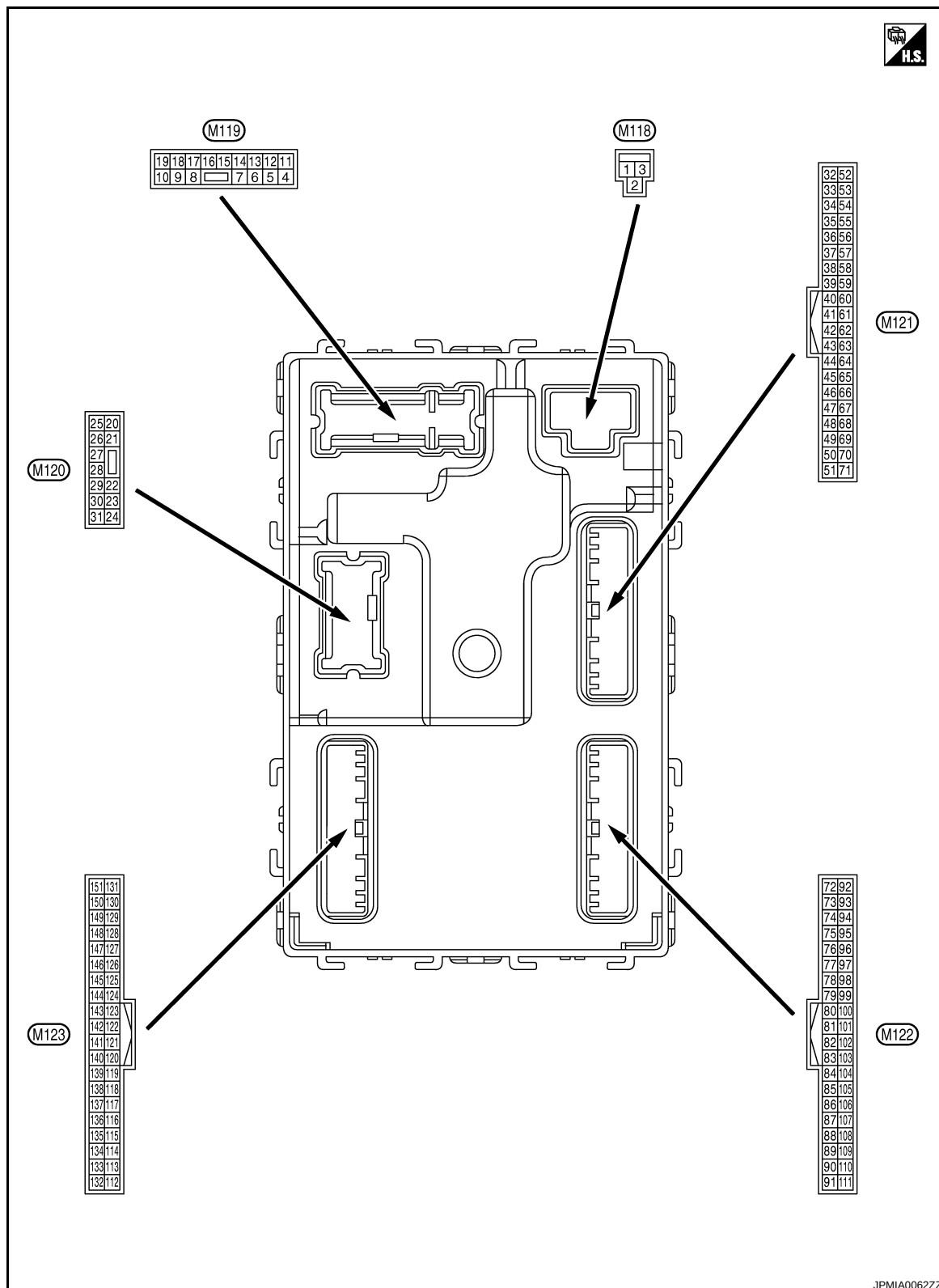
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Monitor Item	Condition	Value/Status
TP 2	The ID of second key is not registered to BCM	Yet
	The ID of second key is registered to BCM	Done
TP 1	The ID of first key is not registered to BCM	Yet
	The ID of first key is registered to BCM	Done

TERMINAL LAYOUT



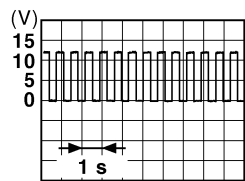
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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	—	Signal name	Input/ Output			
1 (W/B)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (R/Y)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF		Battery voltage
3 (L/W)	Ground	P/W power supply (IGN)	Output	Ignition switch ON		Battery voltage
4 (P/W)	Ground	Interior room lamp power supply	Output	Interior room lamp battery saver is activated. (Cuts the interior room lamp power supply)		0 V
				Interior room lamp battery saver is not activated. (Outputs the interior room lamp power supply)		Battery voltage
5 (G/Y)	Ground	Passenger door UNLOCK	Output	Passenger door	UNLOCK (Actuator is activated)	Battery voltage
					Other than UNLOCK (Actuator is not activated)	0 V
7 (R/W)	Ground	Step lamp	Output	Step lamp	ON	0 V
					OFF	Battery voltage
8 (V)	Ground	All doors LOCK	Output	All doors	LOCK (Actuator is activated)	Battery voltage
					Other than LOCK (Actuator is not activated)	0 V
9 (G)	Ground	Driver door UNLOCK	Output	Driver door	UNLOCK (Actuator is activated)	Battery voltage
					Other than UNLOCK (Actuator is not activated)	0 V
10 (G/Y)	Ground	Rear RH door and rear LH door UNLOCK	Output	Rear RH door and rear LH door	UNLOCK (Actuator is activated)	Battery voltage
					Other than UNLOCK (Actuator is not activated)	0 V
11 (Y/R)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
13 (B)	Ground	Ground	—	Ignition switch ON		0 V
15 (Y)	Ground	ACC indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage
					ACC or ON	0 V
17 (G/B)	Ground	Turn signal RH (Front and door mirror)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	 6.5 V

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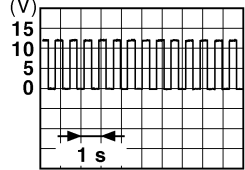
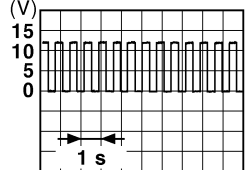
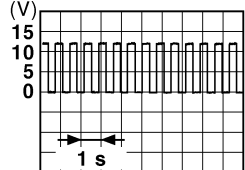
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BCM (BODY CONTROL MODULE)

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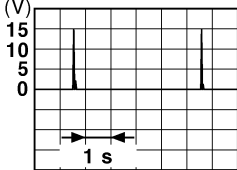
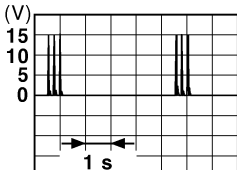
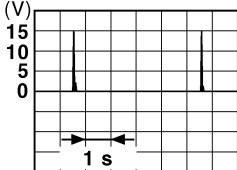
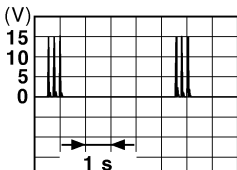
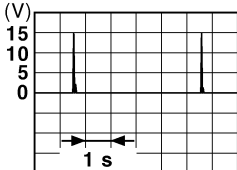
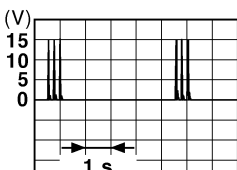
[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
18 (G/Y)	Ground	Turn signal LH (Front and door mirror)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 6.5 V
19 (Y)	Ground	Room lamp timer control	Output	Interior room lamp	OFF	Battery voltage
					ON	0 V
20 (G/B)	Ground	Turn signal RH (Rear)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	 6.5 V
23 (R)	Ground	Trunk lid opening	Output	Trunk lid	OPEN (Trunk lid opener actuator is activated)	Battery voltage
					Other than OPEN (Trunk lid opener actuator is not activated)	0 V
24 (G)	Ground	Rear fog lamp	Output	Rear fog lamp	OFF	0 V
					ON	Battery voltage
25 (G/Y)	Ground	Turn signal LH (Rear)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 6.5 V
30 (V/W)	Ground	Trunk room lamp	Output	Trunk room lamp	OFF	0 V
					ON	Battery voltage

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[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)	
+	-	Signal name	Input/ Output				
34 (B)	Ground	Trunk room antenna (-)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	 JMKIA0062GB	A
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB	B
35 (W)	Ground	Trunk room antenna (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	 JMKIA0062GB	C
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB	D
38 (L/O)	Ground	Rear bumper anten- na (-)	Output	When the trunk lid opener request switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB	E
					When Intelligent Key is not in the antenna detec- tion area	 JMKIA0063GB	F

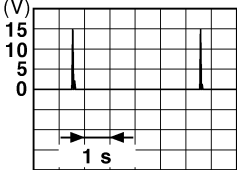
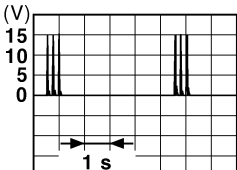
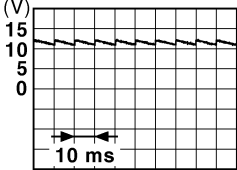
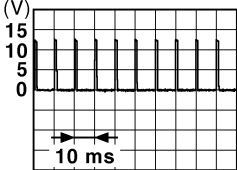
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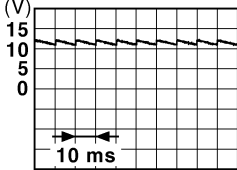
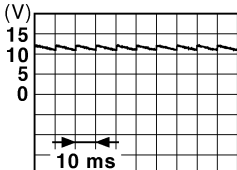
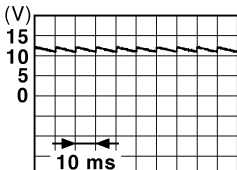
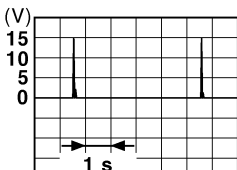
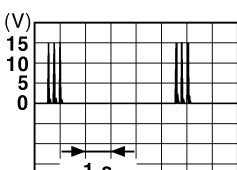
[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
39 (BR/W)	Ground	Rear bumper antenna (+)	Output	When the trunk lid opener request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
				When Intelligent Key is not in the antenna detection area	When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
47 (BR/W)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	Battery voltage
					ON	0 V
50 (W)	Ground	Trunk room lamp switch	Input	Trunk room lamp switch	OFF (When trunk lid closes)	 JPMIA0011GB 11.8 V
					ON (When trunk lid opens)	0 V
52 (R)	Ground	Starter relay control	Output	Ignition switch ON	When selector lever is in P or N position	Battery voltage
					When selector lever is not in P or N position	0.3 V
				Ignition switch OFF		0 V
61 (G/R)	Ground	Trunk lid request switch	Input	Trunk lid request switch	ON (Pressed)	0 V
					OFF (Not pressed)	 JPMIA0016GB 1.0 V
64 (GR)	Ground	Request switch buzzer	Output	Request switch buzzer	Sounding	0 V
					Not sounding	Battery voltage

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[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
67 (L/R)	Ground	Trunk lid opener switch	Input	Trunk lid opener switch	Pressed	0 V
					Not pressed	 11.8 V
68 (R/W)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (When rear RH door closes)	 11.8 V
					ON (When rear RH door opens)	0 V
69 (R/B)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (When rear LH door closes)	 11.8 V
					ON (When rear LH door opens)	0 V
72 (B/R)	Ground	Room antenna 2 (-) (center console)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	 1 s
					When Intelligent Key is not in the passenger compartment	 1 s

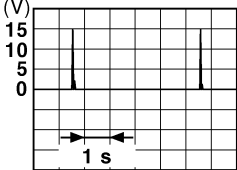
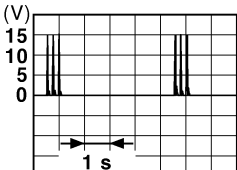
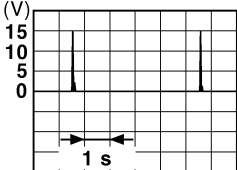
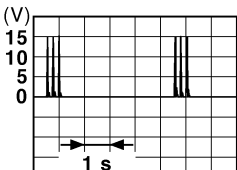
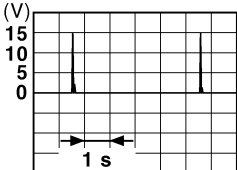
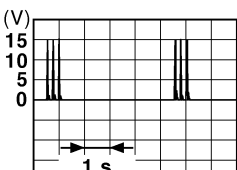
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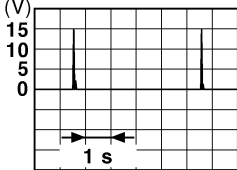
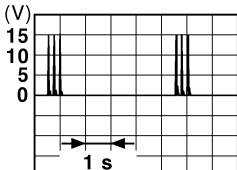
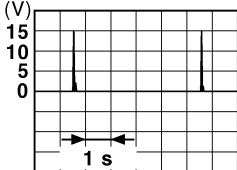
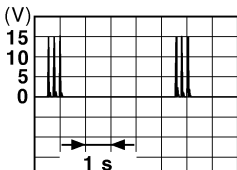
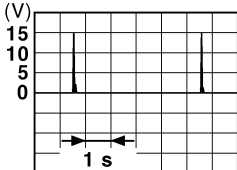
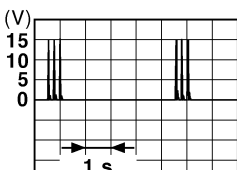
[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
73 (W/R)	Ground	Room antenna 2 (+) (center console)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
74 (B/Y)	Ground	Passenger door an- tenna (-)	Output	When the pas- senger door re- quest switch is operated with ig- nition switch OFF	When Intelligent Key is in the antenna detec- tion area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detec- tion area	 JMKIA0063GB
75 (LG)	Ground	Passenger door an- tenna (+)	Output	When the pas- senger door re- quest switch is operated with ig- nition switch OFF	When Intelligent Key is in the antenna detec- tion area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detec- tion area	 JMKIA0063GB

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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 the driver door request switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detec- tion area	 JMKIA0063GB
77 (P)	Ground	Driver door antenna (+)	Output	When the driver door request switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detec- tion area	 JMKIA0063GB
78 (R)	Ground	Room antenna 1 (-) (instrument panel)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB

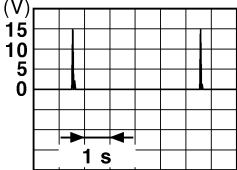
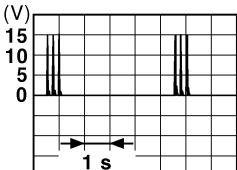
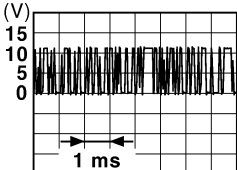
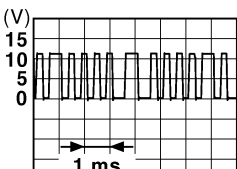
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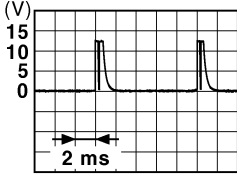
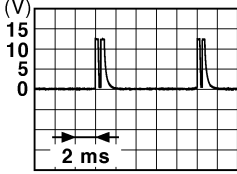
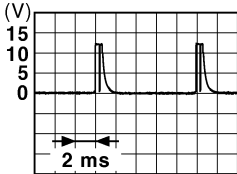
[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
79 (G)	Ground	Room antenna 1 (+) (instrument panel)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
80 (G/O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
81 (O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
82 (R/B)	Ground	Ignition relay [fuse block (J/B)] control	Output	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage
83 (L/O)	Ground	Remote keyless en- try receiver commu- nication	Input/ Output	During waiting		 JMKIA0064GB
				When operating either button on the key		 JMKIA0065GB

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[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
87 (R/Y)	Ground	Combination switch INPUT 5	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 1.4 V
					Front fog lamp switch ON (Wiper intermittent dial 4)	 1.3 V
					Rear fog lamp switch ON (Wiper intermittent dial 4)	 1.2 V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	 1.3 V

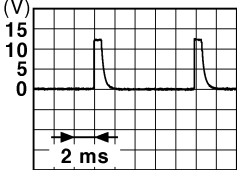
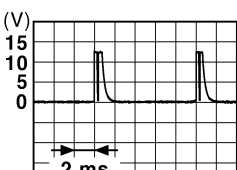
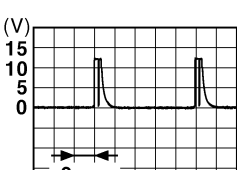
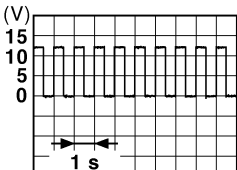
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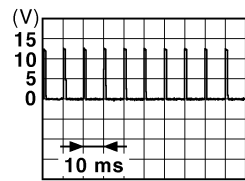
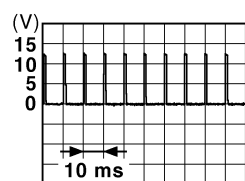
[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
88 (R/G)	Ground	Combination switch INPUT 3	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 JPMIA0041GB 1.4 V
					Lighting switch HI (Wiper intermittent dial 4)	 JPMIA0036GB 1.3 V
					Lighting switch 2ND (Wiper intermittent dial 4)	 JPMIA0037GB 1.3 V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	 JPMIA0040GB 1.3 V
89 (BR)	Ground	Push-button ignition switch (push switch)	Input	Push-button ignition 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 (R/L)	Ground	Key slot illumination	Output	Key slot illumination	OFF	Battery voltage
					Blinking	 JPMIA0015GB 6.5 V
					ON	0 V

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[INTELLIGENT KEY SYSTEM]

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

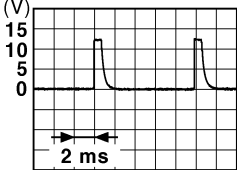
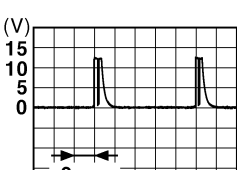
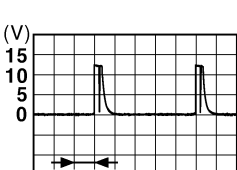
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[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
107 (R/W)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermit- tent dial 4)	 JPMIA0041GB 1.4 V
				Turn signal switch LH	 JPMIA0037GB 1.3 V
				Turn signal switch RH	 JPMIA0036GB 1.3 V
				Front wiper switch LO	 JPMIA0038GB 1.3 V
				Front washer switch ON	 JPMIA0039GB 1.3 V

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[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
108 (P/B)	Ground	Combination switch INPUT 4	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 1.4 V
					Lighting switch AUTO (Wiper intermittent dial 4)	 1.3 V
					Lighting switch 1ST (Wiper intermittent dial 4)	 1.3 V
					Any of the conditions be- low with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	 1.3 V

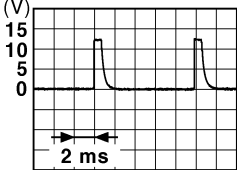
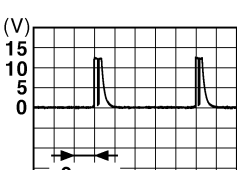
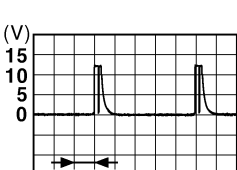
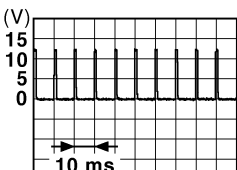
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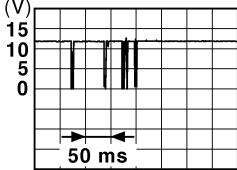
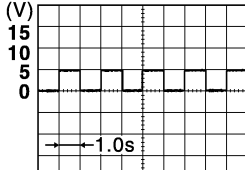
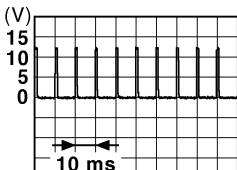
[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
109 (R/B)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	All switch OFF  JPMIA0041GB 1.4 V
					Lighting switch PASS  JPMIA0037GB 1.3 V
					Lighting switch 2ND  JPMIA0036GB 1.3 V
					Front wiper switch INT  JPMIA0038GB 1.3 V
					Front wiper switch HI  JPMIA0040GB 1.3 V
110 (G/O)	Ground	Hazard switch	Input	Hazard switch	ON 0 V
				OFF	 JPMIA0012GB 1.1 V

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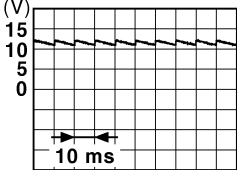
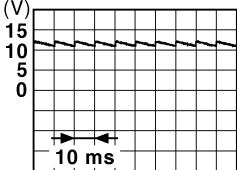
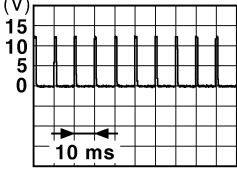
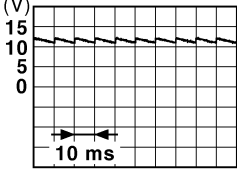
Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
111 (L/Y)	Ground	Steering lock unit communication	Input/ Output	Steering lock	LOCK status
					Battery voltage
					LOCK or UNLOCK
					 JMKIA0066GB
					For 15 seconds after UN- LOCK
					Battery voltage
					15 seconds or later after UNLOCK
113 (P/B)	Ground	Optical sensor	Input	Ignition switch ON	When bright outside of the vehicle
					When dark outside of the vehicle
115 (L)	Ground	Shock sensor	Input	Ignition switch	OFF
					ACC
					ON
					 JPMIA1034GB
116 (R/W)	Ground	Fuse check (Stop lamp switch)	Input	—	Battery voltage
118 (O/L)	Ground	Stop lamp switch	Input	Stop lamp switch	OFF (Brake pedal is not depressed)
					ON (Brake pedal is de- pressed)
119 (G/W)	Ground	Front door lock as- sembly driver side (unlock sensor)	Input	Driver door	LOCK status (unlock sen- sor switch OFF)
					 JPMIA0012GB
					UNLOCK status (unlock sensor switch ON)
121 (Y)	Ground	Key slot switch	Input	When the key is inserted into key slot	Battery voltage
				When the key is not inserted into key slot	0 V
122 (V/R)	Ground	ACC feedback	Input	Ignition switch	OFF
					ACC or ON
123 (G/W)	Ground	IGN feedback	Input	Ignition switch	OFF or ACC
					ON

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

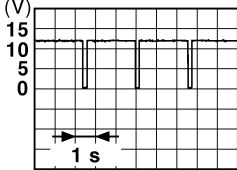
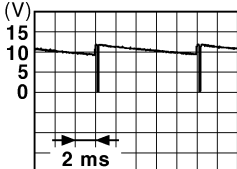
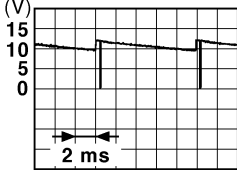
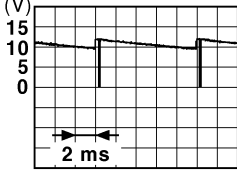
[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
124 (R/B)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closes)	 JPMIA0011GB 11.8 V
					ON (When passenger door opens)	0 V
128 (GR)	Ground	Door lock and unlock switch LOCK	Input	Door lock and unlock switch [power window main switch or front power window switch (passenger side)]	NEUTRAL position	 JPMIA0011GB 11.8 V
					LOCK position	0 V
130* (GR/W)	Ground	Rear window defogger switch	Input	Ignition switch ON	Rear window defogger switch OFF	 JPMIA0012GB 1.1 V
					Rear window defogger switch ON	0 V
131 (GR/R)	Ground	Door lock and unlock switch UN-LOCK	Input	Door lock and unlock switch [power window main switch or front power window switch (passenger side)]	NEUTRAL position	 JPMIA0011GB 11.8 V
					UNLOCK position	0 V
133 (W)	Ground	Push-button ignition switch illumination	Output	Push-button ignition switch illumination	ON	9.5 V
					OFF	0 V
134 (R)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	OFF	Battery voltage
					ON	0 V
137 (P)	Ground	Receiver and sensor ground	Input	Ignition switch ON		0 V
138 (V/W)	Ground	Receiver and sensor power supply output	Output	Ignition switch	OFF	0 V
					ACC or ON	5.0 V
140 (R/G)	Ground	Selector lever P/N position	Input	Selector lever	P or N position	Battery voltage
					Except P and N positions	0 V

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
141 (L/O)	Ground	Security indicator	Output	Security indicator	ON	0 V
					Blinking	 JPMIA0014GB 11.3 V
					OFF	Battery voltage
142 (LG/B)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0 V
					Lighting switch 1ST	 JPMIA0031GB 10.7 V
					Lighting switch HI	
					Lighting switch 2ND	
					Turn signal switch RH	
143 (L/W)	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)	 JPMIA0032GB 10.7 V
					Any of the conditions be- low with all switch OFF	
					• Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3 • Wiper intermittent dial 6 • Wiper intermittent dial 7	
144 (G/B)	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)	 JPMIA0033GB 10.7 V
					Any of the conditions be- low with all switch OFF	
					• Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	

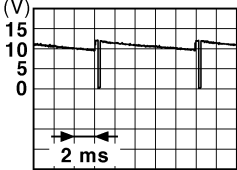
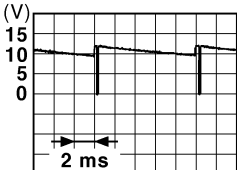
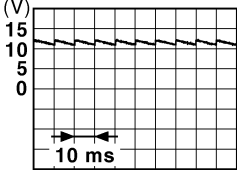
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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
145 (LG/R)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0 V
					Front wiper switch INT	 10.7 V
					Front wiper switch LO	
					Lighting switch AUTO	
					Rear fog lamp switch ON	
146 (G/Y)	Ground	Combination switch OUTPUT 4	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0 V
					Front fog lamp switch ON	 10.7 V
					Lighting switch 2ND	
					Lighting switch PASS	
					Turn signal switch LH	
150 (SB)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closes)	 11.8 V
					ON (When driver door opens)	0 V
151 (G/R)	Ground	Rear window defog- ger relay	Output	Rear window de- fogger	Active	0 V
					Not activated	Battery voltage

NOTE:

*: Without BOSE audio system

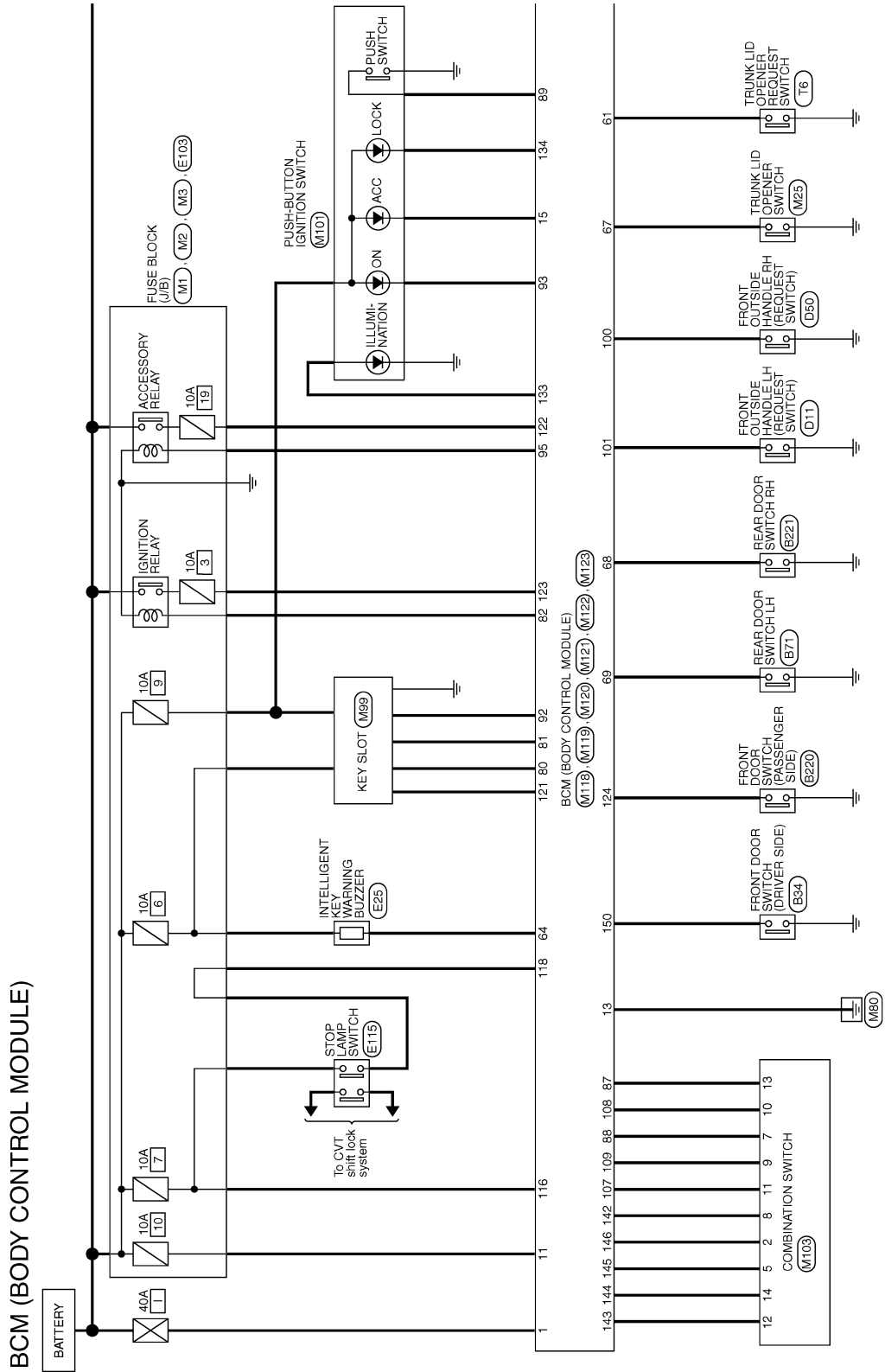
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Wiring Diagram - BCM -

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2008/01/23

JCMWM1671G

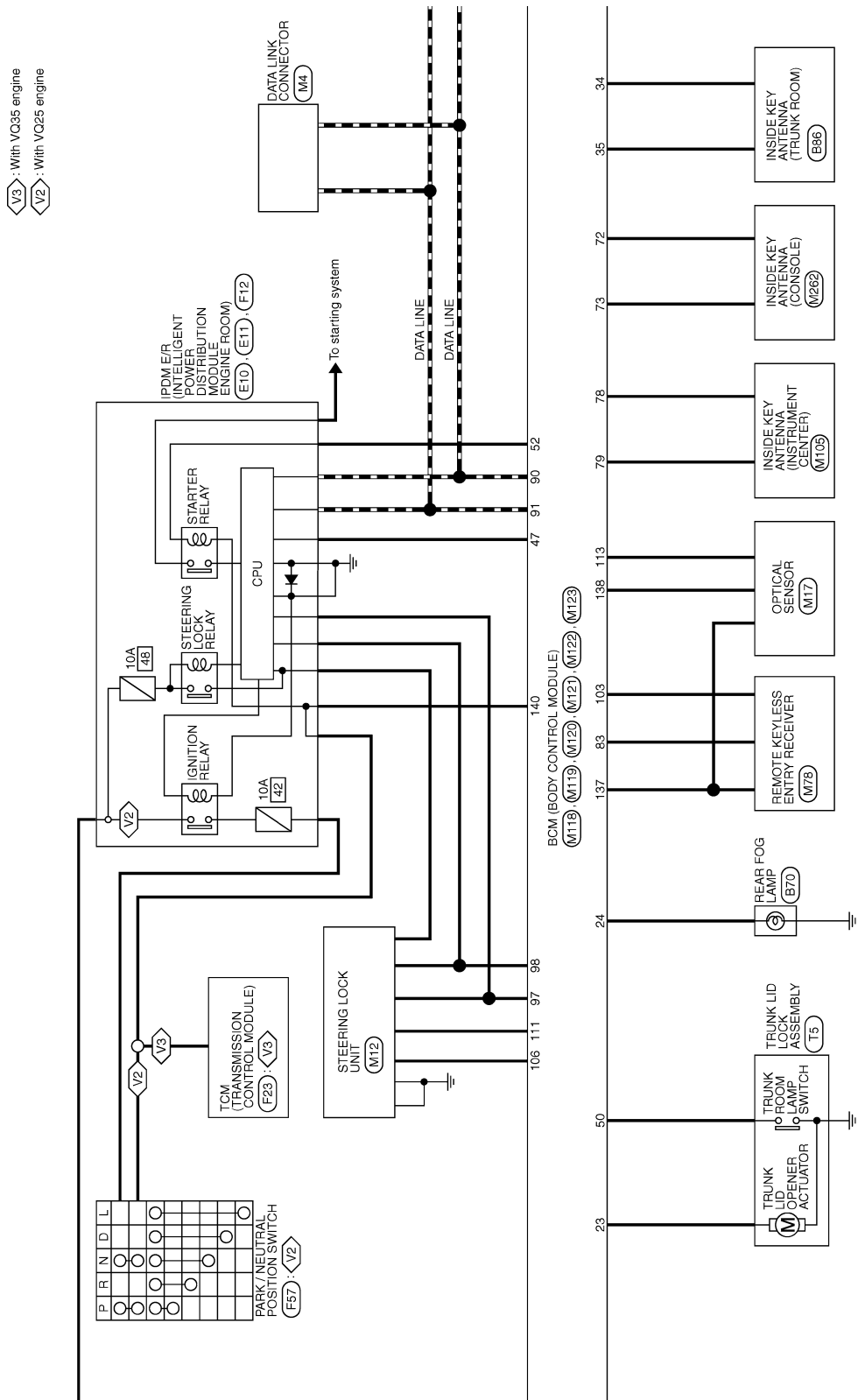
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BCM (BODY CONTROL MODULE)

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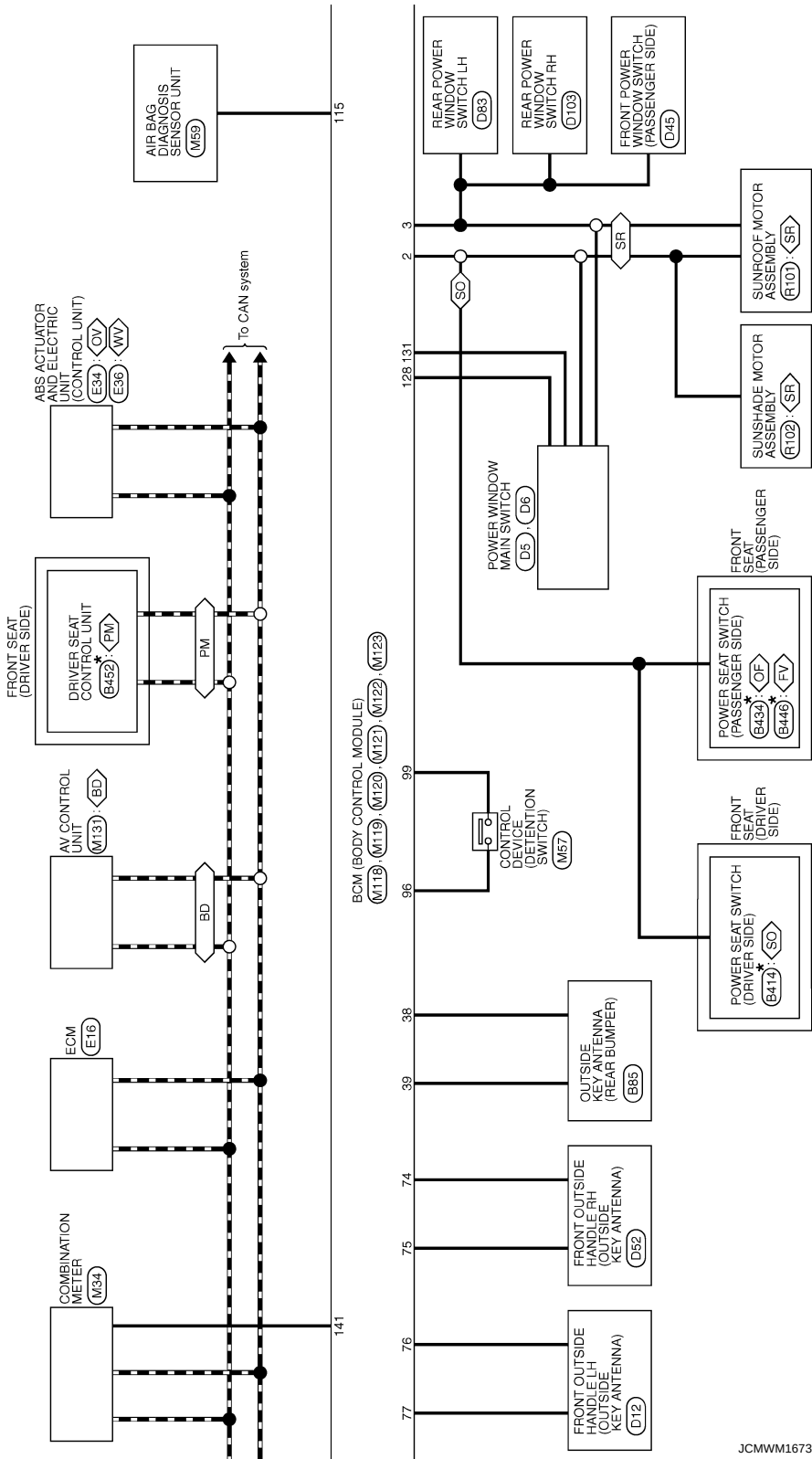
[INTELLIGENT KEY SYSTEM]



JCMWM1672G

- WV : With VDC
- OV : Without VDC
- PM : With automatic drive positioner
- SO : With power seat without automatic drive positioner
- BD : With BOSE system or base audio and display system
- SR : With sunroof
- FV : With front ventilation seat
- OF : Without front ventilation seat

★: This connector is not shown in "Harness Layout".



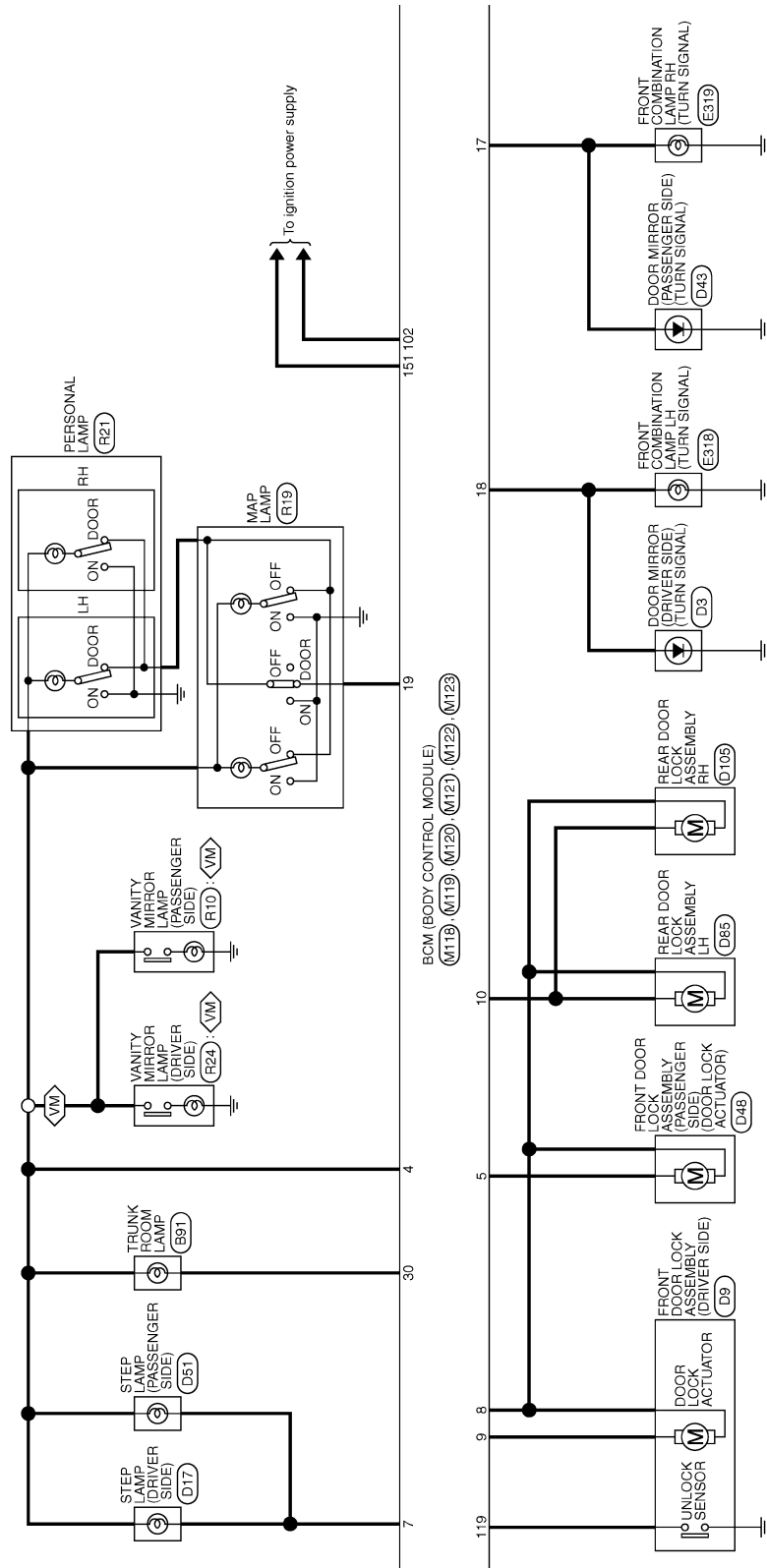
JCMW1673GI

BCM (BODY CONTROL MODULE)

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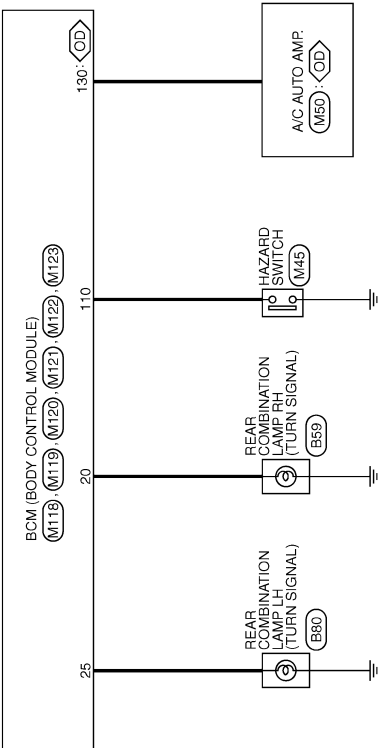
[INTELLIGENT KEY SYSTEM]

◁ VM ▷ : With vanity mirror lamp



JCMWM1674G

⬡OD⬡ : Without BOSE system or base audio and display system



JCMWWM1675G1

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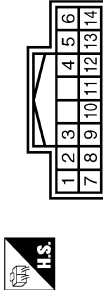
BCM (BODY CONTROL MODULE)

[INTELLIGENT KEY SYSTEM]

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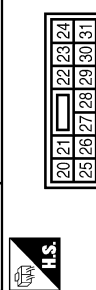
BCM (BODY CONTROL MODULE)

Connector No.	M103
Connector Name	COMBINATION SWITCH
Connector Type	TH16FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
2	G/Y	OUTPUT 4
5	LG/R	OUTPUT 3
7	R/G	INPUT 3
8	LG/B	OUTPUT 5
9	R/B	INPUT 2
10	P/B	INPUT 4
11	R/W	INPUT 1
12	L/W	OUTPUT 1
13	R/Y	INPUT 5
14	G/B	OUTPUT 2

Connector No.	M120
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS12FW-CS



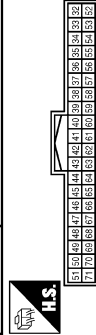
Terminal No.	Color of Wire	Signal Name [Specification]
20	G/B	TURN SIGNAL RH (REAR)
23	R	TRUNK OPEN OUTPUT
24	G	REAR FOG LAMP OUTPUT
25	G/Y	TURN SIGNAL LH (REAR)
30	V/W	TRUNK LAMP OUTPUT

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	M03FB-LC



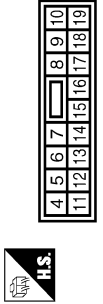
Terminal No.	Color of Wire	Signal Name [Specification]
1	W/B	BAT (F/L)
2	R/Y	POWER WINDOW POWER SUPPLY (BAT)
3	L/W	POWER WINDOW POWER SUPPLY (IGN)

Connector No.	M121
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40GY-NH



Terminal No.	Color of Wire	Signal Name [Specification]
34	B	TRUNK ANT 1 B
35	W	TRUNK ANT 1 A
38	L/O	RR BUMPER ANT B
39	BR/W	RR BUMPER ANT A
47	BR/W	IGN RELAY IPDM E/R CONT
50	W	TRUNK SW
52	R	IGN RELAY IPDM E/R CONT
61	G/R	TRUNK REQUEST SW
64	GR	REQUEST SW BUZZER
67	L/R	INTERIOR TRUNK SW
68	R/W	REAR RH DOOR SW

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
4	P/W	INTERIOR ROOM LAMP POWER SUPPLY
5	G/Y	PASSENGER DOOR UNLOCK OUTPUT
7	R/W	STEP LAMP OUTPUT
8	V	ALL DOOR LOCK OUTPUT
9	G	DRIVER DOOR UNLOCK OUTPUT
10	G/Y	REAR DOOR UNLOCK OUTPUT
11	Y/R	BAT (RUSE)
13	B	GND
15	Y	ACC IND
17	G/B	TURN SIGNAL RH (FRONT D/MIRROR)
18	G/Y	TURN SIGNAL LH (FRONT D/MIRROR)

Connector No.	M122
Connector Name	REAR LH DOOR SW

JCMWM1676G

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

BCM (BODY CONTROL MODULE)

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



91	90	89	88	87	86	85	84	83	82	81	80	79	78	77	76	75	74	73	72
111	110	109	108	107	106	105	104	103	102	101	100	99	98	97	96	95	94	93	92

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

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
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 • Starter control relay signal • Starter relay status signal
B2601: SHIFT POSITION	Inhibit steering lock	500 ms after the following signal reception status becomes consistent • 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 • Ignition switch is in the ON position • Selector lever P position switch signal: Except P position (battery voltage) • Vehicle speed: 4 km/h (2.5 MPH) or more
B2603: SHIFT POSI STATUS	Inhibit steering lock	500 ms after the following BCM recognition conditions are fulfilled • 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 • Status 1 - 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 - 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 • Ignition switch is in the ON position - Power position: IGN - Selector lever P/N position signal: Except P and N positions (0 V) - Interlock/PNP switch signal (CAN): OFF • Status 2 - 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 • 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 • Steering lock relay signal (Request signal) • Steering lock relay signal (Condition signal)

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Display contents of CONSULT	Fail-safe	Cancellation
B2608: STARTER RELAY	Inhibit engine cranking	500 ms after the following signal communication status becomes consistent - Starter motor relay control signal - Starter relay status signal (CAN)
B2609: S/L STATUS	- Inhibit engine cranking - Inhibit steering lock	When the following steering lock conditions agree - 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 - 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 - Power position changes to ACC - Receives engine status signal (CAN)
B2612: S/L STATUS	- Inhibit engine cranking - Inhibit steering lock	When any of the following conditions is fulfilled - 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 RES	Inhibit engine cranking	When any of the following conditions is fulfilled - Power position changes to ACC - Receives engine status signal (CAN)
B26E9: S/L STATUS	- Inhibit engine cranking - Inhibit steering lock	When BCM transmits the LOCK request signal to steering lock unit, and receives LOCK response signal from steering lock unit, the following conditions is fulfilled - Steering condition No. 1 signal: LOCK (0 V) - Steering condition No. 2 signal: LOCK (Battery voltage)

HIGH FLASHER OPERATION

BCM detects the turn signal lamp circuit status by the current value.

BCM increases the turn signal lamp blinking speed if the bulb or harness open is detected with the turn signal lamp operating.

NOTE:

The blinking speed is normal while activating the hazard warning lamp.

DTC Inspection Priority Chart

INFOID:000000003880728

If some DTCs are displayed at the same time, perform inspections one by one based on the following priority chart.

Priority	DTC
1	B2562: LOW VOLTAGE
2	- U1000: CAN COMM CIRCUIT - U1010: CONTROL UNIT (CAN)
3	- B2190: NATS ANTENNA 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	• 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 • 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 RES • B26E9: S/L STATUS • B26EA: KEY REGISTRATION • U0415: VEHICLE SPEED SIG
5	• B2621: INSIDE ANTENNA • B2622: INSIDE ANTENNA • B2623: INSIDE ANTENNA

DTC Index

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NOTE:

The details of time display are as follows.

- CRNT: A malfunction is detected now.
- PAST: A malfunction was detected in the past.

IGN counter is displayed on Freeze Frame Data. For details of Freeze Frame Data and IGN Counter, refer to [BCS-16, "COMMON ITEM : CONSULT-III Function \(BCM - COMMON ITEM\)"](#).

CONSULT display	Fail-safe	Freeze Frame Data	Intelligent Key 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-46
B2014: CHAIN OF S/L-BCM	×	×	—	SEC-47
B2190: NATS ANTENNA AMP	×	—	—	SEC-39
B2191: DIFFERENCE OF KEY	×	—	—	SEC-42

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

CONSULT display	Fail-safe	Freeze Frame Data	Intelligent Key warn- ing lamp ON	Reference page	
B2192: ID DISCORD BCM-ECM	×	—	—	SEC-43	A
B2193: CHAIN OF BCM-ECM	×	—	—	SEC-45	B
B2553: IGNITION RELAY	—	×	—	PCS-49	
B2555: STOP LAMP	—	×	—	SEC-50	
B2556: PUSH-BTN IGN SW	—	×	×	SEC-52	C
B2557: VEHICLE SPEED	×	×	×	SEC-54	
B2560: STARTER CONT RELAY	×	×	×	SEC-55	
B2562: LOW VOLTAGE	—	×	—	BCS-36	D
B2601: SHIFT POSITION	×	×	×	SEC-56	
B2602: SHIFT POSITION	×	×	×	SEC-59	E
B2603: SHIFT POSI STATUS	×	×	×	SEC-61	
B2604: PNP SW	×	×	×	SEC-64	
B2605: PNP SW	×	×	×	SEC-67	F
B2606: S/L RELAY	×	×	×	SEC-69	
B2607: S/L RELAY	×	×	×	SEC-70	G
B2608: STARTER RELAY	×	×	×	SEC-72	
B2609: S/L STATUS	×	×	×	SEC-74	
B260A: IGNITION RELAY	×	×	×	PCS-51	H
B260B: STEERING LOCK UNIT	—	×	×	SEC-78	
B260C: STEERING LOCK UNIT	—	×	×	SEC-79	I
B260D: STEERING LOCK UNIT	—	×	×	SEC-80	
B260F: ENG STATE SIG LOST	×	×	×	SEC-81	
B2612: S/L STATUS	×	×	×	SEC-85	J
B2614: ACC RELAY CIRC	—	×	×	PCS-53	
B2615: BLOWER RELAY CIRC	—	×	×	PCS-55	
B2616: IGN RELAY CIRC	—	×	×	PCS-57	SEC
B2617: STARTER RELAY CIRC	×	×	×	SEC-89	
B2618: BCM	×	×	×	PCS-59	L
B2619: BCM	×	×	×	SEC-91	
B261A: PUSH-BTN IGN SW	—	×	×	SEC-92	
B261E: VEHICLE TYPE	×	×	× (Turn ON for 15 seconds)	SEC-95	M
B2621: INSIDE ANTENNA	—	×	—	DLK-50	
B2622: INSIDE ANTENNA	—	×	—	DLK-52	N
B2623: INSIDE ANTENNA	—	×	—	DLK-54	
B26E1: ENG STATE NO RES	×	×	×	SEC-82	O
B26E9: S/L STATUS	×	×	× (Turn ON for 15 seconds)	SEC-83	
B26EA: KEY REGISTRATION	—	×	× (Turn ON for 15 seconds)	SEC-84	P

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

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

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

Reference Value

INFOID:000000003880730

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition		Value/Status
MOTOR FAN REQ	Engine idle speed	Changes depending on engine coolant temperature, air conditioner operation status, vehicle speed, etc.	1/2/3/4
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
		Front fog lamp switch ON	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	Selector lever in any position other than P or N	Off
		Selector lever in P or N position	On
ST RLY CONT	Ignition switch ON		Off
	At engine cranking		On
IHBT RLY -REQ	Ignition switch ON		Off
	At engine cranking		On

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

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Monitor Item	Condition		Value/Status
ST/INHI RLY	Ignition switch ON		Off
	At engine cranking		INHI → ST
	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	- Press the selector button with selector lever in P position - Selector lever in any position other than P	Off
	Release the selector button with selector lever in P position		On
S/L RLY -REQ	None of the conditions below are present		Off
	- 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		On
S/L STATE	Steering lock is activated		LOCK
	Steering lock is deactivated		UNLOCK
	[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	Not operating		Off
	Headlamp washer operating		On
THFT HRN REQ	Not operating		Off
	Horn is activated with vehicle security (theft warning) system		On
HORN CHIRP	Not operating		Off
	- Door locking with Intelligent Key (horn chirp mode) - Door locking with key fob (horn chirp mode)		On
CRNRNG LMP REQ	NOTE: The item is indicated, but not monitored.		Off

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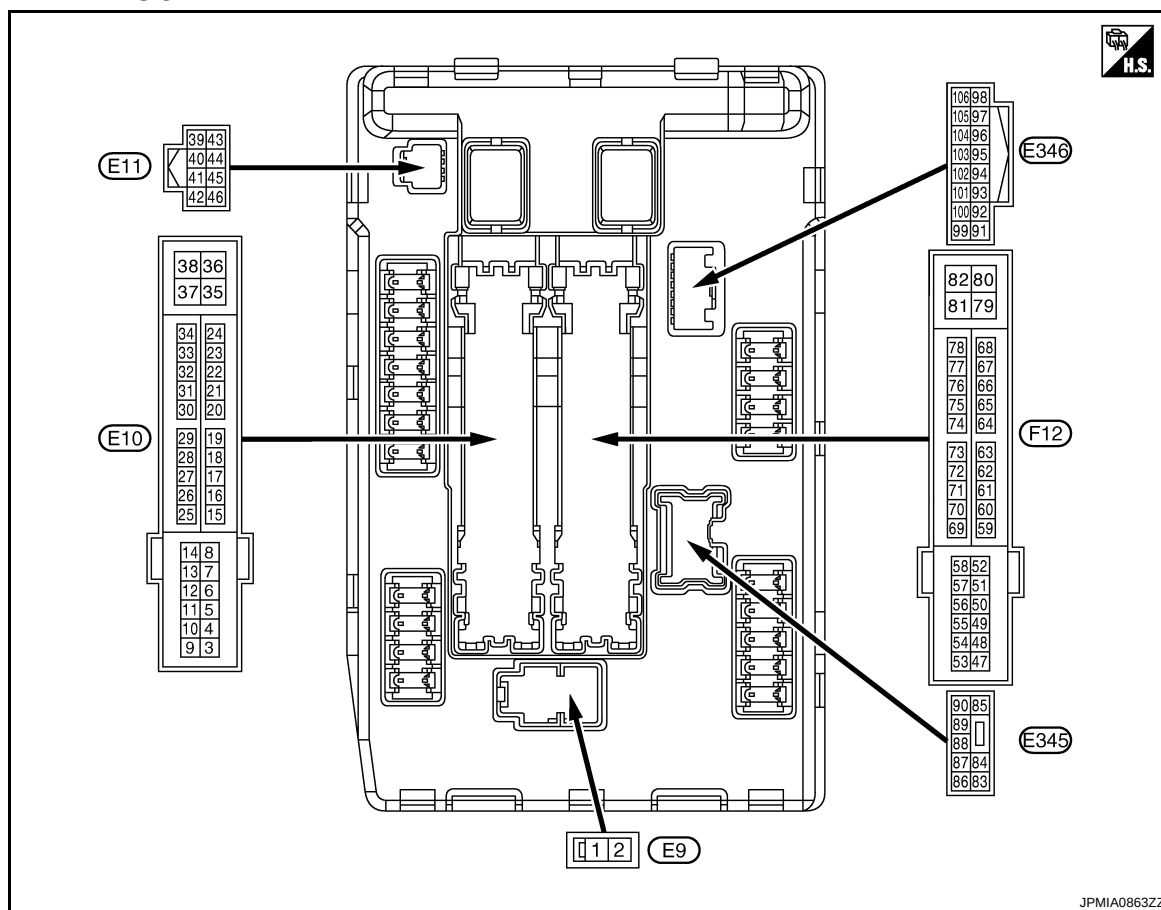
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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

TERMINAL LAYOUT



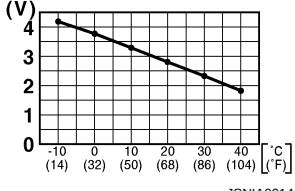
PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
1 (R)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (L)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
4 (LG)	Ground	Front wiper LO	Output	Ignition switch ON	Front wiper switch OFF	0 V
					Front wiper switch LO	Battery voltage
5 (Y)	Ground	Front wiper HI	Output	Ignition switch ON	Front wiper switch OFF	0 V
					Front wiper switch HI	Battery voltage
7 (GR)	Ground	Tail, license plate lamps & illuminations	Output	Ignition switch ON	Lighting switch OFF	0 V
					Lighting switch 1ST	Battery voltage
10 (BR)	Ground	ECM relay power supply	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		0 V
				- Ignition switch ON - Ignition switch OFF (For a few seconds after turning igni- tion switch OFF)		Battery voltage

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

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
11 (P)	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
13 (SB)	Ground	Fuel pump power supply	Output	Approximately 1 second or more after turning the ignition switch ON		0 V
				- Approximately 1 second after turning the ignition switch ON - Engine running		Battery voltage
15 (W)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
16 (R)	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
17 (V)	Ground	Headlamp washer relay control	Input	Ignition switch ON	Headlamp washer deactivated	Battery voltage
					Headlamp washer activated	0 V
19 (Y)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
20 (B)	Ground	Ambient sensor ground	Output	Ignition switch ON		0 V
21 (O)	Ground	Ambient sensor	Input	Ignition switch ON NOTE: Changes depending to ambient temperature		 JSNIA0014GB
22 (SB)	Ground	Refrigerant pressure sensor ground	Output	Engine running	- Warm-up condition - Idle speed	0 V
23 (GR)	Ground	Refrigerant pressure sensor	Output	Engine running	- Warm-up condition - Both A/C switch and blower fan motor switch ON (Compressor operates)	1.0 - 4.0 V
24 (G)	Ground	Refrigerant pressure sensor power supply	Input	Ignition switch OFF		0 V
				Ignition switch ON		5.0 V
25 (GR)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
27 (W)	Ground	Ignition relay monitor	Input	Ignition switch OFF or ACC		Battery voltage
				Ignition switch ON		0 V

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

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	—	Signal name	Input/ Output			
28 (SB)	Ground	Push-button ignition switch	Input	Press the push-button ignition switch		0 V
				Release the push-button ignition switch		Battery voltage
30 (BR)	Ground	Starter relay control	Input	Ignition switch ON	Selector lever in any position other than P or N	0 V
					Selector lever P or N	Battery voltage
32 (V)	Ground	Steering lock unit condition-1	Input	Steering lock is activated		0 V
				Steering lock is deactivated		Battery voltage
33 (G)	Ground	Steering lock unit condition-2	Input	Steering lock is activated		Battery voltage
				Steering lock is deactivated		0 V
34 (O)	Ground	Cooling fan relay-3 control	Input	Cooling fan stopped		Battery voltage
				Cooling fan at HI operation		0 V
35 (P)	Ground	Cooling fan relay-1 power supply	Input	Cooling fan stopped		Battery voltage
				Cooling fan at LO operation		6.0 V
36 (G)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
38 (GR)	Ground	Cooling fan relay-1 power supply	Output	Cooling fan not operating		0 V
				Cooling fan at LO operation		6.0 V
39 (P)	—	CAN-L	Input/ Output	—		—
40 (L)	—	CAN-H	Input/ Output	—		—
41 (B)	Ground	Ground	—	Ignition switch ON		0 V
42 (SB)	Ground	Cooling fan relay-2 control	Input	Cooling fan stopped		Battery voltage
				- Cooling fan MID operating - Cooling fan HI operating		0 V
43 (Y)	Ground	Control device (Detention switch)	Input	Ignition switch ON	Press the selector button (selector lever P)	Battery voltage
					- Selector lever in any position other than P - Release the selector button (selector lever P)	0 V
44 (G)	Ground	Horn relay control	Input	The horn is deactivated		Battery voltage
				The horn is activated		0 V
45 (O)	Ground	Horn switch	Input	The horn is deactivated		Battery voltage
				The horn is activated		0 V
46 (BR)	Ground	Starter relay control	Input	Ignition switch ON	Selector lever in any position other than P or N	0 V
					Selector lever P or N	Battery voltage
48 (Y/R)	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

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

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)	
+	-	Signal name	Input/ Output				
49 (R/B)	Ground	ECM relay power supply	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		0 V	A
				- Ignition switch ON - Ignition switch OFF (For a few seconds after turning igni- tion switch OFF)		Battery voltage	B
51 (LG)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V	C
				Ignition switch ON		Battery voltage	D
52 (Y/G)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V	E
				Ignition switch ON		Battery voltage	F
53 (R/W)	Ground	ECM relay power supply	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		0 V	G
				- Ignition switch ON - Ignition switch OFF (For a few seconds after turning igni- tion switch OFF)		Battery voltage	H
54 (G/W)	Ground	Throttle control motor re- lay power supply	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		0 V	I
				- Ignition switch ON - Ignition switch OFF (For a few seconds after turning igni- tion switch OFF)		Battery voltage	J
55 (W/L)	Ground	ECM power supply	Output	Ignition switch OFF		Battery voltage	
56 (R/Y)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V	
				Ignition switch ON		Battery voltage	
57 (O)	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/B)	Ground	ECM relay control	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		Battery voltage	
				- Ignition switch ON - Ignition switch OFF (For a few seconds after turning igni- tion switch OFF)		0 - 1.5 V	
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	
72 (R/B)	Ground	Starter relay control	Input	Ignition switch ON	Selector lever in any posi- tion other than P or N	0 V	
					Selector lever P or N	Battery voltage	
74 (Y)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V	
				Ignition switch ON		Battery voltage	

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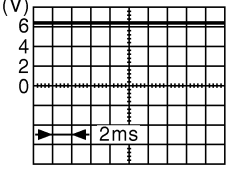
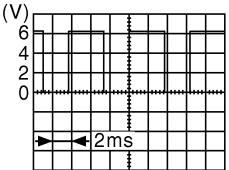
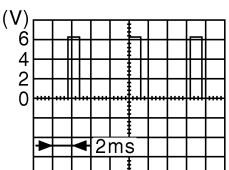
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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

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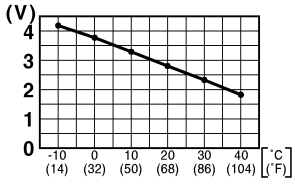
[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
75 (P/L)	Ground	Oil pressure switch	Input	Ignition switch ON	Engine stopped	0 V
					Engine running	Battery voltage
76 (SB)	Ground	Power generation command signal	Output	Ignition switch ON		 6.3 V
				40% is set on "ACTIVE TEST", "ALTERNATOR DUTY" of "ENGINE"		 3.8 V
				80% is set on "ACTIVE TEST", "ALTERNATOR DUTY" of "ENGINE"		 1.4 V
77 (GR)	Ground	Fuel pump relay control	Output	- Approximately 1 second after turning the ignition switch ON - Engine running		0 - 1.5 V
				Approximately 1 second or more after turning the ignition switch ON		Battery voltage
80 (B/W)	Ground	Starter motor	Output	At engine cranking		Battery voltage
83 (Y)	Ground	Headlamp LO (RH)	Output	Ignition switch ON	Lighting switch OFF	0 V
					Lighting switch 2ND	Battery voltage
84 (SB)	Ground	Headlamp LO (LH)	Output	Ignition switch ON	Lighting switch OFF	0 V
					Lighting switch 2ND	Battery voltage
86 (L)	Ground	Front fog lamp (RH)	Output	Lighting switch 2ND	- Front fog lamp switch ON - Daytime running light activated (Only for Canada)	Battery voltage
					Front fog lamp switch OFF	0 V
87 (R)	Ground	Front fog lamp (LH)	Output	Lighting switch 2ND	- Front fog lamp switch ON - Daytime running light activated (Only for Canada)	Battery voltage
					Front fog lamp switch OFF	0 V

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

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
88 (P)	Ground	Washer pump power supply	Output	Ignition switch ON		Battery voltage
89 (W)	Ground	Headlamp HI (RH)	Output	Ignition switch ON	• Lighting switch HI • Lighting switch PASS	Battery voltage
					Lighting switch OFF	0 V
90 (O)	Ground	Headlamp HI (LH)	Output	Ignition switch ON	• Lighting switch HI • Lighting switch PASS	Battery voltage
					Lighting switch OFF	0 V
91 (O)	Ground	Parking lamp (RH)	Output	Ignition switch ON	Lighting switch 1ST	Battery voltage
					Lighting switch OFF	0 V
92 (L)	Ground	Parking lamp (LH)	Output	Ignition switch ON	Lighting switch 1ST	Battery voltage
					Lighting switch OFF	0 V
93 (BR)	Ground	Headlamp aiming motor (RH)	Output	Ignition switch ON	Lighting switch 1ST	Battery voltage
					Lighting switch OFF	0 V
94 (Y)	Ground	Headlamp aiming motor (LH)	Output	Ignition switch ON	Lighting switch 1ST	Battery voltage
					Lighting switch OFF	0 V
99 (W)	Ground	Ambient sensor ground	Input	Ignition switch ON		0 V
100 (SB)	Ground	Ambient sensor	Output	Ignition switch ON NOTE: Changes depending to ambient temperature		 JSNIA0014GB
101 (GR)	Ground	Refrigerant pressure sensor ground	Input	Engine running	• Warm-up condition • Idle speed	0 V
102 (R)	Ground	Refrigerant pressure sensor	Input	Engine running	• Warm-up condition • Both A/C switch and blower fan motor switch ON (Compressor operates)	1.0 - 4.0 V
103 (P)	Ground	Refrigerant pressure sensor power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		5.0 V
104 (LG)	Ground	Hood switch	Output	Close the hood		Battery voltage
				Open the hood		0 V

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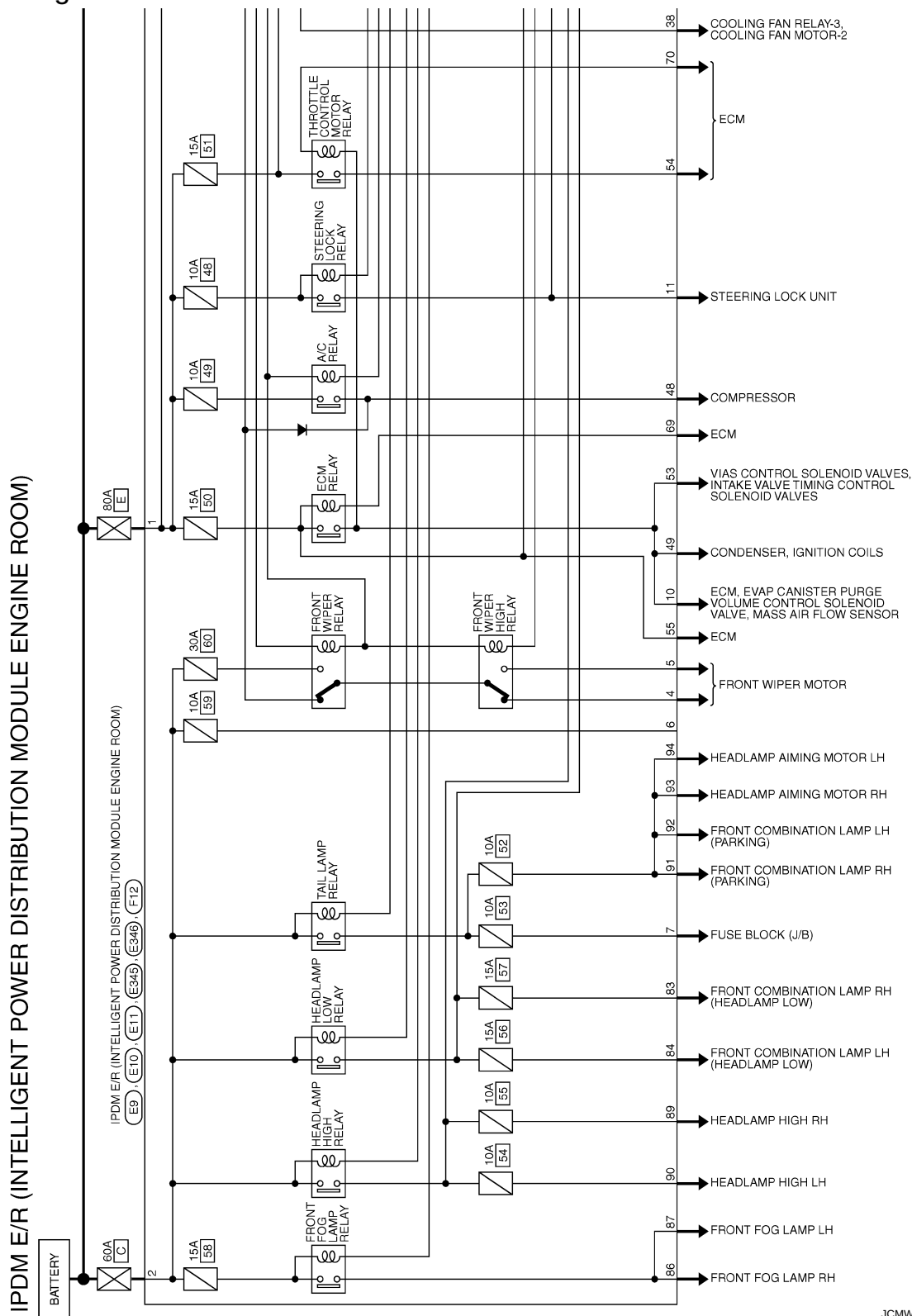
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

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[INTELLIGENT KEY SYSTEM]

Wiring Diagram - IPDM E/R -

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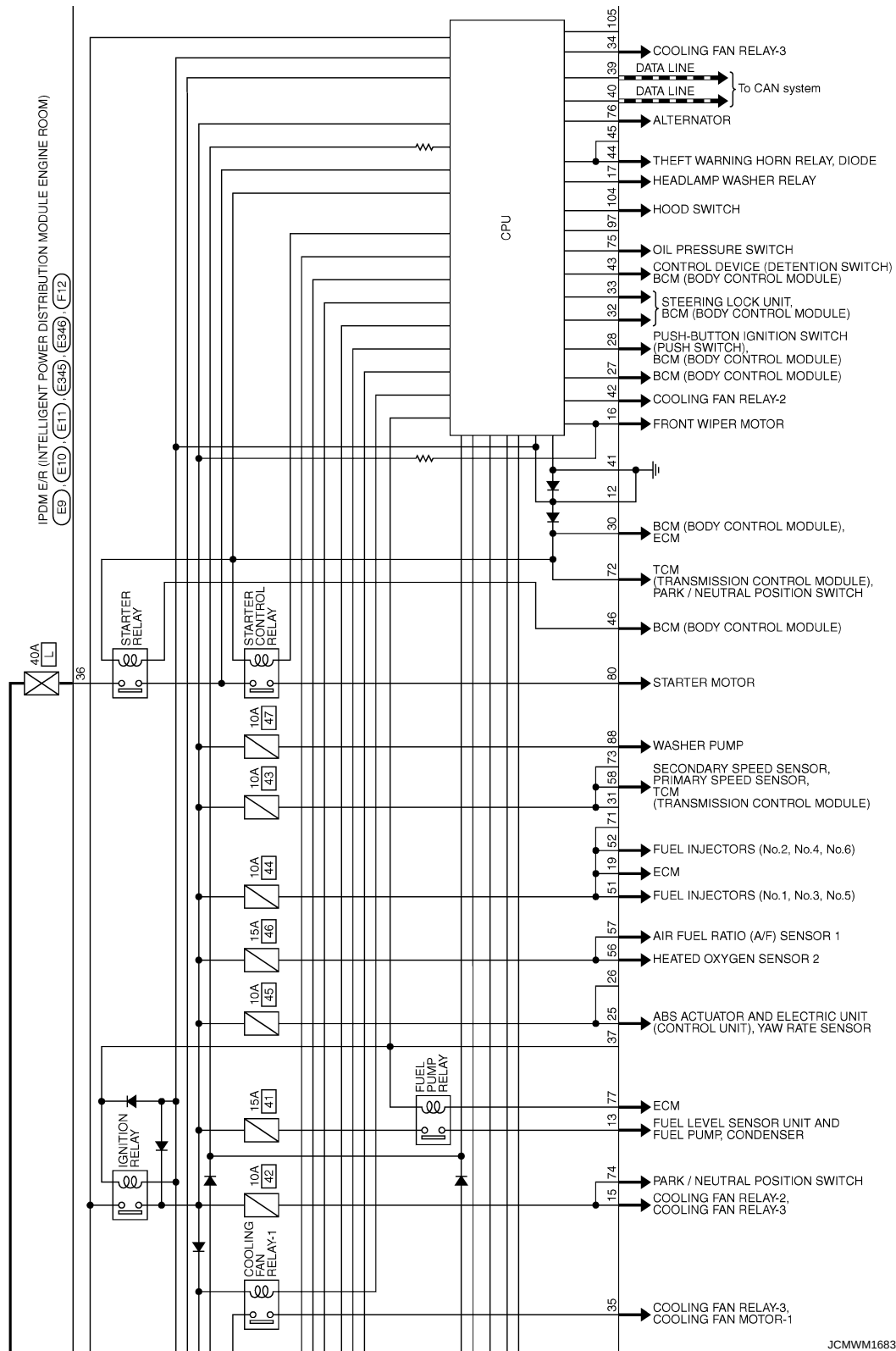
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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

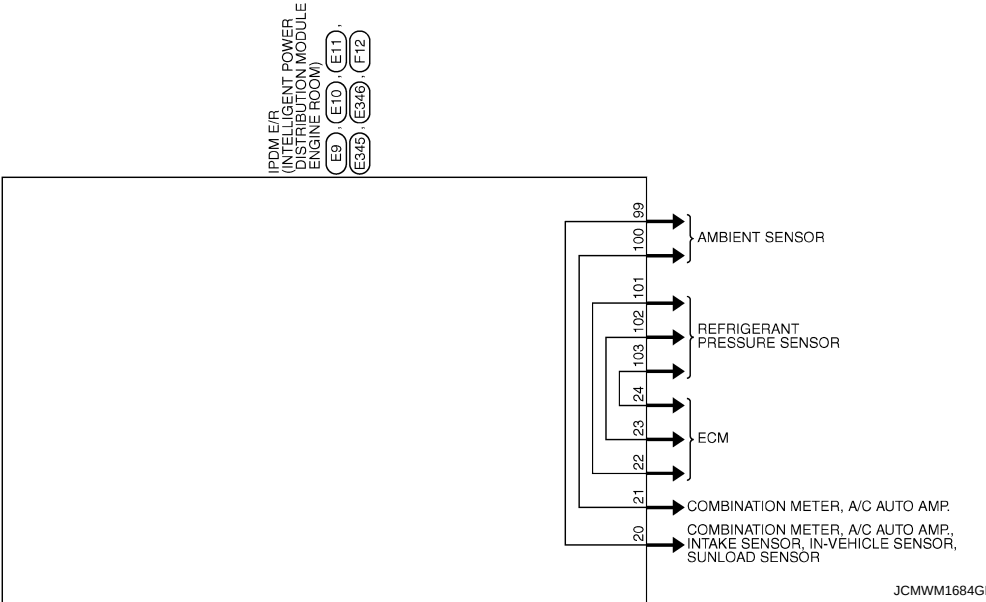
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[INTELLIGENT KEY SYSTEM]



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

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

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

Connector No.	E9
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	LOPE-MC



Terminal No.	Color of Wire	Signal Name [Specification]
1	R	
2	L	

Connector No.	E10
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH2JFW-CS12-M4-1V



Terminal No.	Color of Wire	Signal Name [Specification]
4	LG	
5	Y	
7	GR	
10	BR	
11	P	
12	B/W	
13	SB	
15	W	
16	R	
17	V	
19	Y	

Connector No.	E345
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	NS08FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
83	Y	
84	SB	
86	L	
87	R	
88	P	
89	W	
90	O	

Connector No.	E346
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH10FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
91	O	
92	L	
93	BR	
94	Y	
99	W	
100	SB	
101	GR	
102	R	
103	P	
104	LG	

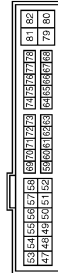
20	B	-
21	O	-
22	SB	-
23	GR	-
24	G	-
25	GR	-
27	W	-
28	SB	-
30	BR	-
32	V	-
33	G	-
34	O	-
35	P	-
36	G	-
38	GR	-

Connector No.	E11
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH03FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
39	P	
40	L	
41	B	
42	SB	
43	Y	
44	G	
46	BR	

Connector No.	F12
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH2JFW-CS12-M4



Terminal No.	Color of Wire	Signal Name [Specification]
48	Y/R	
49	R/B	
51	LG	
52	Y/G	
53	R/W	
54	G/W	
55	W/L	
56	R/Y	
57	O	
58	Y	
69	W/B	

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

JCMW1685GI

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

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Control part	Fail-safe operation
Cooling fan	• Turns ON the cooling fan relay-2 and the cooling fan relay-3 when ignition switch is turned ON (Cooling fan operates at HI) • Turns OFF the cooling fan relay-1, the cooling fan relay-2 and the cooling fan relay-3 when the ignition switch is turned OFF (Cooling fan does not operate)
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	• 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
• Parking lamps • License plate lamps • Illuminations • Tail lamps	• 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	• 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
Headlamp washer relay	Headlamp washer 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.

Voltage judgment		IPDM E/R judgment	Operation
Ignition relay contact side	Ignition relay excitation coil side		
ON	ON	Ignition relay ON normal	—
OFF	OFF	Ignition relay OFF normal	—
ON	OFF	Ignition relay ON stuck	• Detects DTC "B2098: IGN RELAY ON" • Turns ON the tail lamp relay for 10 minutes
OFF	ON	Ignition relay OFF stuck	Detects DTC "B2099: IGN RELAY OFF"

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 seconds activation and 20 seconds stop five times.

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

< ECU DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Ignition switch	Front wiper switch	Front wiper auto stop signal
ON	OFF	The front wiper auto stop signal (stop position) cannot be input for 10 seconds.
	ON	The front wiper auto stop signal does not change for 10 seconds.

NOTE:

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

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NOTE:

- The details of time display are as follows.
 - CRNT: A malfunction is detected now
 - PAST: A malfunction was detected in the past.
- IGN counter is displayed on FFD (Freeze Frame data).
 - The number is 0 when is detected now
 - The number increases like 1 → 2 ... 38 → 39 after returning to the normal condition whenever IGN OFF → ON.
 - The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.

x: Applicable

CONSULT display	Fail-safe	Refer to
No DTC is detected. further testing may be required.	—	—
U1000: CAN COMM CIRCUIT	x	PCS-16
B2098: IGN RELAY ON	x	PCS-17
B2099: IGN RELAY OFF	—	PCS-18
B2108: STRG LCK RELAY ON	—	SEC-96
B2109: STRG LCK RELAY OFF	—	SEC-97
B210A: STRG LCK STATE SW	—	SEC-98
B210B: START CONT RLY ON	—	SEC-102
B210C: START CONT RLY OFF	—	SEC-103
B210D: STARTER RELAY ON	—	SEC-104
B210E: STARTER RELAY OFF	—	SEC-105
B210F: INTRLCK/PNP SW ON	—	SEC-107
B2110: INTRLCK/PNP SW OFF	—	SEC-109

SYMPTOM DIAGNOSIS

SECURITY CONTROL SYSTEM

Symptom Table

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The engine start function, door lock function, power distribution system and NATS-IVIS/NVIS in the Intelligent Key system are closely related to each other regarding control. Narrow down the functional area in question by performing following table 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 following table.

Use the chart below to help you find the cause of the symptom. The numbers indicate the order of the inspection.

NOTE:

Before starting vehicle security system operation check, the following conditions must be met.

- Open front windows
- Turn ignition switch OFF
- Pull out Intelligent Key from key slot.

NO.	Function	Operation condition	Symptom	Diagnostic Item	Reference page
1	INTELLIGENT KEY SYSTEM/ DOOR LOCK FUNCTION	Lock/unlock door with door request switch. (Intelligent Key is into the outside key antenna detection area)	Door does not lock/unlock	—	DLK-158
2	POWER DISTRIBUTION FUNCTION	Press push-button ignition switch under the following condition. • Selector lever position is in the P or N position. • Do not depress brake pedal.	Push-button ignition switch is not operated	—	PCS-124
3	INTELLIGENT KEY SYSTEM/ ENGINE START FUNCTION	Start engine with Intelligent Key into the vehicle (inside key antenna detection area)	Engine can not start with Intelligent Key	—	SEC-193
4		Open the door after ignition switch is turned ON to OFF.	Steering is not locked	—	SEC-194
5	NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS FUNCTION	Start engine with Intelligent Key into the key slot.	Engine can not start (Intelligent Key into the key slot)	—	SEC-195
6		Insert Intelligent Key into the key slot.	Key slot indicator does not illuminate	—	SEC-201
7	VEHICLE SECURITY SYSTEM	Lock all doors with Intelligent Key or door request switch	Vehicle security system can not be set	Intelligent key	SEC-197
				Door request switch	SEC-197
		Lock all doors with Intelligent Key or door request switch	Security indicator lamp does not turn ON	—	SEC-196
		In the armed phase, open the door	Vehicle security alarm does not activate	—	SEC-199
		When alarm sounds, press Intelligent Key button	Vehicle security system can not be canceled	Intelligent Key	SEC-200
8	POWER DISTRIBUTION FUNCTION	When alarm sounds, press door request switch		Door request switch	SEC-200
		Press push-button ignition switch under the following conditions. • Selector lever position is in the P or N position. • Do not depress brake pedal.	Push-button ignition switch position indicator does not turn on	—	PCS-125

ENGINE DOES NOT START WHEN INTELLIGENT KEY IS INSIDE OF VEHICLE

< SYMPTOM DIAGNOSIS > [INTELLIGENT KEY SYSTEM]

ENGINE DOES NOT START WHEN INTELLIGENT KEY IS INSIDE OF VEHICLE

Description

INFOID:000000003815091

- Before performing the diagnosis in the following table, check "Work Flow". Refer to [SEC-5, "Work Flow"](#).
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.

Conditions of Vehicle (Operating Conditions)

- "ENGINE START BY I-KEY" in "WORK SUPPORT" is ON when setting on CONSULT-III.
- Intelligent Key is not inserted in key slot.
- One or more of Intelligent Keys with registered Intelligent Key ID is in the vehicle.

Diagnosis Procedure

INFOID:000000003815092

1.PERFORM WORK SUPPORT

Perform "INSIDE KEY ANTENNA" on Work Support of "INTELLIGENT KEY".
Refer to [SEC-22, "INTELLIGENT KEY : CONSULT-III Function \(BCM - INTELLIGENT KEY\)"](#).

>> GO TO 2.

2.PERFORM SELF DIAGNOSTIC RESULT

Perform "BCM" Self Diagnostic Result.

Is DTC detected?

YES >> Refer to [DLK-50, "DTC Logic"](#) (instrument center), [DLK-52, "DTC Logic"](#) (console) or [DLK-54, "DTC Logic"](#) (trunk room).

NO >> GO TO 3.

3.CHECK INTELLIGENT KEY

Check Intelligent Key.

Refer to [DLK-84, "Component Function Check"](#).

Is the inspection normal?

YES >> GO TO 4.

NO >> Repair or replace malfunctioning parts.

4.CHECK PUSH-BUTTON IGNITION SWITCH

Check push-button ignition switch.

Refer to [PCS-63, "Component Function Check"](#).

Is the inspection normal?

YES >> GO TO 5.

NO >> Repair or replace malfunctioning parts.

5.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection normal?

YES >> Check intermittent incident. Refer to [GI-35, "Intermittent Incident"](#).

NO >> GO TO 1.

STEERING DOES NOT LOCK

< SYMPTOM DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

STEERING DOES NOT LOCK

Description

INFOID:0000000003815093

If door switch is malfunctioning, BCM cannot lock the steering. If BCM does not detect DTC, steering lock unit is normal.

Diagnosis Procedure

INFOID:0000000003815094

1.CHECK DOOR SWITCH

Check door switch.

Refer to [DLK-57, "Component Function Check"](#).

Is the inspection normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection normal?

YES >> Check intermittent incident. Refer to [GI-35, "Intermittent Incident"](#).

NO >> GO TO 1.

ENGINE DOES NOT START WHEN INTELLIGENT KEY IS INSERTED INTO KEY SLOT

< SYMPTOM DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

ENGINE DOES NOT START WHEN INTELLIGENT KEY IS INSERTED INTO KEY SLOT

Description

INFOID:0000000003815095

- Before performing the diagnosis in the following table, check "Work Flow". Refer to [SEC-5, "Work Flow"](#).
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.

Condition of Vehicle (Operating Conditions)

- Registered Intelligent Key is inserted in key slot.

Diagnosis Procedure

INFOID:0000000003815096

1.PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Reregister all Intelligent Keys.

For initialization and registration of Intelligent Key.

Refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".

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

YES >> INSPECTION END

NO >> GO TO 2.

2.CHECK KEY SLOT

Check key slot.

Refer to [DLK-86, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-35, "Intermittent Incident"](#).

NO >> GO TO 1.

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SEC

SECURITY INDICATOR LAMP DOES NOT TURN ON OR FLASH

< SYMPTOM DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

SECURITY INDICATOR LAMP DOES NOT TURN ON OR FLASH

Description

INFOID:000000003815097

- Before performing the diagnosis in the following table, check "Work Flow". Refer to [SEC-5. "Work Flow"](#).
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.

Conditions of Vehicle (Operating Conditions)

Ignition switch position is not in the ON position.

Diagnosis Procedure

INFOID:000000003815098

1.CHECK SECURITY INDICATOR LAMP

Check security indicator lamp.

Refer to [SEC-115. "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-35. "Intermittent Incident"](#).

NO >> GO TO 1.

VEHICLE SECURITY SYSTEM CAN NOT BE SET

< SYMPTOM DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

VEHICLE SECURITY SYSTEM CAN NOT BE SET INTELLIGENT KEY

INTELLIGENT KEY : Description

INFOID:000000003815099

Before performing the diagnosis in the following table, check "Work Flow". Refer to [SEC-5, "Work Flow"](#).

INTELLIGENT KEY : Diagnosis Procedure

INFOID:000000003815100

1.CHECK DOOR SWITCH

Check door switch.

Refer to [DLK-57, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the malfunctioning door switch.

2.CHECK TRUNK ROOM LAMP SWITCH

Check trunk lid lock assembly (trunk room lamp switch).

Refer to [DLK-57, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.CHECK HOOD SWITCH

Check hood switch.

Refer to [SEC-113, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunctioning parts.

4.CHECK INTELLIGENT KEY

Check Intelligent Key.

Refer to [DLK-84, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace the malfunctioning parts.

5.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-35, "Intermittent Incident"](#).

NO >> GO TO 1.

DOOR REQUEST SWITCH

DOOR REQUEST SWITCH : Description

INFOID:000000003815101

Before performing the diagnosis in the following table, check "Work Flow". Refer to [SEC-5, "Work Flow"](#).

DOOR REQUEST SWITCH : Diagnosis Procedure

INFOID:000000003815102

1.CHECK DOOR SWITCH

Check door switch.

Refer to [DLK-57, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

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VEHICLE SECURITY SYSTEM CAN NOT BE SET

< SYMPTOM DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

2.CHECK TRUNK ROOM LAMP SWITCH

Check trunk lid lock assembly (trunk room lamp switch).

Refer to [DLK-57, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.CHECK HOOD SWITCH

Check hood switch.

Refer to [SEC-113, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunctioning parts.

4.CHECK DOOR REQUEST SWITCH

Check door request switch.

Refer to [DLK-72, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace the malfunctioning parts.

5.CHECK INTELLIGENT KEY

Check Intelligent Key.

Refer to [DLK-84, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace the malfunctioning parts.

6.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-35, "Intermittent Incident"](#).

NO >> GO TO 1.

VEHICLE SECURITY ALARM DOES NOT ACTIVATE

< SYMPTOM DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

VEHICLE SECURITY ALARM DOES NOT ACTIVATE

Description

INFOID:000000003815105

Before performing the diagnosis in the following table, check "Work Flow". Refer to [SEC-5, "Work Flow"](#).

Diagnosis Procedure

INFOID:000000003815106

1.CHECK CONDITION OF ALARM

Operate alarm.

Which alarm does not operate?

Hazard warning lamp and horn>>GO TO 2.

Hazard warning lamp>>GO TO 5.

Horn >> GO TO 6.

2.CHECK DOOR SWITCH

Check door switch.

Refer to [DLK-57, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace the malfunctioning door switch

3.CHECK TRUNK ROOM LAMP SWITCH

Check trunk lid lock assembly (trunk room lamp switch).

Refer to [DLK-57, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunctioning parts.

4.CHECK HOOD SWITCH

Check hood switch.

Refer to [SEC-113, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace the malfunctioning parts.

5.CHECK HAZARD WARNING LAMP

Check hazard warning lamp operation.

Refer to [SEC-120, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace malfunctioning parts.

6.CHECK HORN

Check horn.

Refer to [SEC-118, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace malfunctioning parts.

7.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-35, "Intermittent Incident"](#).

NO >> GO TO 1.

VEHICLE SECURITY SYSTEM CAN NOT BE CANCELED

< SYMPTOM DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

VEHICLE SECURITY SYSTEM CAN NOT BE CANCELED INTELLIGENT KEY

INTELLIGENT KEY : Description

INFOID:000000003815107

Before performing the diagnosis in the following table, check "Work Flow". Refer to [SEC-5, "Work Flow"](#).

INTELLIGENT KEY : Diagnosis Procedure

INFOID:000000003815108

1.CHECK INTELLIGENT KEY

Check Intelligent Key.

Refer to [DLK-84, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CHECK INTELLIGENT KEY SYSTEM

Check Intelligent Key system.

Refer to [SEC-9, "System Description"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Refer to [SEC-5, "Work Flow"](#).

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-35, "Intermittent Incident"](#).

NO >> GO TO 1.

DOOR REQUEST SWITCH

DOOR REQUEST SWITCH : Description

INFOID:000000003815109

Before performing the diagnosis in the following table, check "Work Flow". Refer to [SEC-5, "Work Flow"](#).

DOOR REQUEST SWITCH : Diagnosis Procedure

INFOID:000000003815110

1.CHECK DOOR REQUEST SWITCH

Check door request switch.

Refer to [DLK-72, "Component Function Check"](#).

Is the inspection normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CHECK INTELLIGENT KEY SYSTEM

Check Intelligent Key system.

Refer to [DLK-14, "INTELLIGENT KEY SYSTEM : System Description"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Refer to [DLK-7, "Work Flow"](#).

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-35, "Intermittent Incident"](#).

NO >> GO TO 1.

KEY SLOT INDICATOR DOES NOT ILLUMINATE

< SYMPTOM DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

KEY SLOT INDICATOR DOES NOT ILLUMINATE

Description

INFOID:000000003815113

- Before performing the diagnosis in the following table, check "Work Flow". Refer to [SEC-5, "Work Flow"](#).

Diagnosis Procedure

INFOID:000000003815114

1.CHECK KEY SLOT ILLUMINATION

Check key slot illumination.

Refer to [DLK-88, "Component Function Check"](#).

Is the inspection normal?

YES >> GO TO 2.

NO >> Repair or replace malfunctioning parts.

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection normal?

YES >> Check intermittent incident. Refer to [GI-35, "Intermittent Incident"](#).

NO >> GO TO 1.

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PRECAUTION

PRECAUTIONS

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

INFOID:000000003940028

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the "SRS AIRBAG" and "SEAT BELT" of this Service Manual.

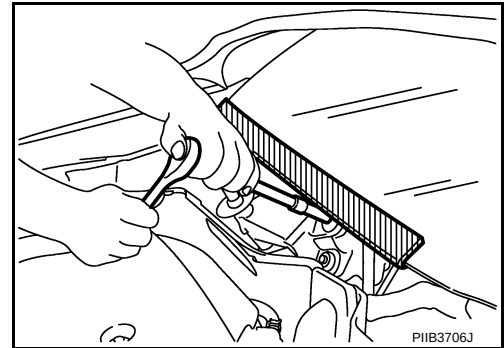
WARNING:

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

Precaution for Procedure without Cowl Top Cover

INFOID:000000003940027

When performing the procedure after removing cowl top cover, cover the lower end of windshield with urethane, etc.



Precaution Necessary for Steering Wheel Rotation after Battery Disconnect

INFOID:000000003940026

NOTE:

- Before removing and installing any control units, first turn the push-button ignition switch to the LOCK position, then disconnect both battery cables.
- After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

This vehicle is equipped with a push-button ignition switch and a steering lock unit.

If the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.

If turning the steering wheel is required with the battery disconnected or discharged, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

1. Connect both battery cables.

NOTE:

Supply power using jumper cables if battery is discharged.

2. Turn the push-button ignition switch to ACC position.
(At this time, the steering lock will be released.)
3. Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.
4. Perform the necessary repair operation.

PRECAUTIONS

< PRECAUTION >

[INTELLIGENT KEY SYSTEM]

5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the push-button ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the push-button ignition switch is turned to LOCK position.)
6. Perform self-diagnosis check of all control units using CONSULT-III.

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ON-VEHICLE REPAIR

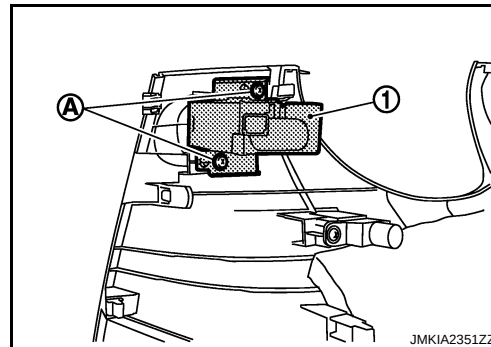
KEY SLOT

Removal and Installation

INFOID:000000003815119

REMOVAL

1. Remove the instrument lower panel LH. Refer to [JP-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 lower panel LH.



INSTALLATION

Install in the reverse order of removal.

PUSH BUTTON IGNITION SWITCH

< ON-VEHICLE REPAIR >

[INTELLIGENT KEY SYSTEM]

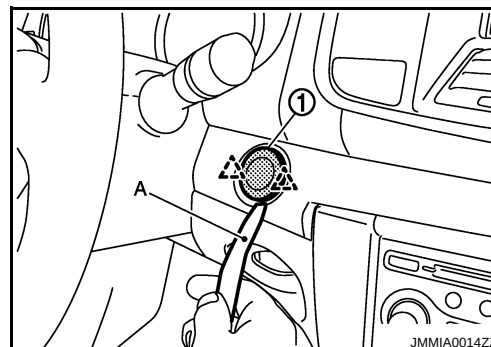
PUSH BUTTON IGNITION SWITCH

Removal and Installation

INFOID:000000003839086

REMOVAL

Remove the push-button ignition switch fixing pawl using a remover tool (A), and then remove push-button ignition switch (1).



INSTALLATION

Install in the reverse order of removal.

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