# SECTION SEC
# SECURITY CONTROL SYSTEM

## CONTENTS

### WITH INTELLIGENT KEY SYSTEM

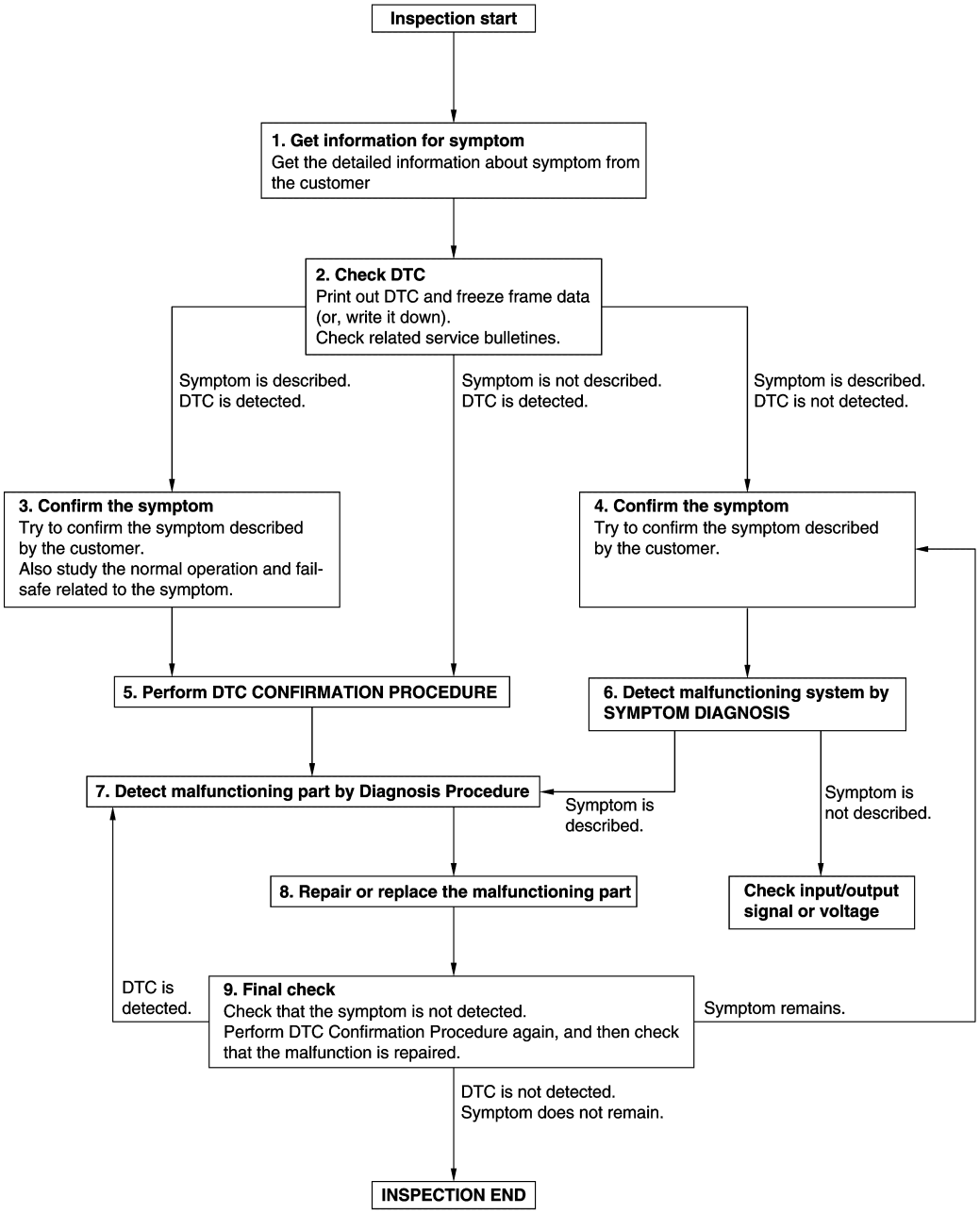
# BASIC INSPECTION

## DIAGNOSIS AND REPAIR WORK FLOW

### Work Flow

INFOID:0000000008284391

#### OVERALL SEQUENCE

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#### DETAILED FLOW

## 1.GET INFORMATION FOR SYMPTOM

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

>> GO TO 2.

## 2.CHECK DTC

1. Check DTC.
2. Perform the following procedure if DTC is detected.

- Record DTC and freeze frame data (Print them out using CONSULT.)
- Erase DTC.
- Study the relationship between the cause detected by DTC and the symptom described by the customer.

3. Check related service bulletins for information.

Are any symptoms described and any DTC detected?

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

## 3.CONFIRM THE SYMPTOM

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

>> GO TO 5.

## 4.CONFIRM THE SYMPTOM

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

>> GO TO 6.

## 5.PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC CONFIRMATION PROCEDURE for the detected DTC, and then check that DTC is detected again. At this time, always connect CONSULT to the vehicle, and check self diagnostic results in real time.
If two or more DTCs are detected, refer to SEC-166, "DTC Inspection Priority Chart" (BCM) or SEC-182, "DTC Index" (IPDM E/R), and determine trouble diagnosis order.

**NOTE:**

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

Is DTC detected?

YES >> GO TO 7.
NO >> Check according to GI-42, "Intermittent Incident".

## 6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM DIAGNOSIS

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

Is the symptom described?

YES >> GO TO 7.
NO >> Monitor input data from related sensors or check voltage of related module terminals using CONSULT.

## 7.DETECT MALFUNCTIONING PART BY DIAGNOSIS PROCEDURE

Inspect according to Diagnosis Procedure of the system.

Is malfunctioning part detected?

YES >> GO TO 8.
NO >> Check according to GI-42, "Intermittent Incident".

## 8. REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 9.

## 9. FINAL CHECK

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

Is DTC detected and does symptom remain?

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

# INSPECTION AND ADJUSTMENT
# ECM RE-COMMUNICATING FUNCTION

## ECM RE-COMMUNICATING FUNCTION : Description

INFOID:0000000008284392

Performing following procedure can automatically perform re-communication of ECM and BCM, but only when the ECM has been replaced with a new one (*1).
*1: New one means a virgin ECM which has never been energized on-board.
(In this step, initialization procedure by CONSULT is not necessary)
**NOTE:**
- **When registering new Key IDs or replacing the ECM that is not brand new, follow the instruction of CONSULT display.**
- **If multiple keys are attached to the key holder, separate them before work.**
- **Distinguish keys with unregistered key ID from those with registered ID.**

## ECM RE-COMMUNICATING FUNCTION : Special Repair Requirement

INFOID:0000000008284393

### 1.PERFORM ECM RE-COMMUNICATING FUNCTION

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

Can engine be started?

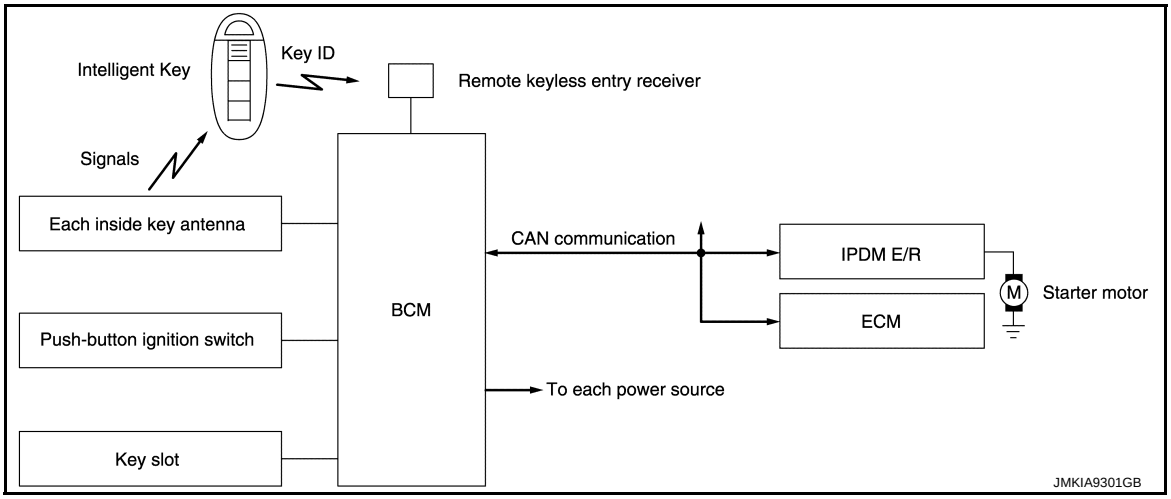
YES >> Procedure is completed.
NO >> Initialize control unit.

# SYSTEM DESCRIPTION

## INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

### System Diagram

INFOID:0000000008284394




### System Description

INFOID:0000000008284395

#### SYSTEM DESCRIPTION

- The engine start function of Intelligent Key system is a system that makes it possible to start and stop the engine without removing the key. It verifies the electronic ID using two-way communications when pressing the push-button ignition switch while carrying the Intelligent Key, which operates based on the results of electronic ID verification for Intelligent Key using two-way communications between the Intelligent Key and the vehicle.
  **NOTE:**
  The driver should carry the Intelligent Key at all times.
- Intelligent Key has 2 IDs [for Intelligent Key and for IVIS (NATS)]. It can perform the door lock/unlock operation and the push-button ignition switch operation when the registered Intelligent Key is carried.
- When the Intelligent Key battery is discharged, it can be used as emergency back-up by inserting the Intelligent Key to the key slot. At that time, perform the IVIS (NATS) ID verification. If it is used when the Intelligent Key is carried, perform the Intelligent Key ID verification.
- If the door lock/unlock operation is performed when the Intelligent Key battery is discharged, all doors lock/unlock can be performed by operating the driver door key cylinder using the mechanical key set in the Intelligent Key.
- Intelligent Key can be registered up to 4 keys (Including the standard Intelligent Key) on request from the owner.
  **NOTE:**
  - Refer to DLK-15, "INTELLIGENT KEY SYSTEM : System Diagram" 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 IVIS (NATS) ID verification] is integrated into the Intelligent Key. (For the conventional models, it is integrated into the mechanical key.) Therefore, the mechanical key cannot perform the ID verification, and thus it cannot start the engine. Instead, the IVIS (NATS) ID verification can be performed by inserting the Intelligent Key into the key slot, and then it can start the engine.**

#### OPERATION WHEN INTELLIGENT KEY IS CARRIED

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

4. BCM turns ACC relay ON and transmits the ignition power supply ON signal to IPDM E/R.
5. IPDM E/R turns the ignition relay ON to start the ignition power supply.
6. BCM confirms that the shift position is P or N.
7. 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.
8. IPDM E/R turns the starter control relay ON when receiving the starter request signal.
9. Battery power is supplied through the starter relay and the starter control relay to operate the starter motor 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.**
10. When BCM received feedback signal from ECM indicating that the engine is started, the BCM transmits a stop signal to IPDM E/R and stops the cranking by turning OFF the starter motor relay. (If the engine initiating has failed, the cranking will stop automatically within 5 seconds.)
    **CAUTION:**
    **When the Intelligent Key is carried outside of the vehicle (inside key antenna detection area) with the power supply in ACC or ON position, even if the engine start condition* is satisfied, the engine cannot be started.**

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

## OPERATION RANGE

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

## OPERATION WHEN KEY SLOT IS USED

When the Intelligent Key battery is discharged, it performs the IVIS (NATS) ID verification between the integrated transponder and BCM by inserting the Intelligent Key into the key slot, and then the engine can be started.
For details relating to starting the engine using key slot, refer to SEC-14, "System Description".

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

The power supply position changing operation can be performed with the following operations.
**NOTE:**
- When an Intelligent Key is within the detection area of inside key antenna and when it is inserted to the key slot, it is equivalent to the operations below.
- When starting the engine, the BCM monitors under the engine start conditions,
- Brake pedal operating condition
- Selector lever position
- Vehicle speed

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

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

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

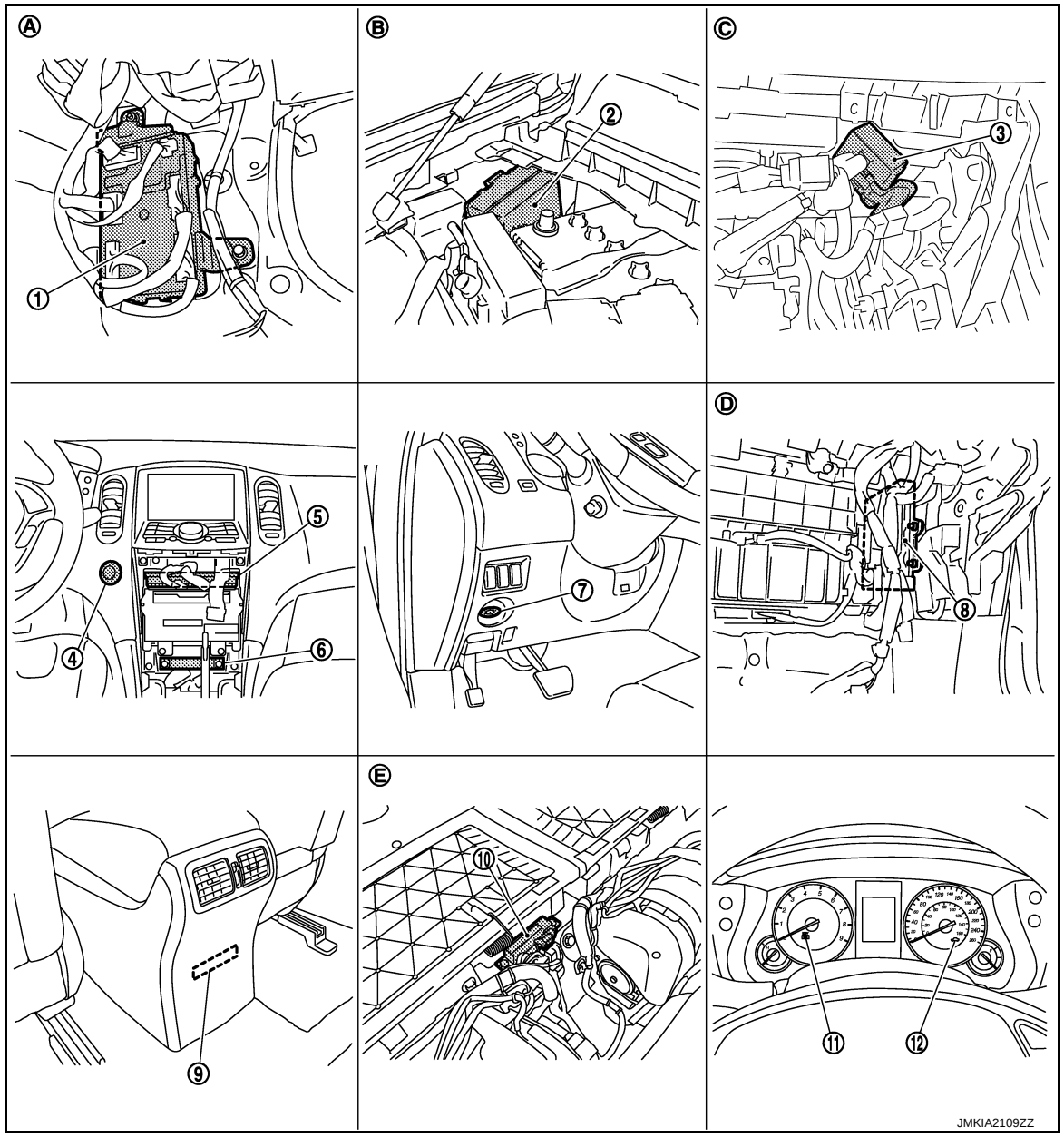
| Power supply position | Engine start/stop condition | | Push-button ignition switch operation frequency |
|---|---|---|---|
| | Selector lever position | Brake pedal operation condition | |
| Engine is running → ACC | — | — | Emergency stop operation |
| Engine stall return operation while driving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

Emergency stop operation

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

## Component Parts Location

INFOID:0000000008284396

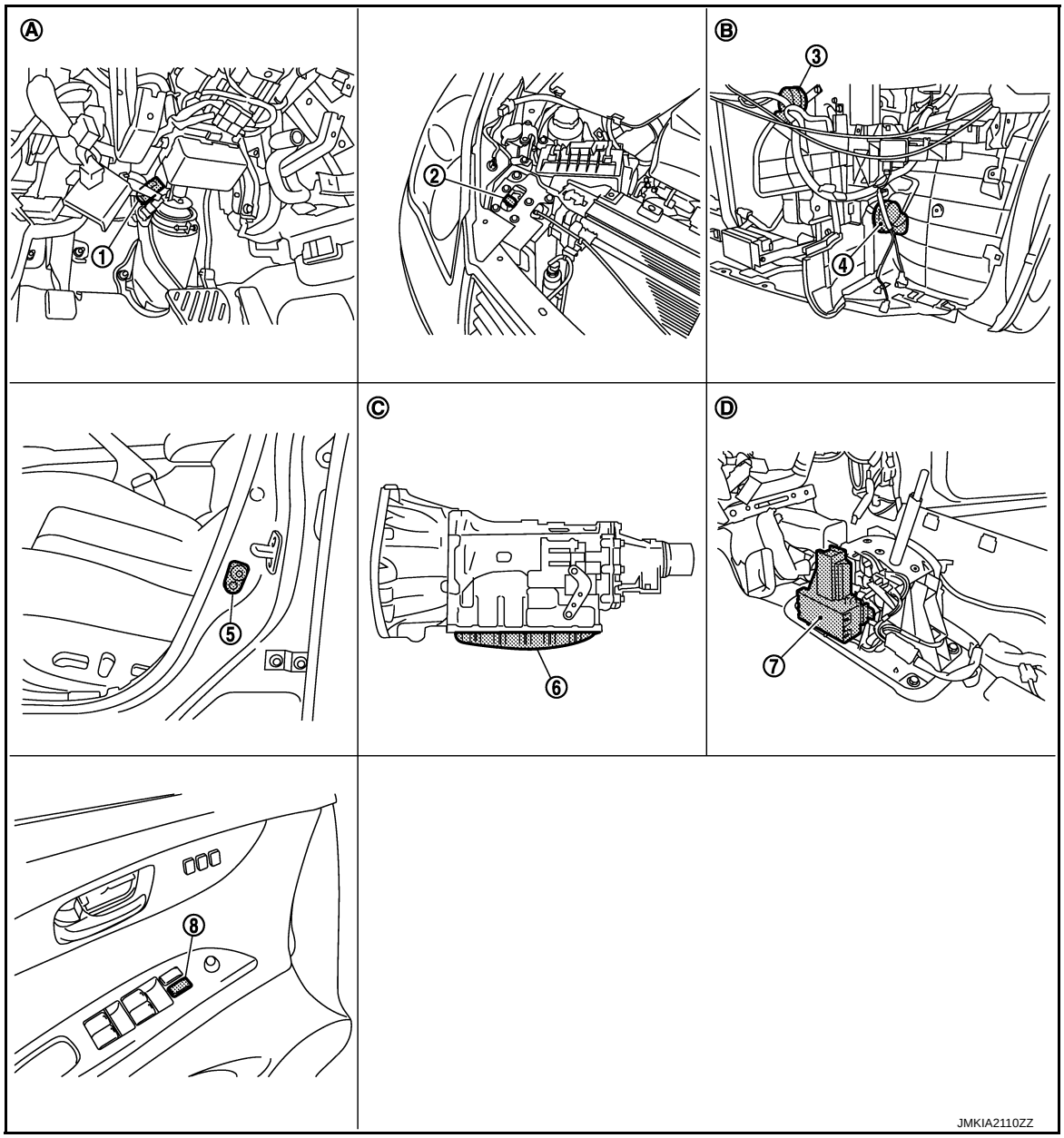



1. BCM
2. IPDM E/R
3. Remote keyless entry receiver
4. Push-button ignition switch
5. Unified meter and A/C amp.
6. Inside key antenna (instrument center)
7. Key slot
8. ECM
9. Inside key antenna (console)

10. Inside key antenna (luggage room)
11. Combination meter (KEY warning lamp)
12. Combination meter (security indicator lamp)

A. Dash side lower (passenger side)
B. Engine room dash panel (RH)
C. Behind the instrument assist lower panel

D. Behind the instrument assist lower panel
E. Under the rear seat seatback




1. Stop lamp switch
2. Hood switch
3. Horn (high)
4. Horn (low)
5. Front door switch (driver side)
6. TCM (built into A/T assembly)
7. A/T shift selector (detention switch)
8. Power window main switch (door lock and unlock switch)

A. Behind the instrument driver lower cover
B. Behind the front bumper
C. A/T assembly

D. View with the center console assembly removed

## Component Description

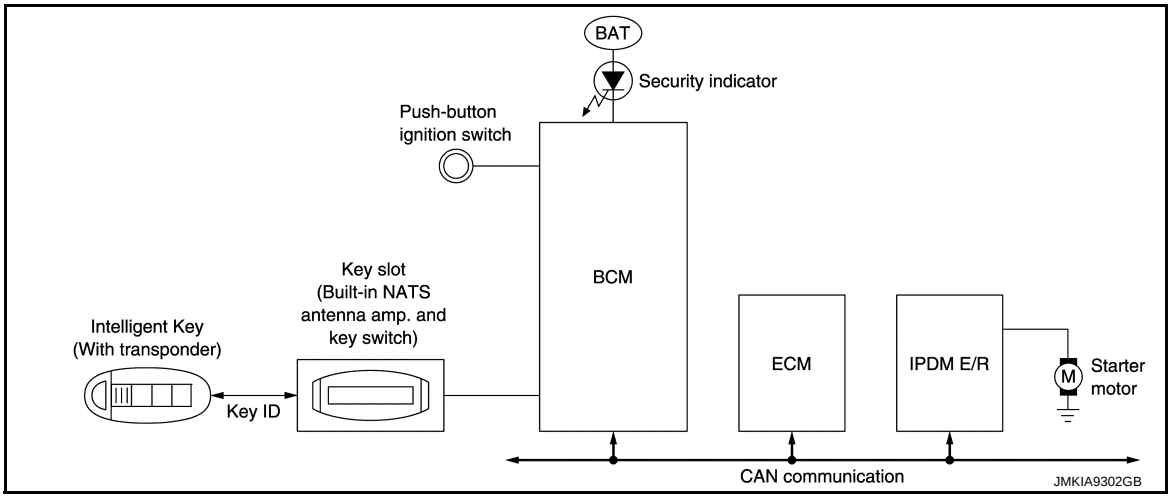
INFOID:0000000008284397

| Component | Reference |
|---|---|
| Push-button ignition switch | SEC-73 |
| Door switch | DLK-63 |
| A/T shift selector (detention switch) | SEC-53 |
| Inside key antenna | DLK-58 |
| Remote keyless entry receiver | DLK-78 |
| Stop lamp switch | SEC-47 |
| Transmission range switch | SEC-62 |
| Starter relay | SEC-66 |
| Starter control relay | SEC-52 |
| Security indicator lamp | SEC-93 |
| Key warning lamp | SEC-94 |

# INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS

## System Diagram

INFOID:0000000008284398




## System Description

INFOID:0000000008284399

### SYSTEM DESCRIPTION

- The IVIS (NATS) is an anti-theft system by registering an Intelligent Key ID in to the vehicle and prevents the engine being started by an unregistered Intelligent Key. It has a higher protection against auto thefts that duplicate mechanical key.
- It performs the ID verification when starting the engine in the same way as the Intelligent Key system. But, it performs the IVIS (NATS) ID verification when inserting the Intelligent Key and performs the Intelligent Key ID verification when carrying the Intelligent Key.
- The mechanical key integrated in the Intelligent Key cannot start the engine. When the Intelligent Key battery is discharged, the IVIS (NATS) ID verification memorized to the transponder integrated with Intelligent Key is performed by inserting the Intelligent Key into the key slot. If the verification results are OK, the engine start operation can be performed by the push-button ignition switch operation.
- Locate the security indicator lamp, that warns the IVIS (NATS) is on board the model.
- Security indicator lamp always blinks when the ignition switch is in any position except the ON position.
- Intelligent Key can be registered up to 4 keys (Including the standard ignition key) on request from the owner.
- The specified registration is required when replacing ECM, BCM or Intelligent Key. The registrations procedure for IVIS (NATS) and registration procedure for Intelligent Key when installing the BCM, follow the instruction of CONSULT display.
- Possible symptom of IVIS (NATS) malfunction is “Engine can not start”. The engine can be started with the Intelligent Key system and IVIS (NATS). Identify the possible causes according to “Work Flow”, Refer to SEC-5, "Work Flow".
- If ECM other than Genuine NISSAN is installed, the engine cannot be started. For ECM replacement procedure, refer to SEC-8, "ECM RE-COMMUNICATING FUNCTION : Special Repair Requirement".

### PRECAUTIONS FOR KEY REGISTRATION

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

### SECURITY INDICATOR LAMP

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

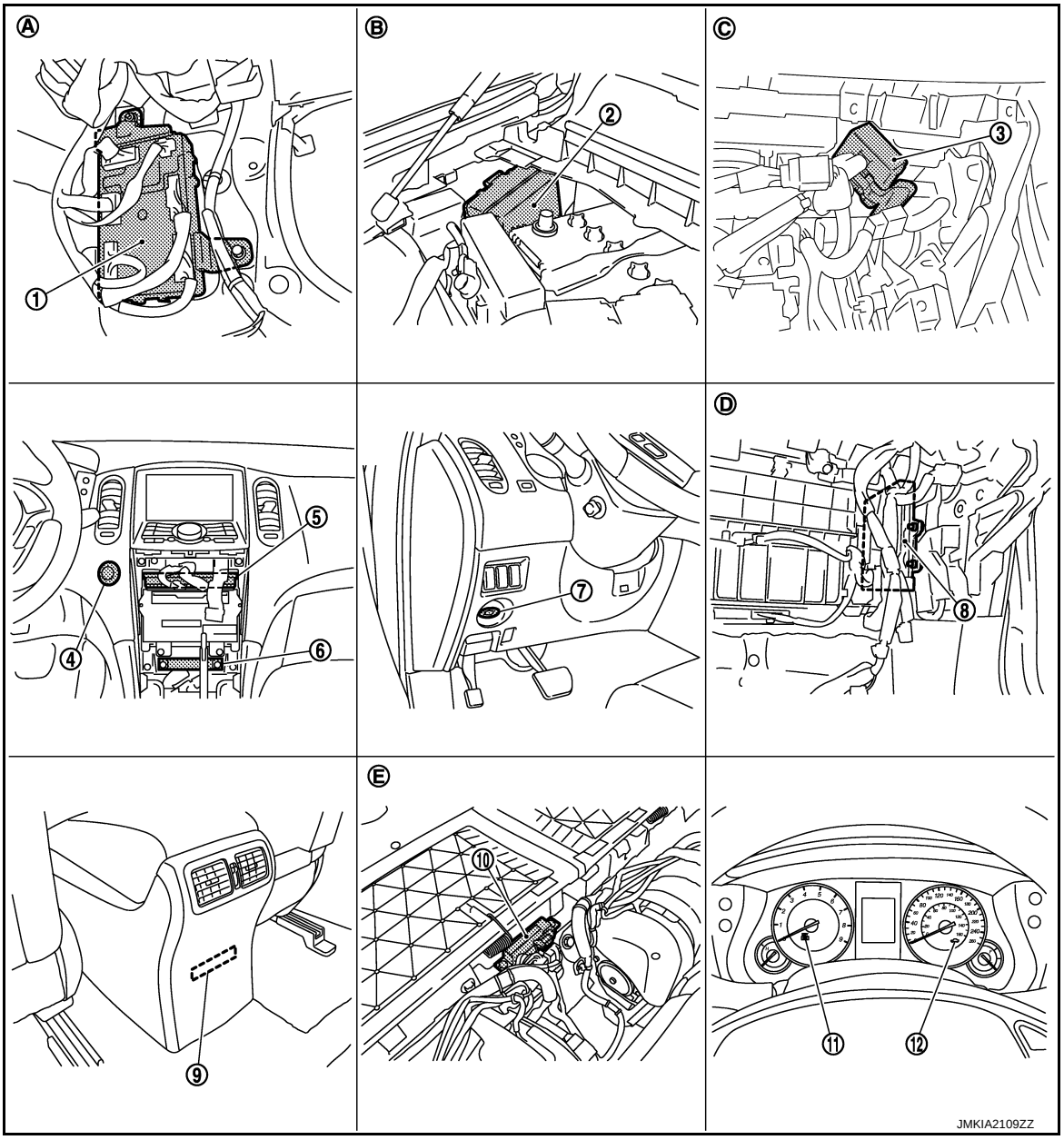
• Security indicator lamp always blinks when the ignition switch is in any position except the ON position.

**NOTE:**

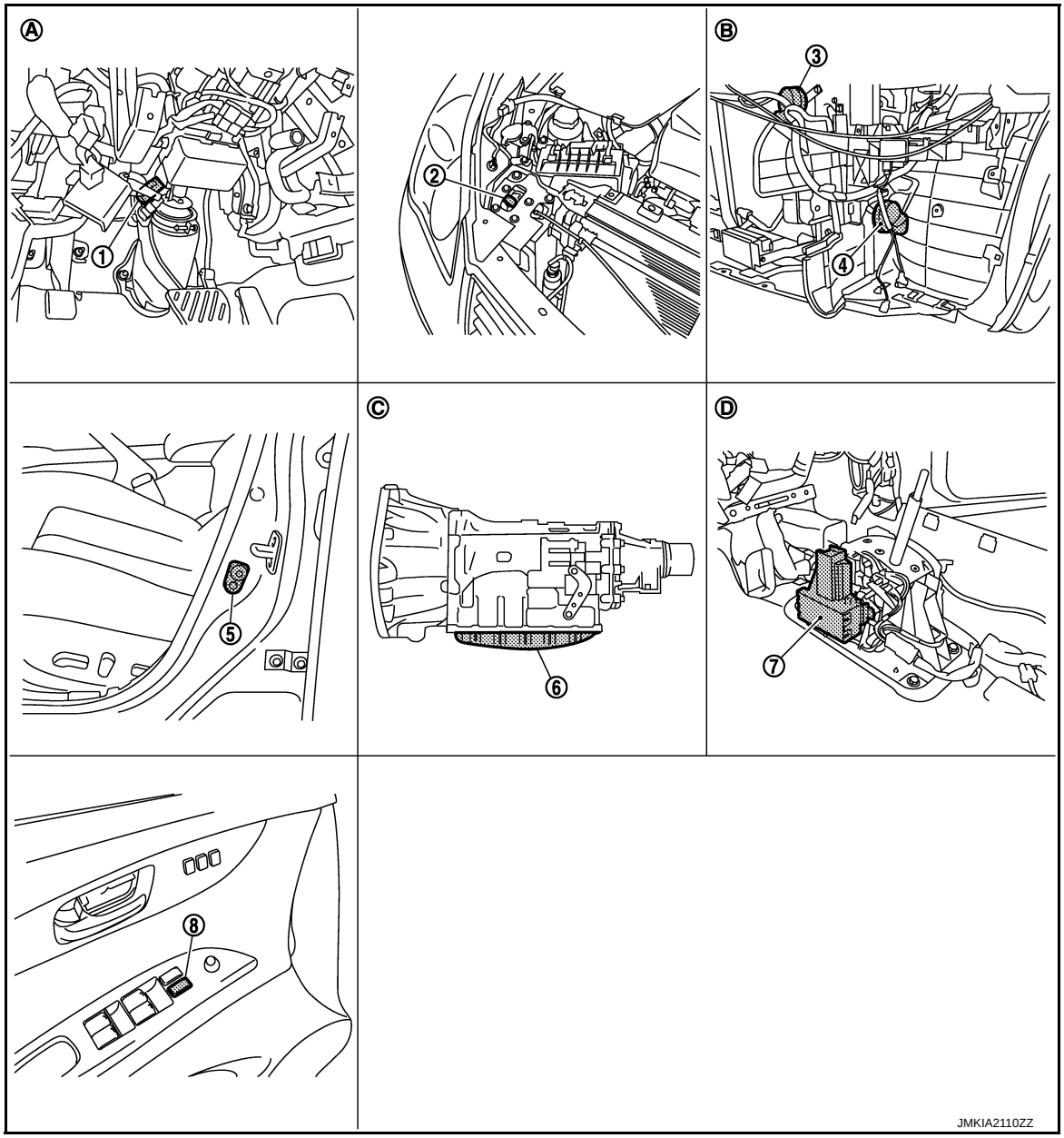
Because security indicator lamp is highly efficient, the battery is barely affected.

## Component Parts Location

INFOID:0000000008284400




| | | |
|---|---|---|
| 1. BCM | 2. IPDM E/R | 3. Remote keyless entry receiver |
| 4. Push-button ignition switch | 5. Unified meter and A/C amp. | 6. Inside key antenna (instrument center) |
| 7. Key slot | 8. ECM | 9. Inside key antenna (console) |
| 10. Inside key antenna (luggage room) | 11. Combination meter (KEY warning lamp) | 12. Combination meter (security indicator lamp) |
| A. Dash side lower (passenger side) | B. Engine room dash panel (RH) | C. Behind the instrument assist lower panel |
| D. Behind the instrument assist lower panel | E. Under the rear seat seatback | |




1. Stop lamp switch
2. Hood switch
3. Horn (high)
4. Horn (low)
5. Front door switch (driver side)
6. TCM (built into A/T assembly)
7. A/T shift selector (detention switch)
8. Power window main switch (door lock and unlock switch)

A. Behind the instrument driver lower cover
B. Behind the front bumper
C. A/T assembly
D. View with the center console assembly removed

## Component Description

INFOID:0000000008284401

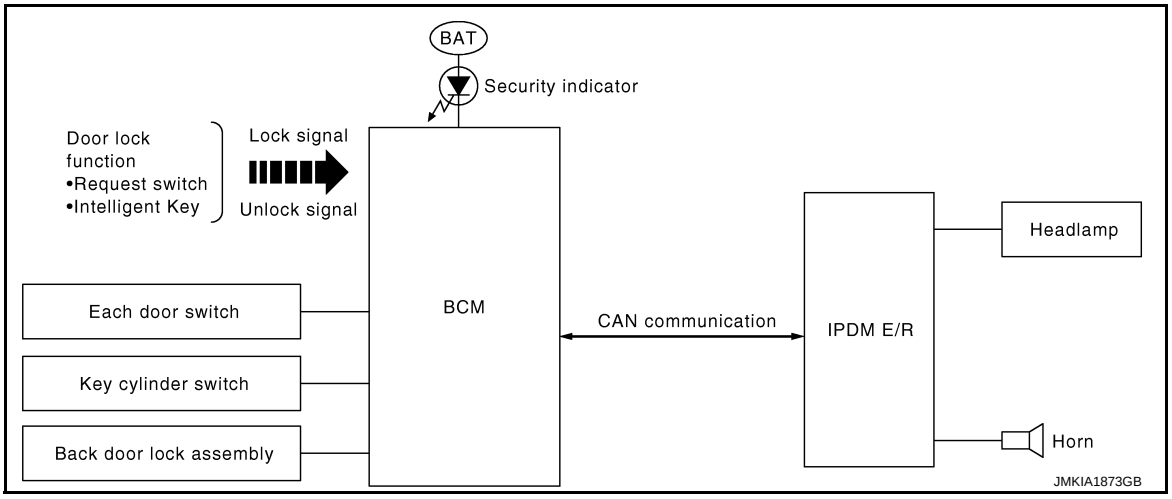
| Component | Reference |
|---|---|
| Push-button ignition switch | SEC-73, "Description" |
| Door switch | DLK-63, "Description" |
| key slot | DLK-96, "Description" |
| A/T shift selector (detention switch) | SEC-53, "Description" |

| Component | Reference |
|---|---|
| Inside key antenna | DLK-58, "Description" |
| Remote keyless entry receiver | DLK-78, "Description" |
| Stop lamp switch | SEC-47, "Description" |
| Transmission range switch | SEC-62, "Description" |
| Starter relay | SEC-66, "Description" |
| Starter control relay | SEC-52, "Description" |
| Security indicator lamp | SEC-93, "Description" |
| Key warning lamp | SEC-94, "Description" |

# VEHICLE SECURITY SYSTEM

## System Diagram

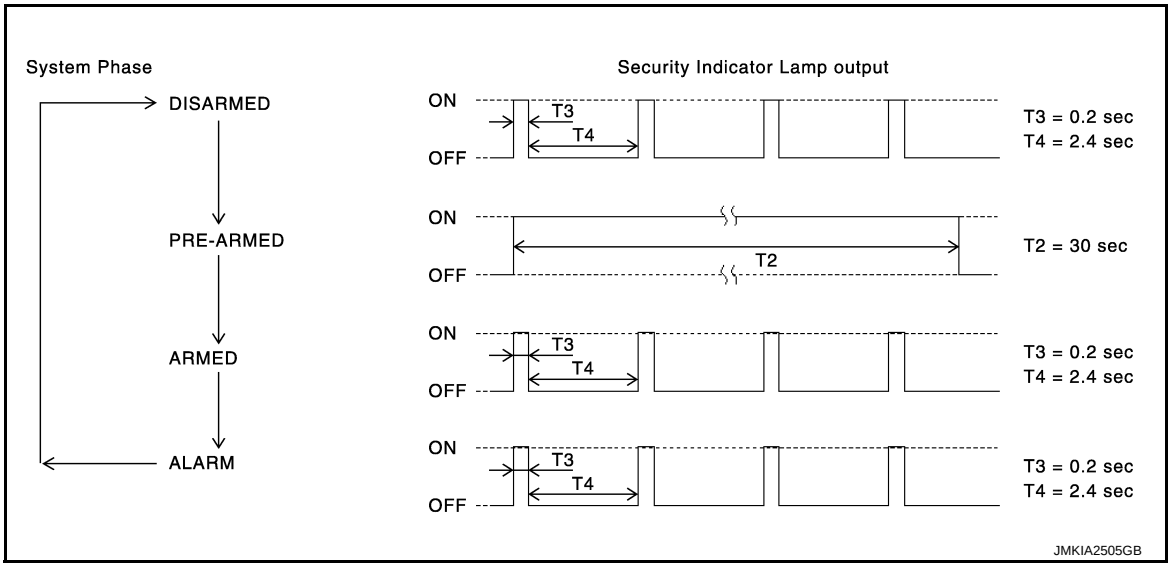
INFOID:0000000008284402




## System Description

INFOID:0000000008284403

### OPERATION FLOW




### SETTING THE VEHICLE SECURITY SYSTEM

Initial Condition

Ignition switch is in OFF position.

Disarmed Phase

- When any door or back door 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, 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. (Security indicator lamp illuminates.)

1. BCM receives LOCK signal from front door request switch, Intelligent Key or door key cylinder, after back door and all doors are closed.
2. Security indicator lamp illuminates for 30 seconds. Then, the system automatically shifts into the “armed” phase.

### CANCELING THE SET VEHICLE SECURITY SYSTEM

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

1. Unlock the all doors with the door request switch, Intelligent Key or door key cylinder.
2. Turn ignition switch “ON” or “ACC” position.

### CANCELING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM

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

### ACTIVATING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM

Check that the system is in the armed phase. (Security indicator lamp indicator lamp blinks every 2.4 seconds.)
When the following operation 1 or 2 is performed, the system sounds the horns and flashes the headlamps for about 50 seconds.

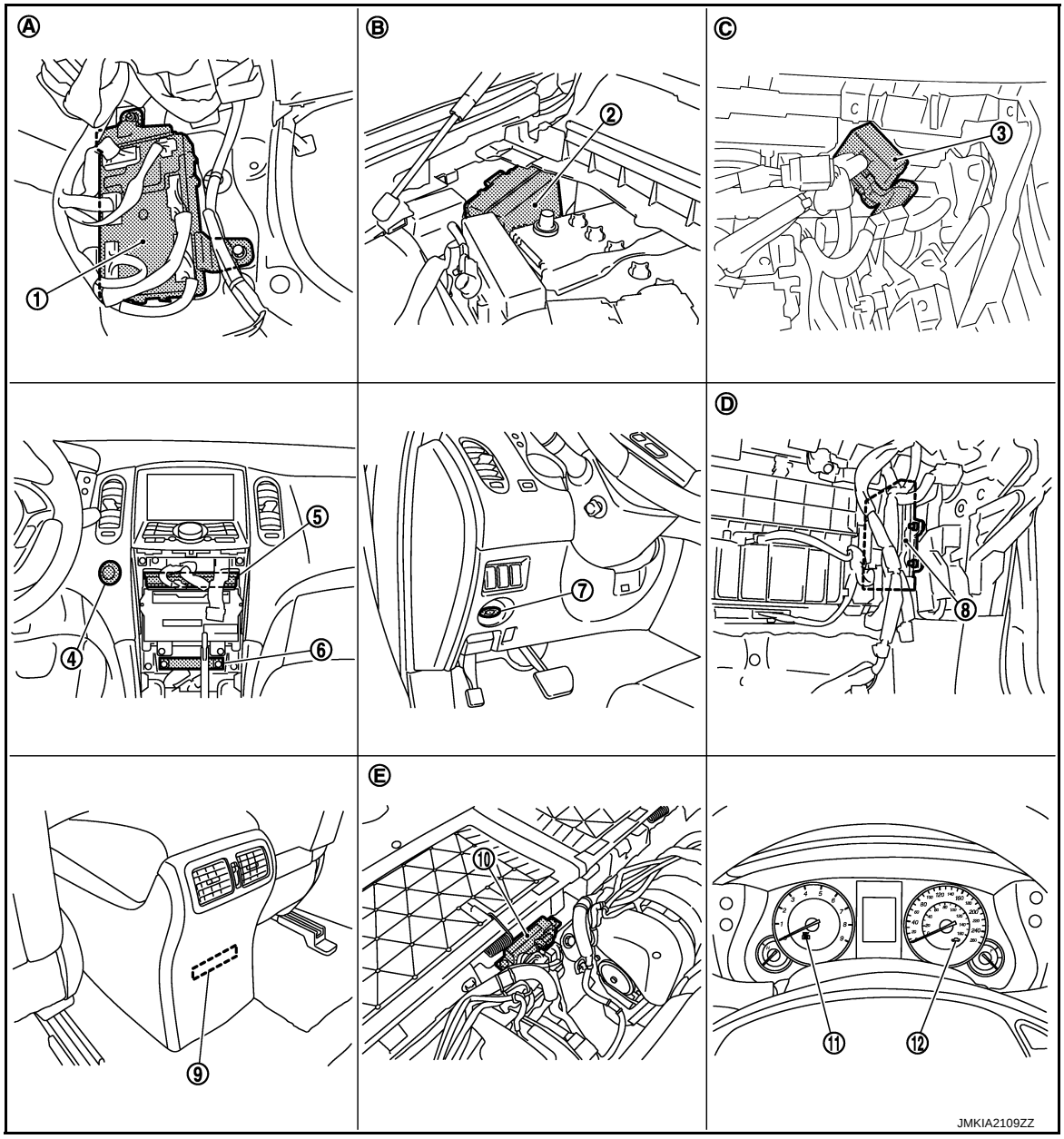
1. Back door or any door is opened during armed phase.
2. Disconnecting and connecting the battery connector before canceling armed phase.

### PANIC ALARM OPERATION

Intelligent Key system may or may not operate vehicle security system (horn and headlamps) as required.
When the Intelligent Key system is triggered, ground is supplied intermittently to both headlamp relay and horn relay.
When headlamp relay and horn relay are energized, then power is supplied to headlamps (high beam and low beam) and horns (high and low).
The headlamps flash and the horn sounds intermittently.
The alarm automatically turns off after 50 seconds or when BCM receives any signal from Intelligent Key, door request switch or door key cylinder.

## Component Parts Location

INFOID:0000000008284404




1. BCM
2. IPDM E/R
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7. Key slot
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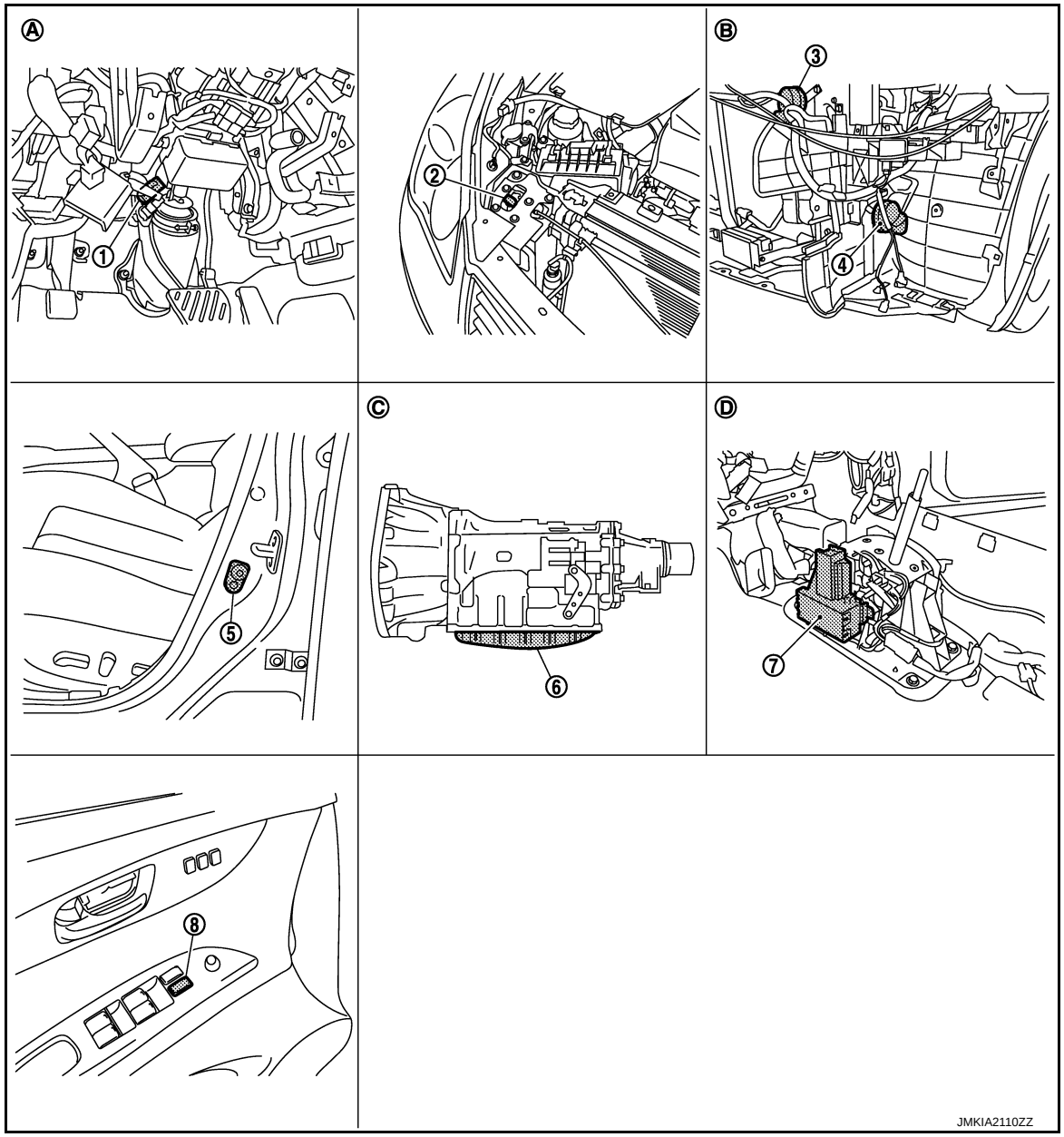


1. Stop lamp switch
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4. Horn (low)
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6. TCM (built into A/T assembly)
7. A/T shift selector (detention switch)
8. Power window main switch (door lock and unlock switch)

A. Behind the instrument driver lower cover
B. Behind the front bumper
C. A/T assembly
D. View with the center console assembly removed

## Component Description

INFOID:0000000008284405

| Component | Reference |
|---|---|
| Horn relay 1 | DLK-100, "Description" |
| Horn relay 2 | DLK-100, "Description" |
| Security indicator lamp | SEC-93, "Description" |
| Door switch | DLK-63, "Description" |

| Component | Reference |
|---|---|
| Hood switch | SEC-90, "Description" |
| Back door lock assembly (door witch) | DLK-63, "Description" |
| Door key cylinder switch | DLK-76, "Description" |

# DIAGNOSIS SYSTEM (BCM)

## COMMON ITEM

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

INFOID:0000000008776155

### APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

| Diagnosis mode | Function Description |
|---|---|
| Work Support | Changes the setting for each system function. |
| Self Diagnostic Result | Displays the diagnosis results judged by BCM. |
| CAN Diag Support Monitor | Monitors the reception status of CAN communication viewed from BCM. |
| Data Monitor | The BCM input/output signals are displayed. |
| Active Test | The signals used to activate each device are forcibly supplied from BCM. |
| Ecu Identification | The BCM part number is displayed. |
| Configuration | • Read and save the vehicle specification.<br>• 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<br>• Engine start system | INTELLIGENT KEY | × | × | × |
| Combination switch | COMB SW | | × | |
| Body control system | BCM | × | | |
| IVIS - NATS | IMMU | | × | × |
| Interior room lamp battery saver | BATTERY SAVER | × | × | × |
| Back door open system | TRUNK | | × | × |
| Vehicle security system | THEFT ALM | × | × | × |
| RAP system | RETAINED PWR | | × | |
| Signal buffer system | SIGNAL BUFFER | | × | × |
| TPMS | AIR PRESSURE MONITOR | × | × | × |

**NOTE:**

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

### FREEZE FRAME DATA (FFD)

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

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

**NOTE:**

*: Power supply position shifts to “LOCK” from “OFF”, when ignition switch is in the OFF position, selector lever is in the P position, and any of the following conditions are met.

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

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

# INTELLIGENT KEY

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

INFOID:0000000008284407

### WORK SUPPORT

| Monitor item | Description |
|---|---|
| CONFIRM KEY FOB ID | It can be checked whether Intelligent Key ID code is registered or not in this mode. |
| AUTO LOCK SET | Auto door lock time can be changed in this mode.<br>• MODE 1: 1 minute<br>• MODE 2: 5 minutes<br>• MODE 3: 30 seconds<br>• MODE 4: 2 minutes |
| LOCK/UNLOCK BY I-KEY | Door lock/unlock function by door request switch (driver side, passenger side and back door) mode can be changed to operate (ON) or not operate (OFF) in this mode. |
| ENGINE START BY I-KEY | Engine start function mode can be changed to operate (ON) or not operate (OFF) with this mode. |
| TRUNK/GLASS HATCH OPEN | Buzzer reminder function mode by back door request switch can be changed to operate (ON) or not operate (OFF) with this mode. |
| PANIC ALARM SET | Panic alarm button pressing time on Intelligent Key remote control button can be selected from the following with this mode.<br>• MODE 1: 0.5 sec.<br>• MODE 2: Non-operation<br>• MODE 3: 1.5 sec. |
| PW DOWN SET | Unlock button pressing time on Intelligent Key button can be selected from the following with this mode.<br>• MODE 1: 3 sec.<br>• MODE 2: Non-operation<br>• MODE 3: 5 sec. |
| TAKE OUT FROM WIN WARN | **NOTE:**<br>This item is displayed, but cannot be supported. |
| TRUNK OPEN DELAY | **NOTE:**<br>This item is displayed, but cannot be supported. |
| LO- BATT OF KEY FOB WARN | Intelligent Key low battery warning mode can be changed to operate (ON) or not operate (OFF) with this mode. |
| ANTI KEY LOCK IN FUNCTI | Key reminder function mode can be changed to operate (ON) or not operate (OFF) with this mode. |
| HAZARD ANSWER BACK | Hazard reminder function mode can be selected from the following with this mode.<br>• LOCK ONLY: Door lock operation only<br>• UNLOCK ONLY: Door unlock operation only<br>• LOCK/UNLOCK: Lock/unlock operation<br>• OFF: Non-operation |
| ANS BACK I-KEY LOCK | Buzzer reminder function (lock operation) mode by door request switch (driver side and passenger side) can be selected from the following with this mode.<br>• Horn chirp: Sound horn<br>• Buzzer: Sound Intelligent Key warning buzzer<br>• OFF: Non-operation |
| ANS BACK I-KEY UNLOCK | Buzzer reminder function (unlock operation) mode by door request switch can be changed to operate (ON) or not operate (OFF) with this mode. |
| SHORT CRANKING OUTPUT | Starter motor can operate during the times below.<br>• 70 msec.<br>• 100 msec.<br>• 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) with this mode. |
| WELCOME LIGHT OP SET | Welcome light function mode can be changed to operate (WITH) or not operate (WITHOUT) with this mode. |
| WELCOME LIGHT SELECT | Welcome light function mode can be selected from the following with this mode.<br>• Without room lamp<br>• With room lamp<br>• Without paddle lamp<br>• With paddle lamp |

## SELF-DIAG RESULT

Refer to BCS-90, "DTC Index".

## DATA MONITOR

**NOTE:**

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

| Monitor Item | Condition |
|---|---|
| REQ SW -DR | Indicates [ON/OFF] condition of door request switch (driver side). |
| REQ SW -AS | Indicates [ON/OFF] condition of door request switch (passenger side). |
| REQ SW -RR | **NOTE:** This item is displayed, but cannot be monitored. |
| REQ SW -RL | **NOTE:** This item is displayed, but cannot be monitored. |
| REQ SW -BD/TR | Indicates [ON/OFF] condition of back door 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. |
| CLUCH SW | **NOTE:** This item is displayed, but cannot be monitored. |
| BRAKE SW 1 | Indicates [ON/OFF] condition of brake switch power supply. |
| BRAKE SW 2 | Indicates [ON/OFF] condition of brake switch. |
| DETE/CANCL SW | Indicates [ON/OFF] condition of P position. |
| SFT PN/N SW | Indicates [ON/OFF] condition of P or N position. |
| S/L -LOCK | **NOTE:** This item is displayed, but cannot be monitored. |
| S/L -UNLOCK | **NOTE:** This item is displayed, but cannot be monitored. |
| S/L RELAY -F/B | **NOTE:** This item is displayed, but cannot be monitored. |
| UNLK SEN -DR | Indicates [ON/OFF] condition of driver door UNLOCK status. |
| PUSH SW -IPDM | Indicates [ON/OFF] condition of push-button ignition switch. |
| IGN RLY1 -F/B | Indicates [ON/OFF] condition of ignition relay 1. |
| DETE SW -IPDM | Indicates [ON/OFF] condition of P position. |
| SFT PN -IPDM | Indicates [ON/OFF] condition of P or N position. |
| SFT P -MET | Indicates [ON/OFF] condition of P position. |
| SFT N -MET | Indicates [ON/OFF] condition of N position. |
| ENGINE STATE | Indicates [STOP/START/CRANK/RUN] condition of engine states. |
| S/L LOCK-IPDM | **NOTE:** This item is displayed, but cannot be monitored. |
| S/L UNLK-IPDM | **NOTE:** This item is displayed, but cannot be monitored. |
| S/L RELAY-REQ | **NOTE:** This item is displayed, but cannot be monitored. |
| VEH SPEED 1 | Display the vehicle speed signal received from unified meter and A/C amp. by numerical value [Km/h]. |
| VEH SPEED 2 | Display the vehicle speed signal received from ABS or VDC or CVT by numerical value [Km/h]. |
| DOOR STAT-DR | Indicates [LOCK/READY/UNLOCK] condition of driver side door status. |
| DOOR STAT-AS | Indicates [LOCK/READY/UNLOCK] 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. |

| Monitor Item | Condition |
|---|---|
| PRMT RKE STRT | **NOTE:**<br>This item is displayed, but cannot be monitored. |
| KEY SW -SLOT | Indicates [ON/OFF] condition of key slot. |
| TRNK/HAT MNTR | **NOTE:**<br>This item is displayed, but cannot be monitored. |
| RKE-LOCK | Indicates [ON/OFF] condition of LOCK signal from Intelligent Key. |
| RKE-UNLOCK | Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key. |
| RKE-TR/BD | **NOTE:**<br>This item is displayed, but cannot be monitored. |
| RKE-PANIC | Indicates [ON/OFF] condition of PANIC button of Intelligent Key. |
| RKE-P/W OPEN | Indicates [ON/OFF] condition of P/W DOWN signal from Intelligent Key. |
| RKE-MODE CHG | Indicates [ON/OFF] condition of MODE CHANGE signal from Intelligent Key. |
| RKE OPE COUN1 | When remote keyless entry receiver receives the signal transmitted while operating on Intelligent Key, the numerical value start changing. |
| RKE OPE COUN2 | **NOTE:**<br>This item is displayed, but cannot be monitored. |

## ACTIVE TEST

| Test item | Description |
|---|---|
| BATTERY SAVER | This test is able to check interior room lamp operation.<br>The interior room lamp will be activated after “ON” on CONSULT screen is touched. |
| PW REMOTO DOWN SET | This test is able to check power window down operation.<br>The power window down will be activated after “ON” on CONSULT screen is touched. |
| INSIDE BUZZER | This test is able to check warning chime in combination meter operation.<br>• Take away warning chime sounds when “TAKE OUT” on CONSULT screen is touched.<br>• Key warning chime sounds when “KEY WARN” on CONSULT screen is touched.<br>• P position warning chime sounds when “P RNG WARN” on CONSULT screen is touched.<br>• ACC warning chime sounds when “ACC WARN” on CONSULT screen is touched. |
| OUTSIDE BUZZER | This test is able to check Intelligent Key warning buzzer operation.<br>The Intelligent Key warning buzzer will be activated after “ON” on CONSULT screen is touched. |
| INDICATOR | This test is able to check warning lamp operation.<br>• “KEY” Warning lamp illuminates when “KEY ON” on CONSULT screen is touched.<br>• “KEY” Warning lamp flashes when “KEY IND” on CONSULT screen is touched. |
| INT LAMP | This test is able to check interior room lamp operation.<br>The interior room lamp will be activated after “ON” on CONSULT screen is touched. |
| LCD | This test is able to check meter display information<br>• Engine start information displays when “BP N” on CONSULT screen is touched.<br>• Engine start information displays when “BP I” on CONSULT screen is touched.<br>• Key ID warning displays when “ID NG” on CONSULT screen is touched.<br>• ROTAT: This item is displayed, but cannot be tested.<br>• P position warning displays when “SFT P” on CONSULT screen is touched.<br>• Intelligent Key insert information displays when “INSRT” on CONSULT screen is touched.<br>• Intelligent Key low battery warning displays when “BATT” on CONSULT screen is touched.<br>• Take away through window warning displays when “NO KY” on CONSULT screen is touched.<br>• Take away warning display when “OUTKY” on CONSULT screen is touched.<br>• OFF position warning display when “LK WN” on CONSULT screen is touched. |
| TRUNK/GLASS HATCH | This test is able to check back door opener actuator open operation.<br>This actuator opens when “ON” on CONSULT screen is touched. |
| FLASHER | This test is able to check hazard warning lamp operation.<br>The hazard warning lamps will be activated after “ON” on CONSULT screen is touched. |
| HORN | This test is able to check horn operation.<br>The horn will be activated after “ON” on CONSULT screen is touched. |
| P RANGE | This test is able to check A/T shift selector power supply<br>A/T shift selector power is supplied when “ON” on CONSULT screen is touched. |

| Test item | Description |
|---|---|
| ENGINE SW ILLUMI | This test is able to check push-ignition switch illumination operation.<br>Push-ignition switch illumination illuminates when “ON” on CONSULT screen is touched. |
| LOCK INDICATOR | This test is able to check LOCK indicator in push-ignition switch operation.<br>LOCK indicator in push-ignition switch illuminates when “ON” on CONSULT screen is touched; |
| ACC INDICATOR | This test is able to check ACC indicator in push-ignition switch operation.<br>Indicator in push-ignition switch illuminates when “ON” on CONSULT screen is touched. |
| IGNITION ON IND | This test is able to check ON indicator in push-ignition switch operation.<br>Indicator in push-ignition switch illuminates when “ON” on CONSULT screen is touched. |
| KEY SLOT ILLUMI | This test is able to check key slot illumination operation.<br>Key slot illumination flash when “ON” on CONSULT screen is touched. |
| TRUNK/BACK DOOR | **NOTE:**<br>This item is displayed, but cannot be tested. |

# THEFT ALM

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

INFOID:0000000008284408

### DATA MONITOR

**NOTE:**

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

| Monitored Item | Description |
|---|---|
| REQ SW -DR | Indicates [ON/OFF] condition of door request switch (driver side). |
| REQ SW -AS | Indicates [ON/OFF] condition of door request switch (passenger side). |
| REQ SW -RR | **NOTE:**<br>This is displayed even when it is not equipped. |
| REQ SW -RL | **NOTE:**<br>This is displayed even when it is not equipped. |
| REQ SW -BD/TR | Indicates [ON/OFF] condition of back door request switch. |
| PUSH SW | Indicates [ON/OFF] condition of push-button ignition switch |
| UNLK SEN -DR | Indicates [ON/OFF] condition of driver door UNLOCK status. |
| KEY SW -SLOT | Indicates [ON/OFF] condition of key slot. |
| DOOR SW-DR | Indicates [ON/OFF] condition of front door switch LH. |
| DOOR SW-AS | Indicates [ON/OFF] condition of front door switch RH. |
| DOOR SW-RR | Indicates [ON/OFF] condition of rear door switch RH. |
| DOOR SW-RL | Indicates [ON/OFF] condition of rear door switch LH. |
| DOOR SW-BK | Indicates [ON/OFF] condition of back door switch. |
| CDL LOCK SW | Indicates [ON/OFF] condition of lock signal from door lock/unlock switch LH and RH. |
| CDL UNLOCK SW | Indicates [ON/OFF] condition of unlock signal from door lock/unlock switch LH and RH. |
| KEY CYL LK-SW | Indicates [ON/OFF] condition of lock signal from front door key cylinder switch. |
| KEY CYL UN-SW | Indicates [ON/OFF] condition of unlock signal from front door key cylinder switch. |
| KEY CYL SW-TR | **NOTE:**<br>This is displayed even when it is not equipped. |
| TR/BD OPEN SW | Indicates [ON/OFF] condition of back door opener switch. |
| TRNK/HAT MNTR | **NOTE:**<br>This is displayed even when it is not equipped. |
| RKE-LOCK | Indicates [ON/OFF] condition of LOCK signal from Intelligent Key. |
| RKE-UNLOCK | Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key. |
| RKE-TR/BD | **NOTE:**<br>This is displayed even when it is not equipped. |

### 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 screen. |

### ACTIVE TEST

| Test Item | Description |
|---|---|
| THEFT IND | This test is able to check security indicator lamp operation. The lamp will be turned on when “ON” on CONSULT screen is touched. |
| VEHICLE SECURITY HORN | This test is able to check vehicle security horn operation. The horns will be activated for 0.5 seconds after “ON” on CONSULT 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 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 screen is touched. |

## IMMU

## IMMU : CONSULT Function (BCM - IMMU)

INFOID:0000000008284409

### DATA MONITOR

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

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

### ACTIVE TEST

| Test item | Description |
|---|---|
| THEFT IND | This test is able to check security indicator lamp operation.<br>The lamp will be turned on when “ON” on CONSULT screen touched. |

# DTC/CIRCUIT DIAGNOSIS

## U1000 CAN COMM CIRCUIT

## BCM

### BCM : Description

INFOID:0000000008284410

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-25, "CAN Communication Signal Chart".

### BCM : DTC Logic

INFOID:0000000008284411

#### DTC DETECTION LOGIC

| DTC | CONSULT 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:0000000008284412

#### 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-16, "Trouble Diagnosis Flow Chart".
NO >> Refer to GI-42, "Intermittent Incident".

## IPDM E/R

### IPDM E/R : Description

INFOID:0000000008284413

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-25, "CAN Communication Signal Chart".

### IPDM E/R : DTC Logic

INFOID:0000000008284414

#### DTC DETECTION LOGIC

| DTC | CONSULT 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:0000000008284415

#### 1.PERFORM SELF DIAGNOSTIC

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-16, "Trouble Diagnosis Flow Chart".
NO >> Refer to GI-42, "Intermittent Incident".

# U1010 CONTROL UNIT (CAN)

## BCM

### BCM : DTC Logic

INFOID:0000000008284416

#### DTC DETECTION LOGIC

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

### BCM : Diagnosis Procedure

INFOID:0000000008284417

#### 1.REPLACE BCM

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

>> Replace BCM. Refer to BCS-96, "Exploded View".

### BCM : Special Repair Requirement

INFOID:0000000008284418

#### 1.REQUIRED WORK WHEN REPLACING BCM

Initialize control unit, follow the instruction of CONSULT display.

>> Work end.

# P1610 LOCK MODE

## Description

INFOID:0000000008284419

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:0000000008284420

### 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.<br>• Unregistered Intelligent Key<br>• 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.

Is DTC detected?

YES >> Go to SEC-33, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284421

#### 1.CHECK ENGINE START FUNCTION

1. Perform the check for DTC except DTC P1610.
2. Use CONSULT to erase DTC after fixing.
3. Turn ignition switch OFF.
4. Turn ignition switch ON when registered Intelligent Key insert into key slot and wait for 5 seconds.
5. Return 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 insert into key slot.

>> INSPECTION END

# P1611 ID DISCORD, IMMU-ECM

## Description

INFOID:0000000008284422

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:0000000008284423

### DTC DETECTION LOGIC

**NOTE:**

- If DTC B1611 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-30, "BCM : DTC Logic".
- If DTC B1611 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-32, "BCM : DTC Logic".

| DTC No. | Trouble diagnosis name | DTC detecting condition | Possible cause |
|---|---|---|---|
| P1611 | ID DISCORD, IMMU-ECM | The ID verification results between BCM and ECM are NG. The registration is necessary. | • BCM<br>• 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.

Is DTC detected?

YES >> Go to SEC-34, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284424

#### 1.PERFORM INITIALIZATION

Perform initialization with CONSULT. Register all Intelligent Keys.
For initialization and registration of Intelligent Key, follow the instruction of CONSULT display.

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

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

#### 2.REPLACE BCM

1. Replace BCM. Refer to BCS-96, "Removal and Installation".
2. Perform initialization with CONSULT.
   For initialization, follow the instruction of CONSULT display.

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

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

#### 3.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

# P1612 CHAIN OF ECM-IMMU

## Description

INFOID:0000000008284425

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:0000000008284426

### DTC DETECTION LOGIC

**NOTE:**

- If DTC P1612 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-30, "BCM : DTC Logic".
- If DTC P1612 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-32, "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)<br>• BCM<br>• 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.

Is DTC detected?

YES >> Go to SEC-35, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284427

#### 1.REPLACE BCM

1. Replace BCM. Refer to BCS-96, "Removal and Installation".
2. Perform initialization with CONSULT.
   For initialization, follow the instruction of CONSULT display.

Does the engine start?

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

#### 2.REPLACE ECM

Replace ECM. Refer to SEC-8, "ECM RE-COMMUNICATING FUNCTION : Description".

>> INSPECTION END

# P1614 CHAIN OF IMMU-KEY

## Description

INFOID:0000000008284428

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

## DTC Logic

INFOID:0000000008284429

### 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 (key slot circuit is open or shorted)<br>• Key slot<br>• 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.

Is DTC detected?

YES >> Go to SEC-36, "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.

Is DTC detected?

YES >> Go to SEC-36, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284430

### 1. INSPECTION START

Perform inspection in accordance with procedure that confirms DTC.

Which procedure confirms DTC?

DTC confirmation procedure 1>>GO TO 2.
DTC confirmation procedure 2>>GO TO 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 | | |
| M22 | 2 | Ground | Battery voltage |

Is the inspection result normal?

YES >> Replace key slot. Refer to SEC-195, "Removal and Installation".
NO >> GO TO 3.

#### 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 | |
| M22 | 2 | M122 | 80 | Existed |

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

| Key slot | | Ground | Continuity |
|---|---|---|---|
| Connector | Terminal | | |
| M22 | 2 | | Not existed |

Is the inspection result normal?

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

## 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 | | |
| M22 | 3 | Ground | Battery voltage |

Is the inspection result normal?

YES >> Replace key slot. Refer to SEC-195, "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 | |
| M22 | 3 | M122 | 81 | Existed |

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

| Key slot | | Ground | Continuity |
|---|---|---|---|
| Connector | Terminal | | |
| M22 | 3 | | Not existed |

Is the inspection result normal?

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

## 7. CHECK KEY SLOT GROUND CIRCUIT

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 | | |
| M22 | 7 | | Existed |

Is the inspection result normal?

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

## 8.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

# P1615 DIFFRENCE OF KEY

## Description

INFOID:0000000008284431

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

## DTC Logic

INFOID:0000000008284432

### DTC DETECTION LOGIC

| DTC No. | Trouble diagnosis name | DTC detecting condition | Possible cause |
|---|---|---|---|
| P1615 | DIFFERENCE OF KEY | The ID verification results between BCM and Intelligent Key are 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.

Is DTC detected?

YES >> Go to SEC-39, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284433

#### 1.PERFORM INITIALIZATION

Perform initialization with CONSULT. Register all Intelligent Keys.
For initialization and registration of Intelligent Key, follow the instruction of CONSULT display.

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

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

#### 2.REPLACE INTELLIGENT KEY

1. Replace Intelligent Key.
2. Perform initialization with CONSULT.
   For initialization and registration of Intelligent Key, follow the instruction of CONSULT display.

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

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

#### 3.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

# B2190 NATS ANTENNA AMP.

## Description

INFOID:0000000008284434

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

## DTC Logic

INFOID:0000000008284435

### 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)<br>• Key slot<br>• BCM |

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

1. Insert Intelligent Key into the key slot.
2. Check “Self diagnostic result” with CONSULT.

Is DTC detected?

YES >> Go to SEC-40, "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.

Is DTC detected?

YES >> Go to SEC-40, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284436

### 1. INSPECTION START

Perform inspection in accordance with procedure that confirms DTC.

Which procedure confirms DTC?

DTC confirmation procedure 1>>GO TO 2.
DTC confirmation procedure 2>>GO TO 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 | | |
| M22 | 2 | Ground | Battery voltage |

Is the inspection result normal?

YES >> Replace key slot. Refer to SEC-195, "Removal and Installation".
NO >> GO TO 3.

### 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 | |
| M22 | 2 | M122 | 80 | Existed |

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

| Key slot | | Ground | Continuity |
|---|---|---|---|
| Connector | Terminal | | |
| M22 | 2 | | Not existed |

Is the inspection result normal?

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

## 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 | | |
| M22 | 3 | Ground | Battery voltage |

Is the inspection result normal?

YES >> Replace key slot. Refer to SEC-195, "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 | |
| M22 | 3 | M122 | 81 | Existed |

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

| Key slot | | Ground | Continuity |
|---|---|---|---|
| Connector | Terminal | | |
| M22 | 3 | | Not existed |

Is the inspection result normal?

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

## 7. CHECK KEY SLOT GROUND CIRCUIT

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 | | |
| M22 | 7 | | Existed |

Is the inspection result normal?

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

## 8. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

# B2191 DIFFERENCE OF KEY

## Description

INFOID:0000000008284437

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

## DTC Logic

INFOID:0000000008284438

### DTC DETECTION LOGIC

| DTC No. | Trouble diagnosis name | DTC detecting condition | Possible cause |
|---|---|---|---|
| B2191 | DIFFERENCE OF KEY | The ID verification results between BCM and Intelligent Key are 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.

Is DTC detected?

YES >> Go to SEC-43, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284439

#### 1.PERFORM INITIALIZATION

Perform initialization with CONSULT. Register all Intelligent Keys.
For initialization and registration of Intelligent Key, follow the instruction of CONSULT display.

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

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

#### 2.REPLACE INTELLIGENT KEY

1. Replace Intelligent Key.
2. Perform initialization with CONSULT.
   For initialization and registration of Intelligent Key, follow the instruction of CONSULT display.

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

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

#### 3.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

# B2192 ID DISCORD, IMMU-ECM

## Description

INFOID:0000000008284440

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:0000000008284441

### DTC DETECTION LOGIC

**NOTE:**

- If DTC B2192 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-30, "BCM : DTC Logic".
- If DTC B2192 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-32, "BCM : DTC Logic".

| DTC No. | Trouble diagnosis name | DTC detecting condition | Possible cause |
|---|---|---|---|
| B2192 | ID DISCORD, IMMU-ECM | The ID verification results between BCM and ECM are NG. The registration is necessary. | • BCM<br>• 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.

Is DTC detected?

YES >> Go to SEC-44, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284442

#### 1.PERFORM INITIALIZATION

Perform initialization with CONSULT. Register all Intelligent Keys.
For initialization and registration of Intelligent Key, follow the instruction of CONSULT display.

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

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

#### 2.REPLACE BCM

1. Replace BCM. Refer to BCS-96, "Removal and Installation".
2. Perform initialization with CONSULT.
   For initialization, follow the instruction of CONSULT display.

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

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

#### 3.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

# B2193 CHAIN OF ECM-IMMU

## Description

INFOID:0000000008284443

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:0000000008284444

### DTC DETECTION LOGIC

**NOTE:**

- If DTC B2193 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-30, "BCM : DTC Logic".
- If DTC B2193 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-32, "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)<br>• BCM<br>• 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.

Is DTC detected?

YES >> Go to SEC-45, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284445

#### 1.REPLACE BCM

1. Replace BCM. Refer to BCS-96, "Removal and Installation".
2. Perform initialization with CONSULT.
   For initialization, follow the instruction of CONSULT display.

Does the engine start?

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

#### 2.REPLACE ECM

Replace ECM. Refer to SEC-8, "ECM RE-COMMUNICATING FUNCTION : Description".

>> INSPECTION END

# B2195 ANTI-SCANNING

## Description

INFOID:0000000008284446

When ignition switch is turned ON, BCM performs ID verification with ECM. If ID verification that is out of the specified specification is detected, BCM prohibits further ID verification and engine cranking.

## DTC Logic

INFOID:0000000008284447

### DTC DETECTION LOGIC

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

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions.
- Selector lever is in the P or N position
- Do not depress brake pedal
2. Check “Self-diagnostic result” using CONSULT.

Is DTC detected?

YES >> Refer to SEC-46, "Diagnosis Procedure".
NO >> INSPECTION END.

## Diagnosis Procedure

INFOID:0000000008284448

#### 1.CHECK SELF-DIAGNOSTIC RESULT-1

1. Perform “Self-diagnostic result” of BCM using CONSULT.
2. Erase DTC.
3. Perform DTC Confirmation Procedure. Refer to SEC-46, "DTC Logic".

Is DTC 2195 detected?

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

#### 2.CHECK EQUIPMENT OF THE VEHICLE

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

Is unspecified accessory part related to engine start installed?

YES >> GO TO 3.
NO >> Replace BCM. Refer to BCS-96, "Removal and Installation".

#### 3.CHECK SELF-DIAGNOSTIC RESULT-2

1. Obtain the customers approval to remove unspecified accessory part related to engine start, and then remove it.
2. Perform “Self-diagnostic result” of BCM using CONSULT.
3. Erase DTC.
4. Perform DTC Confirmation Procedure. Refer to SEC-46, "DTC Logic".

Is DTC 2195 detected?

YES >> Replace BCM. Refer to BCS-96, "Removal and Installation".
NO >> INSPECTION END

# B2555 STOP LAMP

## Description

INFOID:0000000008284449

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:0000000008284450

### 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)<br>• Stop lamp switch<br>• 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.

Is DTC detected?

YES >> Go to SEC-47, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284451

#### 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-1 >> Check 10A fuse [No. 7, located in the fuse block (J/B)]
NO-2 >> Check harness for open or short between BCM and fuse.

#### 2.CHECK STOP LAMP SWITCH 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 | | |
| E110 | 1 | Ground | Battery voltage |

Is the inspection result normal?

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

#### 3.CHECK STOP LAMP SWITCH CIRCUIT

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

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

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

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

Is the inspection result normal?

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

## 4.CHECK STOP LAMP SWITCH

Refer to SEC-48, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace stop lamp switch. Refer to BR-18, "Exploded View".

## 5.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

# Component Inspection

INFOID:0000000008284452

## 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-18, "Exploded View".

# B2556 PUSH-BUTTON IGNITION SWITCH

## Description

INFOID:0000000008284453

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:0000000008284454

### DTC DETECTION LOGIC

| DTC No. | Trouble diagnosis name | DTC detecting condition | Possible cause |
|---|---|---|---|
| B2556 | PUSH-BUTTON IGNITION SWITCH | BCM detects the push-button ignition switch stuck to ON for 100 seconds or more | • Harness or connectors (Push-button ignition switch circuit is shorted.)<br>• Push-button ignition switch |

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine and wait for at least 100 seconds.
2. Check “Self diagnostic result” with CONSULT.

Is DTC detected?

YES >> Go to SEC-49, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284455

#### 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 | | |
| M50 | 4 | Ground | Battery voltage |

Is the inspection result 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 | |
| M50 | 4 | M122 | 60 | Existed |

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

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

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-96, "Removal and Installation".

NO >> Repair or replace harness or connector.

## 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 | | |
| M50 | 1 | | Existed |

Is the inspection result normal?

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

## 4.CHECK PUSH-BUTTON IGNITION SWITCH

Refer to SEC-50, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace push-button ignition switch. Refer to SEC-196, "Removal and Installation".

## 5.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

# Component Inspection

INFOID:0000000008284456

## 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-196, "Removal and Installation".

# B2557 VEHICLE SPEED

## Description

INFOID:0000000008284457

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

## DTC Logic

INFOID:0000000008284458

### DTC DETECTION LOGIC

**NOTE:**

- If DTC B2557 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-30, "BCM : DTC Logic".
- If DTC B2557 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-32, "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 “unified meter and A/C amp” and the one from “ABS actuator and electric unit” for 10 seconds continuously<br>• One is 10 km/h (6.2 MPH) or more and the other is 4 km/h (2.5 MPH) or less. | • Wheel sensor<br>• Unified meter and A/C amp.<br>• 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.

Is DTC detected?

YES >> Go to SEC-51, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284459

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

Check “Self diagnostic result” with CONSULT. Refer to BRC-117, "DTC No. Index".

Is the inspection result normal?

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

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

Check “Self diagnostic result” with CONSULT. Refer to MWI-110, "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-42, "Intermittent Incident".

>> INSPECTION END

# B2560 STARTER CONTROL RELAY

## Description

INFOID:0000000008284460

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

## DTC Logic

INFOID:0000000008284461

### DTC DETECTION LOGIC

**NOTE:**

- If DTC B2560 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-30, "BCM : DTC Logic"
- If DTC B2560 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-32, "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.

Is DTC detected?

YES >> Go to SEC-52, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284462

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

Check “Self diagnostic result” with CONSULT. Refer to SEC-182, "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-42, "Intermittent Incident"

>> INSPECTION END

# B2601 SHIFT POSITION

## Description

INFOID:0000000008284463

BCM confirms the shift position with the following 4 signals.
- Selector lever
- Transmission range switch
- P position signal from IPDM E/R (CAN)
- P position signal from TCM (CAN)

## DTC Logic

INFOID:0000000008284464

### DTC DETECTION LOGIC

**NOTE:**
- If DTC B2601 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-30, "BCM : DTC Logic".
- If DTC B2601 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-32, "BCM : DTC Logic".
- If DTC B2601 is displayed with DTC B2603, first perform the trouble diagnosis for DTC B2603. Refer to SEC-64, "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 (A/T shift selector circuit is open or shorted.)<br>• A/T shift selector (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.

Is DTC detected?

YES >> Go to SEC-53, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284465

#### 1.CHECK A/T SHIFT SELECTOR POWER SUPPLY

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

| (+) | | (–) | Voltage (V) (Approx.) |
|---|---|---|---|
| A/T shift selector (detention switch) | | | |
| Connector | Terminal | | |
| M137 | 10 | Ground | Battery voltage |

Is the inspection result normal?

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

#### 2.CHECK A/T SHIFT SELECTOR POWER SUPPLY CIRCUIT

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

| A/T shift selector (detention switch) | | BCM | | Continuity |
|---|---|---|---|---|
| Connector | Terminal | Connector | Terminal | |
| M137 | 10 | M122 | 96 | Existed |

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

| A/T shift selector (detention switch) | | Ground | Continuity |
|---|---|---|---|
| Connector | Terminal | | |
| M137 | 10 | | Not existed |

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-96, "Removal and Installation".
NO >> Repair or replace harness or connector.

## 3.CHECK A/T SHIFT SELECTOR CIRCUIT (BCM)

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

| A/T shift selector (detention switch) | | BCM | | Continuity |
|---|---|---|---|---|
| Connector | Terminal | Connector | Terminal | |
| M137 | 11 | M122 | 99 | Existed |

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

| A/T shift selector (detention switch) | | Ground | Continuity |
|---|---|---|---|
| Connector | Terminal | | |
| M137 | 11 | | Not existed |

Is the inspection result normal?

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

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

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

| A/T shift selector (detention switch) | | IPDM E/R | | Continuity |
|---|---|---|---|---|
| Connector | Terminal | Connector | Terminal | |
| M137 | 11 | E6 | 43 | Existed |

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

| A/T shift selector (detention switch) | | Ground | Continuity |
|---|---|---|---|
| Connector | Terminal | | |
| M137 | 11 | | Not existed |

Is the inspection result normal?

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

## 5.CHECK A/T SHIFT SELECTOR (DETENTION SWITCH)

Refer to SEC-55, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Replace A/T shift selector. Refer to TM-182, "Removal and Installation".

## 6.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

## Component Inspection

INFOID:0000000008284466

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

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

| A/T shift selector (detention switch) | | Condition | | Continuity |
|---|---|---|---|---|
| Terminal | | | | |
| 10 | 11 | Selector lever | P position | Not existed |
| | | | Other than above | Existed |

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace A/T shift selector (detention switch). Refer to TM-182, "Removal and Installation".

# B2602 SHIFT POSITION

## Description

INFOID:0000000008284467

BCM confirms the shift position with the following 4 signals.
- Selector lever
- Transmission range switch
- P position signal from IPDM E/R (CAN)
- P position signal from TCM (CAN)

## DTC Logic

INFOID:0000000008284468

### DTC DETECTION LOGIC

**NOTE:**
- If DTC B2602 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-30, "BCM : DTC Logic".
- If DTC B2602 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-32, "BCM : DTC Logic".

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

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine under the following conditions and wait for at least 10 seconds.
- Selector lever is in the P or N position
- Depress the brake pedal.
2. Check “Self diagnostic result” with CONSULT.

Is DTC detected?

YES >> Go to SEC-56, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284469

#### 1.CHECK DTC WITH “ABS ACTUATOR AND ELECTRIC UNIT”

Check “Self diagnostic result” with CONSULT. Refer to BRC-117, "DTC No. Index".

Is the inspection result normal?

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

#### 2.CHECK A/T SHIFT SELECTOR POWER SUPPLY

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

| (+) | | (–) | Voltage (V) (Approx.) |
|---|---|---|---|
| A/T shift selector (detention switch) | | | |
| Connector | Terminal | | |
| M137 | 10 | Ground | Battery voltage |

Is the inspection result normal?

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

## 3. CHECK A/T SHIFT SELECTOR POWER SUPPLY CIRCUIT

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

| A/T shift selector (detention switch) | | BCM | | Continuity |
|---|---|---|---|---|
| Connector | Terminal | Connector | Terminal | |
| M137 | 10 | M122 | 96 | Existed |

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

| A/T shift selector (detention switch) | | Ground | Continuity |
|---|---|---|---|
| Connector | Terminal | | |
| M137 | 10 | | No existed |

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-96, "Removal and Installation".
NO >> Repair or replace harness or connector.

## 4. CHECK A/T SHIFT SELECTOR CIRCUIT

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

| A/T shift selector (detention switch) | | BCM | | Continuity |
|---|---|---|---|---|
| Connector | Terminal | Connector | Terminal | |
| M137 | 11 | M122 | 99 | Existed |

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

| A/T shift selector (detention switch) | | Ground | Continuity |
|---|---|---|---|
| Connector | Terminal | | |
| M137 | 11 | | No existed |

Is the inspection result normal?

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

## 5. CHECK A/T SHIFT SELECTOR (DETENTION SWITCH)

Refer to SEC-57, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Replace A/T shift selector. Refer to TM-182, "Removal and Installation".

## 6. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

# Component Inspection

INFOID:0000000008284470

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

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

| A/T shift selector (detention switch) | | Condition | | Continuity |
|---|---|---|---|---|
| Terminal | | | | |
| 10 | 11 | Selector lever | P position | Not existed |
| | | | Other than above | Existed |

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace A/T shift selector (detention switch). Refer to TM-182, "Removal and Installation".

# B2603 SHIFT POSITION STATUS

## Description

INFOID:0000000008284471

BCM confirms the shift position with the following 4 signals.
- Selector lever
- Transmission range switch
- P position signal from IPDM E/R (CAN)
- P position signal from TCM (CAN)

## DTC Logic

INFOID:0000000008284472

### DTC DETECTION LOGIC

**NOTE:**
- If DTC B2603 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-30, "BCM : DTC Logic".
- If DTC B2603 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-32, "BCM : DTC Logic".

| DTC | Self-diagnosis name | DTC detecting condition | Possible causes |
|---|---|---|---|
| B2603 | SHIFT POSITION STATUS | BCM detects the followings status for 500 ms or more when shift is in P position, and ignition switch is in ON position.<br>• Transmission range switch: approx. 0V<br>• A/T shift selector (detention switch): approx. 0V | • Harness or connector (A/T shift selector circuit is open or shorted.)<br>• Harness or connectors (Transmission range switch circuit is open or shorted.)<br>• A/T shift selector (detention switch)<br>• Transmission range 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 position.
- Do not depress the brake pedal.
2. Check “Self diagnostic result” with CONSULT.

Is DTC detected?

YES >> Go to SEC-59, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284473

#### 1.CHECK DTC WITH TCM

Check “Self diagnostic result” with CONSULT. Refer to TM-156, "DTC Index".

Is the inspection result normal?

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

#### 2.CHECK TRANSMISSION RANGE SWITCH CIRCUIT

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

| TCM | | BCM | | Continuity |
|---|---|---|---|---|
| Connector | Terminal | Connector | Terminal | |
| F51 | 9 | M123 | 140 | Existed |

4. Check continuity between TCM harness connector and ground.

| TCM | | Ground | Continuity |
|---|---|---|---|
| Connector | Terminal | | |
| F51 | 9 | | Not existed |

Is the inspection result normal?

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

## 3. CHECK A/T SHIFT SELECTOR POWER SUPPLY

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

| (+) | | (–) | Voltage (V) (Approx.) |
|---|---|---|---|
| A/T shift selector (detention switch) | | | |
| Connector | Terminal | | |
| M137 | 10 | Ground | Battery voltage |

Is the inspection result normal?

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

## 4. CHECK A/T SHIFT SELECTOR POWER SUPPLY CIRCUIT

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

| A/T shift selector (detention switch) | | BCM | | Continuity |
|---|---|---|---|---|
| Connector | Terminal | Connector | Terminal | |
| M137 | 10 | M122 | 96 | Existed |

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

| A/T shift selector (detention switch) | | Ground | Continuity |
|---|---|---|---|
| Connector | Terminal | | |
| M137 | 10 | | Not existed |

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-96, "Removal and Installation".
NO >> Repair or replace harness or connector.

## 5. CHECK A/T SHIFT SELECTOR CIRCUIT

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

| A/T shift selector (detention switch) | | BCM | | Continuity |
|---|---|---|---|---|
| Connector | Terminal | Connector | Terminal | |
| M137 | 11 | M122 | 99 | Existed |

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

| A/T shift selector (detention switch) | | Ground | Continuity |
|---|---|---|---|
| Connector | Terminal | | |
| M137 | 11 | | Not existed |

Is the inspection result normal?

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

## 6. CHECK A/T SHIFT SELECTOR (DETENTION SWITCH)

Refer to SEC-61, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 7.
NO >> Replace A/T shift selector. Refer to TM-182, "Removal and Installation".

## 7. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

# Component Inspection

INFOID:0000000008284474

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

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

| A/T shift selector (detention switch) Terminal | | Condition | | Continuity |
|---|---|---|---|---|
| 10 | 11 | Selector lever | P position | Not existed |
| | | | Other than above | Existed |

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace A/T shift selector (detention switch). Refer to TM-182, "Removal and Installation".

# B2604 PNP SWITCH

## Description

INFOID:0000000008284475

BCM confirms the shift position with the following 4 signals.
- Selector lever
- Transmission range switch
- P position signal from IPDM E/R (CAN)
- P position signal from TCM (CAN)

## DTC Logic

INFOID:0000000008284476

### DTC DETECTION LOGIC

**NOTE:**
- If DTC B2604 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-30, "BCM : DTC Logic".
- If DTC B2604 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-32, "BCM : 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.<br>• N position input signal exists. Shift position signal from TCM does not exist.<br>• N position input signal does not exist. Shift position signal from TCM exists. | • Harness or connectors (Transmission range switch circuit is open or shorted.)<br>• Transmission range 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.

Is DTC detected?

YES >> Go to SEC-62, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284477

#### 1.CHECK DTC WITH TCM

Check “Self diagnostic result” with CONSULT. Refer to TM-156, "DTC Index".

Is the inspection result normal?

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

#### 2.CHECK TRANSMISSION RANGE SWITCH CIRCUIT

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

| TCM | | BCM | | Continuity |
|---|---|---|---|---|
| Connector | Terminal | Connector | Terminal | |
| F51 | 9 | M123 | 140 | Existed |

4. Check continuity between TCM harness connector and ground.

| TCM | | Ground | Continuity |
|---|---|---|---|
| Connector | Terminal | | |
| F51 | 9 | | Not existed |

Is the inspection result normal?

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

## 3.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

# B2605 PNP SWITCH

## Description

INFOID:0000000008284478

BCM confirms the shift position with the following 4 signals.
- Selector lever
- Transmission range switch
- P position signal from IPDM E/R (CAN)
- P position signal from TCM (CAN)

## DTC Logic

INFOID:0000000008284479

### DTC DETECTION LOGIC

**NOTE:**
- If DTC B2605 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-30, "BCM : DTC Logic".
- If DTC B2605 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-32, "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<br>• N position input signal exists. Shift position signal from IPDM E/R does not exist.<br>• N position input signal does not exist. Shift position signal from IPDM E/R exists. | • Harness or connectors (Transmission range switch circuit is open or shorted.)<br>• Transmission range switch<br>• 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.

Is DTC detected?

YES >> Go to SEC-64, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284480

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

Check “Self diagnostic result” with CONSULT. Refer to SEC-182, "DTC Index".

Is the inspection result normal?

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

#### 2.CHECK TRANSMISSION RANGE SWITCH CIRCUIT

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

| TCM | | BCM | | Continuity |
|---|---|---|---|---|
| Connector | Terminal | Connector | Terminal | |
| F51 | 9 | M123 | 140 | Existed |

4. Check continuity between TCM harness connector and ground.

| TCM | | Ground | Continuity |
|---|---|---|---|
| Connector | Terminal | | |
| F51 | 9 | | Not existed |

Is the inspection result normal?

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

## 3.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

# B2608 STARTER RELAY

## Description

INFOID:0000000008284481

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

## DTC Logic

INFOID:0000000008284482

### DTC DETECTION LOGIC

**NOTE:**

- If DTC B2608 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-30, "BCM : DTC Logic".
- If DTC B2608 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-32, "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-80, "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.)<br>• IPDM E/R |

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press the push-button ignition switch 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.

Is DTC detected?

YES >> Go to SEC-66, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284483

#### 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 measurement value within the specification?

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

#### 2.CHECK STARTER RELAY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector and 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 | |
| E6 | 46 | M121 | 52 | Existed |

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

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

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".
NO >> Repair or replace harness or connector.

## 3.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

# B260F ENGINE STATUS

## Description

INFOID:0000000008284484

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

## DTC Logic

INFOID:0000000008284485

### DTC DETECTION LOGIC

**NOTE:**

- If DTC B260F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-30, "BCM : DTC Logic".
- If DTC B260F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-32, "BCM : DTC Logic".

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

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions.
- Selector lever is in the P or N position.
- Do not depress brake pedal.
2. Check “Self diagnostic result” with CONSULT.

Is DTC detected?

YES >> Go to SEC-68, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284486

#### 1.INSPECTION START

1. Turn ignition switch ON.
2. Check “Self diagnostic result” with CONSULT.
3. Touch “ERASE”.
4. **Perform DTC Confirmation Procedure.**
   See SEC-68, "DTC Logic".

Is the DTC B260F displayed again?

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

#### 2.REPLACE ECM

Replace ECM. Refer to SEC-8, "ECM RE-COMMUNICATING FUNCTION : Description".

>> INSPECTION END

#### 3.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

# B26E1 NO RECEPTION OF ENGINE STATUS SIGNAL

## Description

INFOID:0000000008284487

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

## DTC Logic

INFOID:0000000008284488

### DTC DETECTION LOGIC

**NOTE:**

- If DTC B26E1 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-30, "BCM : DTC Logic".
- If DTC B26E1 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-32, "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 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.

Is DTC detected?

YES >> Go to SEC-69, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284489

#### 1.INSPECTION START

1. Turn ignition switch ON.
2. Check “Self diagnostic result” with CONSULT.
3. Touch “ERASE”.
4. **Perform DTC Confirmation Procedure.**
   See SEC-69, "DTC Logic".

Is the DTC B26E1 displayed again?

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

#### 2.REPLACE ECM

Replace ECM. Refer to SEC-8, "ECM RE-COMMUNICATING FUNCTION : Description".

>> INSPECTION END

#### 3.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

# B26EA KEY REGISTRATION

## Description

INFOID:0000000008284490

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

## DTC Logic

INFOID:0000000008284491

### 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<br>• Intelligent Key<br>• BCM |

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

1. Perform initialization with CONSULT. Register all Intelligent Keys.
   For initialization and registration of Intelligent Key, follow the instruction of CONSULT display.
2. Check “Self diagnostic result” with CONSULT.

Is DTC detected?

YES >> Go to SEC-70, "Diagnosis Procedure"
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284492

#### 1.PERFORM INITIALIZATION

1. Perform initialization with CONSULT. Register all Intelligent Keys.
   For initialization and registration of Intelligent Key, follow the instruction of CONSULT display.
2. Check “Self diagnostic result” with CONSULT.

Is DTC detected?

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

#### 2.REPLACE INTELLIGENT KEY

1. Replace Intelligent Key. Register all Intelligent Keys
2. Perform initialization with CONSULT. For initialization, follow the instruction of CONSULT display.
3. Check “Self diagnostic result” with CONSULT.

Is DTC detected?

YES >> Replace BCM. Refer to BCS-96, "Removal and Installation".
NO >> INSPECTION END

# B2617 STARTER RELAY CIRCUIT

## Description

INFOID:0000000008284493

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

## DTC Logic

INFOID:0000000008284494

### DTC DETECTION LOGIC

**NOTE:**

- If DTC B2617 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-30, "BCM : DTC Logic".
- If DTC B2617 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-32, "BCM : 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-82, "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.)<br>• 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.

Is DTC detected?

YES >> Go to SEC-71, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284495

#### 1.CHECK STARTER RELAY

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 measurement value within the specification.

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

#### 2.CHECK STARTER RELAY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector and 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 | |
| E6 | 46 | M121 | 52 | Existed |

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

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

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".
NO >> Repair or replace harness or connector.

## 3.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

# B261A PUSH-BUTTON IGNITION SWITCH

## Description

INFOID:0000000008284496

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

## DTC Logic

INFOID:0000000008284497

### DTC DETECTION LOGIC

**NOTE:**

- If DTC B261A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-30, "BCM : DTC Logic".
- If DTC B261A is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-32, "BCM : DTC Logic".

| DTC No. | Trouble diagnosis name | DTC detecting condition | Possible cause |
|---|---|---|---|
| B261A | PUSH-BUTTON IGNITION SWITCH | BCM detects the mismatch between the following for 1 second or more<br>• Power supply position with push-button ignition switch<br>• Power supply position from IPDM E/R (CAN) | Harness or connectors (Push-button ignition switch circuit is open or shorted)<br>• Between BCM and push-button ignition switch<br>• 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.

Is DTC detected?

YES >> Go to SEC-73, "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.

Is DTC detected?

YES >> Go to SEC-73, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284498

#### 1. INSPECTION START

Perform inspection in accordance with procedure that confirms DTC.

Which procedure confirms DTC?

DTC confirmation procedure 1>>GO TO 2.
DTC confirmation procedure 2>>GO TO 4.

#### 2.CHECK PUSH-BUTTON IGNITION SWITCH OUTPUT SIGNAL 1

1. Turn ignition switch OFF.
2. Disconnect push-button ignition switch connector and IPDM E/R connector.

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

| (+) | | (–) | Voltage (V) (Approx.) |
|---|---|---|---|
| Push-button ignition switch | | | |
| Connector | Terminal | | |
| M50 | 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

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

| Push-button ignition switch | | BCM | | Continuity |
|---|---|---|---|---|
| Connector | Terminal | Connector | Terminal | |
| M50 | 4 | M122 | 60 | Existed |

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

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

Is the inspection result normal?

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

## 4.CHECK PUSH-BUTTON IGNITION SWITCH OUTPUT SIGNAL 2

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

| (+) | | (–) | Voltage (V) (Approx.) |
|---|---|---|---|
| Push-button ignition switch | | | |
| Connector | Terminal | | |
| M50 | 4 | Ground | Battery voltage |

Is the inspection result normal?

YES >> GO TO 6.
NO >> GO TO 5.

## 5.CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT 2

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

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

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

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

Is the inspection result normal?

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

## 6. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

# B261E VEHICLE TYPE

## Description

INFOID:0000000008284499

There are two types of vehicle.
- HEV
- Conventional

## DTC Logic

INFOID:0000000008284500

### DTC DETECTION LOGIC

**NOTE:**
- If DTC B261E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-30, "BCM : DTC Logic".
- If DTC B261E is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-32, "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.

Is DTC detected?

YES >> Go to SEC-76, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284501

#### 1.INSPECTION START

1. Turn ignition switch ON.
2. Check “Self diagnostic result” with CONSULT.
3. Touch “ERASE”.
4. **Perform DTC Confirmation Procedure.**
   See SEC-76, "DTC Logic".

Is the 1st trip DTC B261E displayed again?

YES >> Replace BCM. Refer to BCS-96, "Removal and Installation".
NO >> INSPECTION END

# B210B STARTER CONTROL RELAY

## Description

INFOID:0000000008284502

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

## DTC Logic

INFOID:0000000008284503

### DTC DETECTION LOGIC

**NOTE:**
If DTC B210B is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to PCS-14, "DTC Logic".

| DTC No. | Trouble diagnosis name | DTC detecting condition | Possible cause |
|---|---|---|---|
| B210B | STR CONT RLY ON CIRC | IPDM E/R detects that the relay is stuck at ON position even if the followings condition are met for about 1 second.<br>• Starter control relay ON/OFF signal from BCM<br>• Transmission range switch input signal | IPDM E/R |

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-77, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284504

#### 1.CHECK SELF DIAGNOSTIC RESULT

Check DTC using CONSULT.

What is the display history of DTC “B210B”?

“CRNT”>> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".
“PAST” >> GO TO 2.

#### 2.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident"

>> INSPECTION END

# B210C STARTER CONTROL RELAY

## Description

INFOID:0000000008284505

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

## DTC Logic

INFOID:0000000008284506

### DTC DETECTION LOGIC

**NOTE:**

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

| DTC No. | Trouble diagnosis name | DTC detecting condition | Possible cause |
|---|---|---|---|
| B210C | STR CONT RLY OFF CIRC | IPDM E/R detects that the relay is stuck at OFF position even if the followings condition are met for about 1 second.<br>• Starter control relay ON/OFF signal from BCM<br>• Transmission range switch input signal | • IPDM E/R<br>• Battery |

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-78, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284507

#### 1.CHECK SELF DIAGNOSTIC RESULT

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

What is the display history of DTC “B210C”?

“CRNT”>> GO TO 3.
“PAST” >> GO TO 2.

#### 2.CHECK BATTERY VOLTAGE

Measure the battery voltage.

Which is the measurement result?

More than 12.4 V>>GO TO 5
Less than 12.4 V>>Perform battery inspection. Refer to PG-3, "How to Handle Battery".

#### 3.CHECK P/N POSITION SIGNAL CIRCUIT VOLTAGE

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

| (+) | | (-) | Voltage (Approx.) |
|---|---|---|---|
| IPDM E/R | | | |
| Connector | Terminal | | |
| E5 | 30 | Ground | Battery voltage |

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".

NO >> GO TO 4.

## 4. CHECK P/N POSITION SIGNAL CIRCUIT

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

| IPDM E/R | | BCM | | Continuity |
|---|---|---|---|---|
| Connector | Terminal | Connector | Terminal | |
| E5 | 30 | M123 | 140 | Existed |

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-96, "Removal and Installation".
NO >> Repair or replace harness.

## 5. CHECK INTERMITTENT INCIDENT

Check intermittent incident. Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

# B210D STARTER RELAY

## Description

INFOID:0000000008284508

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

## DTC Logic

INFOID:0000000008284509

### DTC DETECTION LOGIC

**NOTE:**

- If DTC B210D is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-30, "BCM : DTC Logic".
- If DTC B210D is displayed with DTC B2617, first perform the trouble diagnosis for DTC B2617. Refer to SEC-71, "DTC Logic".

| DTC No. | Trouble diagnosis name | DTC detecting condition | Possible cause |
|---|---|---|---|
| B210D | STARTER RLY ON CIRC | IPDM E/R detects that the relay is stuck at ON position even if the followings condition are met for about 1 second.<br>• Starter control relay ON/OFF signal from BCM<br>• Transmission range switch input | IPDM E/R |

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM DTC CONFIRMATION PROCEDURE

1. Ignition switch ON under the following conditions and wait for at least 1 second.
- Selector lever is in the P or N position.
- Do not depress brake pedal.
2. Check “Self diagnostic result” with CONSULT.

Is DTC detected?

YES >> Go to SEC-80, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284510

#### 1.CHECK SELF DIAGNOSTIC RESULT

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

What is the display history of DTC “B210D”?

“CRNT”>> GO TO 2.
“PAST” >> GO TO 4.

#### 2.CHECK STARTER RELAY CONTROL SIGNAL CIRCUIT VOLTAGE

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

| (+) | | (-) | Condition | Voltage (Approx.) |
|---|---|---|---|---|
| IPDM E/R | | | | |
| Connector | Terminal | | | |
| E6 | 46 | Ground | Other than at engine cranking | Battery voltage |

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".
NO >> GO TO 3.

#### 3.CHECK STARTER RELAY CONTROL SIGNAL CIRCUIT

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

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

Is the inspection result normal?

YES >> Perform the diagnosis procedure for DTC B2608 of BCM. Refer to SEC-66, "DTC Logic".
NO >> Repair or replace harness.

## 4.CHECK INTERMITTENT INCIDENT

Check intermittent incident. Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

# B210E STARTER RELAY

## Description

INFOID:0000000008284511

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

## DTC Logic

INFOID:0000000008284512

### DTC DETECTION LOGIC

**NOTE:**

- If DTC B210E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-30, "BCM : 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-86, "DTC Logic".
- If DTC B210E is displayed with DTC B2617 for BCM, first perform the trouble diagnosis for DTC B2617. Refer to SEC-71, "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 RLY OFF CIRC | IPDM E/R detects that the relay is stuck at OFF position even if the followings condition are met for about 1 second.<br>• Starter control relay ON/OFF signal from BCM<br>• Transmission range switch input | • IPDM E/R<br>• 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.

Is DTC detected?

YES >> Go to SEC-82, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284513

#### 1.CHECK SELF DIAGNOSTIC RESULT

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

What is the display history of DTC “B210E”?

“CRNT”>> GO TO 3.
“PAST” >> GO TO 2.

#### 2.CHECK BATTERY VOLTAGE

Check the battery voltage.

Which is the measurement result?

More than 12.4 V>>GO TO 5.
Less than 12.4 V>>Perform battery inspection. Refer to PG-3, "How to Handle Battery".

#### 3.CHECK STARTER RELAY CONTROL SIGNAL

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

| (+) | | (-) | Condition | Voltage (Approx.) |
|---|---|---|---|---|
| IPDM E/R | | | | |
| Connector | Terminal | | | |
| E6 | 46 | Ground | Other than at engine cranking | 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 STARTER RELAY CONTROL SIGNAL CIRCUIT

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

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

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-96, "Removal and Installation".
NO >> Repair or replace harness.

## 5. CHECK INTERMITTENT INCIDENT

Check intermittent incident. Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

# B210F PNP/CLUTCH INTERLOCK SWITCH

## Description

INFOID:0000000008284514

IPDM E/R confirms the shift position with the following signals.
- Transmission range switch
- Shift position signal from BCM (CAN)

## DTC Logic

INFOID:0000000008284515

### DTC DETECTION LOGIC

**NOTE:**
If DTC B210F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-30, "BCM : DTC Logic"

| DTC No. | Trouble diagnosis name | DTC detecting condition | Possible cause |
|---|---|---|---|
| B210F | INTER LOCK/PNP SW ON | IPDM E/R detects a mismatch between the signals below for 1 second or more.<br>• Transmission range switch input signal<br>• Shift position signal from BCM (CAN) | • Harness or connectors (Transmission range switch circuit is open or shorted)<br>• Transmission range switch |

### 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.

Is DTC detected?

YES >> Go to SEC-84, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284516

#### 1.CHECK DTC WITH BCM

Check “Self diagnostic result” with CONSULT. Refer to SEC-167, "DTC Index".

Is the inspection result normal?

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

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

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

| (+) | | (–) | Condition | | Voltage (V) (Approx.) |
|---|---|---|---|---|---|
| IPDM E/R | | | | | |
| Connector | Terminal | | | | |
| E5 | 30 | Ground | Selector lever | P or N | Battery voltage |
| | | | | Other than above | 0 |

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".
NO >> GO TO 3.

#### 3.CHECK TRANSMISSION RANGE SWITCH CIRCUIT

1. Turn ignition switch OFF.

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

| IPDM E/R | | TCM | | Continuity |
|---|---|---|---|---|
| Connector | Terminal | Connector | Terminal | |
| E5 | 30 | F51 | 9 | Existed |

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

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

Is the inspection result normal?

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

## 4. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

# B2110 PNP/CLUTCH INTERLOCK SWITCH

## Description

INFOID:0000000008284517

IPDM E/R confirms the shift position with the following signals.
- Transmission range switch
- Shift position signal from BCM (CAN)

## DTC Logic

INFOID:0000000008284518

### DTC DETECTION LOGIC

**NOTE:**
If DTC B2110 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-30, "BCM : DTC Logic".

| DTC No. | Trouble diagnosis name | DTC detecting condition | Possible cause |
|---|---|---|---|
| B2110 | INTER LOCK/PNP SW | IPDM E/R detects mismatch between the signals below for 1 second or more.<br>• Transmission range switch input signal<br>• Shift position signal from BCM (CAN) | • Harness or connectors (Transmission range switch circuit is open or shorted)<br>• Transmission range switch<br>• IPDM E/R<br>• 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.

Is DTC detected?

YES >> Go to SEC-86, "Diagnosis Procedure".
NO >> INSPECTION END

## Diagnosis Procedure

INFOID:0000000008284519

#### 1.CHECK DTC WITH TCM

Check “Self diagnostic result” with CONSULT. Refer to TM-156, "DTC Index".

Is the inspection result normal?

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

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

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

| (+) | | (–) | Condition | | Voltage (V) (Approx.) |
|---|---|---|---|---|---|
| IPDM E/R | | | | | |
| Connector | Terminal | | | | |
| E5 | 30 | Ground | Selector lever | P or N | Battery voltage |
| | | | | Other than above | 0 |

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".
NO >> GO TO 3.

## 3. CHECK TRANSMISSION RANGE SWITCH CIRCUIT

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

| IPDM E/R | | TCM | | Continuity |
|---|---|---|---|---|
| Connector | Terminal | Connector | Terminal | |
| E5 | 30 | F51 | 9 | Existed |

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

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

Is the inspection result normal?

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

## 4. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

# POWER SUPPLY AND GROUND CIRCUIT

## BCM

### BCM : Diagnosis Procedure

INFOID:0000000008284520

#### 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 | K |
| | 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 | |
| Connector | Terminal | | |
| M118 | 1 | | Battery voltage |
| 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:0000000008284521

#### 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 | C |
| | 50 |
| | 51 |

Is the fuse fusing?

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

## 2. CHECK POWER SUPPLY CIRCUIT

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

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

Is the measurement value normal?

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

## 3. CHECK GROUND CIRCUIT

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

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

Does continuity exist?

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

# HOOD SWITCH

## Description

INFOID:0000000008284522

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

## Component Function Check

INFOID:0000000008284523

### 1.CHECK FUNCTION

1. Select “HOOD SW” in “Data Monitor” mode with CONSULT.
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-90, "Diagnosis Procedure".

## Diagnosis Procedure

INFOID:0000000008284524

### 1.CHECK HOOD SWITCH POWER SUPPLY

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

| (+) | | (–) | Voltage (V) (Approx.) |
|---|---|---|---|
| Hood switch | | | |
| Connector | Terminal | | |
| E30 | 2 | Ground | Battery voltage |

Is the inspection result normal?

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

### 2.CHECK HOOD SWITCH CIRCUIT

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

| IPDM E/R | | Hood switch | | Continuity |
|---|---|---|---|---|
| Connector | Terminal | Connector | Terminal | |
| E9 | 104 | E30 | 2 | Existed |

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

| IPDM E/R | | Ground | Continuity |
|---|---|---|---|
| Connector | Terminal | | |
| E9 | 104 | | 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 HOOD SWITCH GROUND CIRCUIT

Check continuity between hood switch harness connector and ground.

| Hood switch | | Ground | Continuity |
|---|---|---|---|
| Connector | Terminal | | |
| E30 | 1 | | Existed |

Is the inspection result normal?

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

## 4.CHECK HOOD SWITCH

Refer to SEC-91, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace hood lock (RH). Refer to DLK-254, "Removal and Installation".

## 5.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

# Component Inspection

INFOID:0000000008284525

## 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 | Close | Not existed |
| | | | Open | Existed |

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace hood lock (RH). Refer to DLK-254, "Removal and Installation".

# HEADLAMP

## Description

INFOID:0000000008284526

Headlamp lighting when vehicle security system is alarm phase.

## Component Function Check

INFOID:0000000008284527

### 1.CHECK HEADLAMP OPERATION

Check if headlamp operate by lighting switch.

Does headlamp come on when turning switch “ON”?

YES >> Headlamp circuit is OK.
NO >> Go to SEC-92, "Diagnosis Procedure".

## Diagnosis Procedure

INFOID:0000000008284528

### 1.CHECK HEADLAMP OPERATION

Refer to SEC-92, "Component Function Check".

Is the inspection result normal?

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

### 2.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

# SECURITY INDICATOR LAMP

## Description

INFOID:0000000008284529

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

## Component Function Check

INFOID:0000000008284530

### 1.CHECK FUNCTION

1. Perform “THEFT IND” in the “ACTIVE TEST” mode with CONSULT.
2. Check security indicator lamp operation.

| Test item | | Description | |
|---|---|---|---|
| THEFT IND | ON | Security indicator lamp | Illuminate |
| | OFF | | Not illuminate |

Is the inspection result normal?

YES >> INSPECTION END
NO >> Go to SEC-93, "Diagnosis Procedure".

## Diagnosis Procedure

INFOID:0000000008284531

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

Perform “Self Diagnostic Result” for unified meter and A/C amp. Refer to MWI-110, "DTC Index".

Is the inspection result is normal?

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

### 2.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

# KEY WARNING LAMP

## Description

INFOID:0000000008284532

Performs operation method guide and warning together with buzzer.

## Component Function Check

INFOID:0000000008284533

### 1.CHECK FUNCTION

Check the operation with “INDICATOR” in “Active Test” mode with CONSULT.

| Test item | Condition | |
|---|---|---|
| INDICATOR | KEY ON | Key warning lamp illuminates |
| | KEY IND | Key warning lamp flashes |

Is the inspection result normal?

YES >> Key warning lamp in combination meter is OK.
NO >> Refer to SEC-94, "Diagnosis Procedure".

## Diagnosis Procedure

INFOID:0000000008284534

### 1.CHECK KEY WARNING LAMP

Refer to DLK-104, "Diagnosis Procedure".

Is the inspection result normal?

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

### 2.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

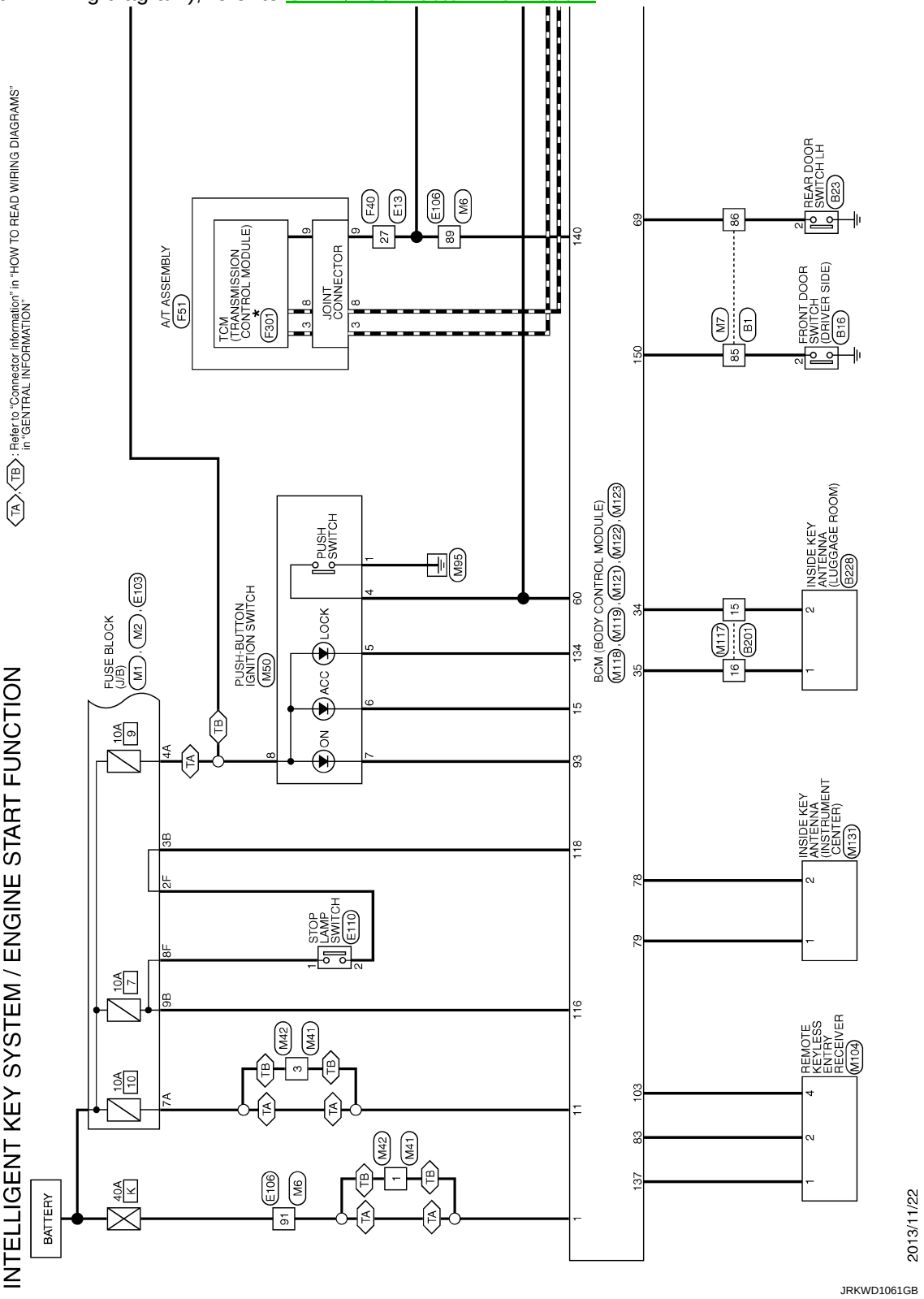
>> INSPECTION END

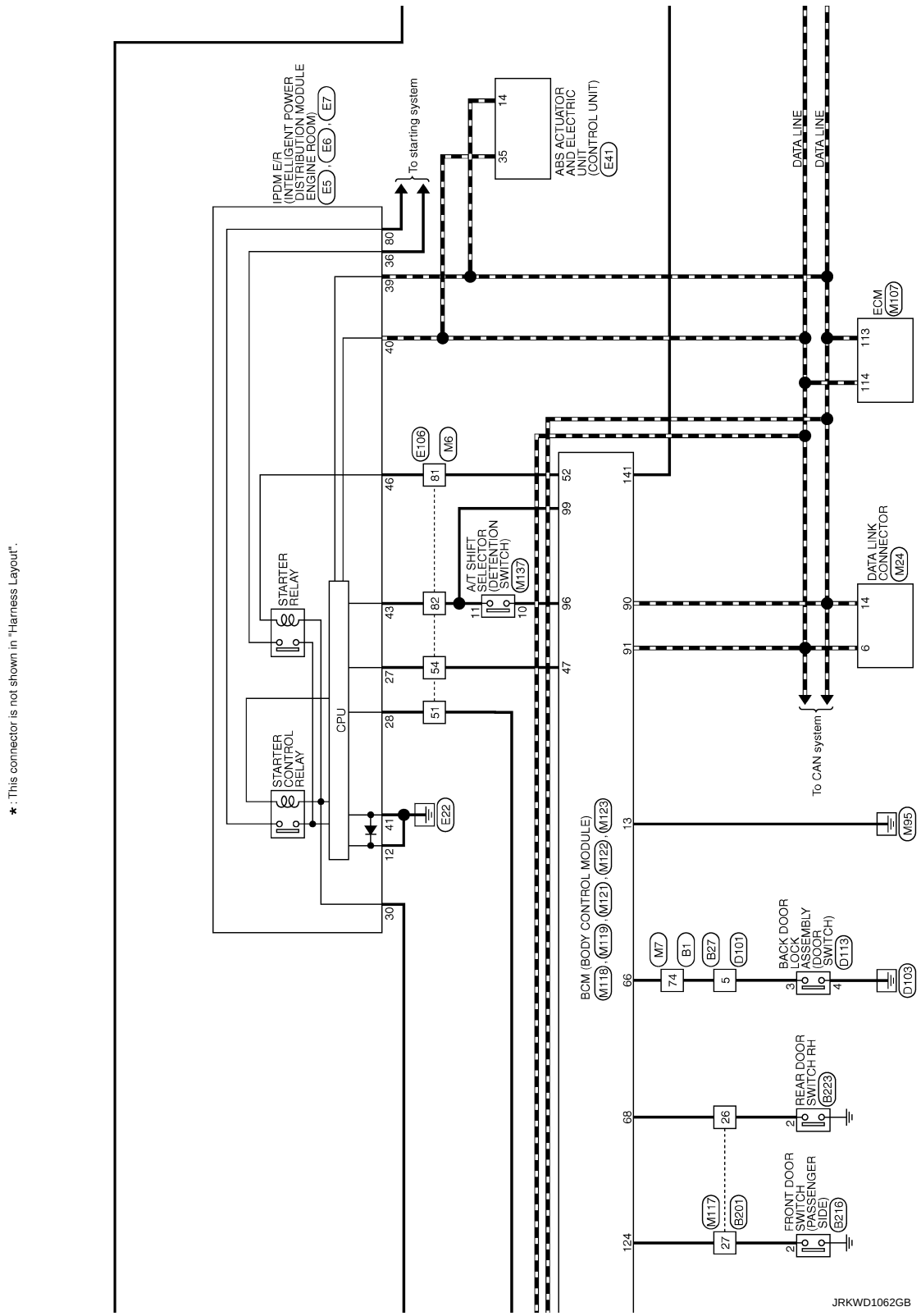
# INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

## Wiring Diagram - INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION -

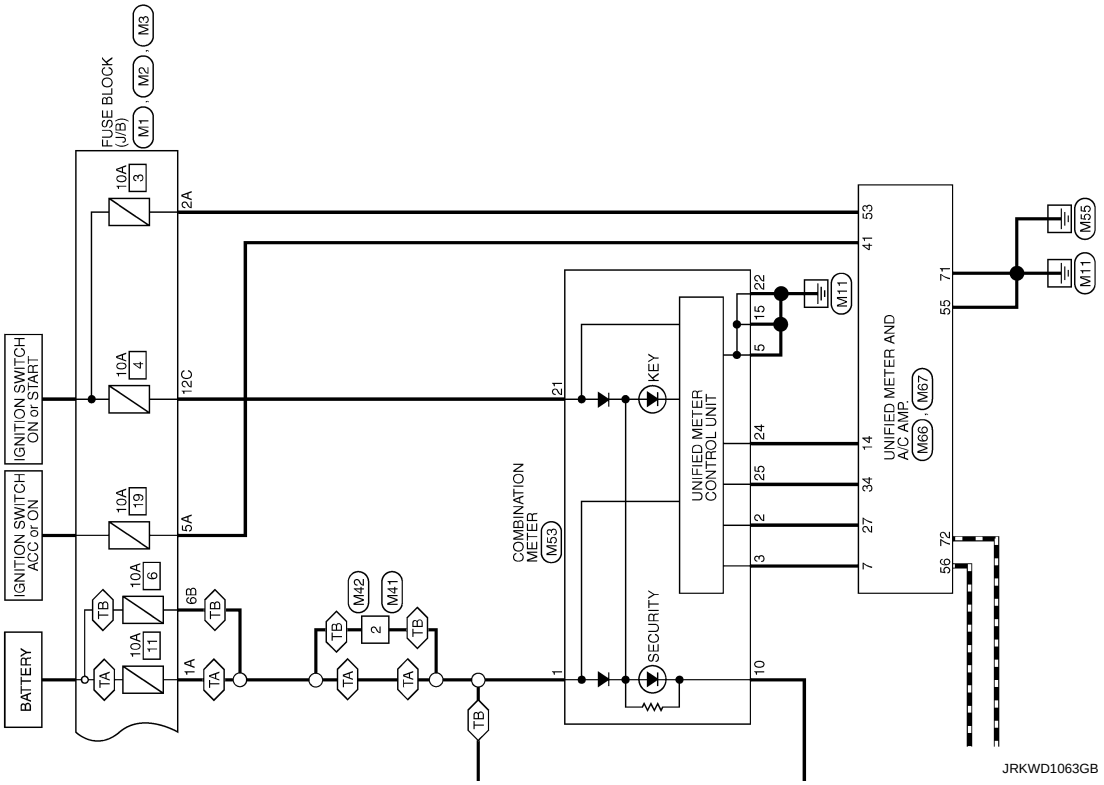
INFOID:0000000008284535

For connector terminal arrangements, harness layouts, and alphabets in a ⬡ (option abbreviation; if not described in wiring diagram), refer to GI-12, "Connector Information".






*: This connector is not shown in "Harness Layout".


FUSE BLOCK (J/B)
M1, M2, M3
10A 3
10A 4
10A 19
10A 6
10A 11
2A
12C
5A
6B
1A
IGNITION SWITCH ON or START
IGNITION SWITCH ACC or ON
BATTERY
TB
TA
M42
M41
2
COMBINATION METER
M53
KEY
SECURITY
UNIFIED METER CONTROL UNIT
UNIFIED METER AND A/C AMP.
M66, M67
M11
M55
JRKWD1063GB

INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

| Connector No. | B1 |
|---|---|
| Connector Name | WIRE TO WIRE |
| Connector Type | TH80FW-CS16-TM4 |

H.S.

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 3 | R | - |
| 5 | G | - |
| 6 | SB | - |
| 7 | V | - |
| 8 | L | - |
| 12 | SB | - |
| 13 | LG | - |
| 14 | GR | - |
| 15 | LG | - |
| 17 | W | - |
| 18 | SB | - |
| 19 | LG | - |
| 20 | BR | - |
| 21 | SHIELD | - |
| 22 | Y | - |
| 24 | P | - |
| 27 | B | - |
| 28 | R | - |
| 29 | W | - |
| 30 | SHIELD | - |
| 31 | SHIELD | - |
| 32 | W | - |
| 33 | SB | - |
| 34 | L | - |
| 35 | P | - |
| 36 | L | - |
| 37 | P | - |
| 38 | BR | - |
| 39 | Y | - |
| 44 | Y | - |
| 45 | GR | - |
| 46 | LG | - |
| 47 | SB | - |
| 49 | G | - |
| 50 | V | - |
| 60 | P | - |
| 61 | L | - |
| 62 | SHIELD | - |
| 63 | R | - |
| 64 | G | - |
| 65 | SHIELD | - |
| 66 | W | - |
| 67 | V | - |
| 68 | SB | - |
| 69 | SHIELD | - |
| 70 | W | - |
| 73 | SB | - |
| 74 | L | - |
| 75 | W | - |
| 76 | BR | - |
| 77 | R | - |
| 78 | P | - |
| 79 | GR | - |
| 83 | BG | - |
| 85 | V | - |
| 86 | LG | - |
| 87 | Y | - |
| 88 | R | - |
| 89 | B | - |
| 90 | BG | - |
| 91 | G | - |
| 92 | BR | - |
| 93 | G | - |
| 94 | SB | - |
| 95 | G | - |
| 96 | Y | - |
| 98 | W | - |
| 99 | GR | - |

| Connector No. | B16 |
|---|---|
| Connector Name | FRONT DOOR SWITCH (DRIVER SIDE) |
| Connector Type | A03FW |

H.S.

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 2 | V | - |

| Connector No. | B23 |
|---|---|
| Connector Name | REAR DOOR SWITCH LH |
| Connector Type | A03FW |

H.S.

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 2 | LG | - |

| Connector No. | B27 |
|---|---|
| Connector Name | WIRE TO WIRE |
| Connector Type | M06MW-LC |

H.S.

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | R | - |
| 2 | G | - |
| 3 | B | - |
| 4 | SB | - |
| 5 | L | - |
| 6 | B | - |

| Connector No. | B201 |
|---|---|
| Connector Name | WIRE TO WIRE |
| Connector Type | TH80FW-CS16-TM4 |

H.S.

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | W | - |
| 2 | R | - |
| 3 | GR | - |
| 4 | BG | - |
| 7 | LG | - |
| 10 | W | - |
| 15 | SB | - |
| 16 | V | - |
| 17 | BR | - |
| 26 | BR | - |
| 27 | L | - |
| 28 | Y | - |
| 29 | Y | - |
| 30 | GR | - |
| 31 | R | - |
| 32 | BR | - |
| 33 | G | - |
| 51 | R | - |
| 55 | G | - |
| 56 | R | - |
| 57 | W | - |
| 58 | B | - |
| 59 | SHIELD | - |
| 60 | LG | - |
| 61 | W | - |

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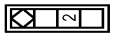
INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 62 | BR | - |
| 63 | P | - |
| 64 | L | - |
| 65 | G | - |
| 66 | P | - |
| 67 | L | - |
| 68 | SHIELD | - |
| 69 | V | - |
| 70 | Y | - |
| 71 | SB | - |
| 72 | W | - |
| 73 | BR | - |
| 75 | Y | - |
| 80 | V | - |
| 81 | SB | - |
| 82 | LG | - |
| 83 | P | - |
| 84 | R | - |
| 85 | L | - |
| 86 | BG | - |
| 87 | L | - |
| 88 | P | - |
| 91 | V | - |
| 92 | R | - |
| 94 | R | - |
| 95 | SB | - |
| 96 | G | - |
| 97 | G | - |
| 98 | R | - |
| 99 | P | - |
| 100 | L | - |

| Connector No. | B223 |
|---|---|
| Connector Name | REAR DOOR SWITCH RH |
| Connector Type | A03FW |



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

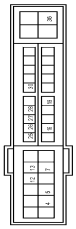
| Connector No. | B228 |
|---|---|
| Connector Name | INSIDE KEY ANTENNA (LUGGAGE ROOM) |
| Connector Type | RK02FGY |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | V | - |
| 2 | SB | - |

| Connector No. | D101 |
|---|---|
| Connector Name | WIRE TO WIRE |
| Connector Type | M06FW-LC |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 4 | V | - |
| 5 | L | - |
| 7 | R | - |
| 12 | B/W | - |
| 13 | Y | - |
| 16 | LG | - |

| Connector No. | E5 |
|---|---|
| Connector Name | PDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Type | TH20FW-CS12-M4-1V |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | Y | - |
| 2 | B | - |
| 3 | V | - |
| 4 | B | - |

| Connector No. | D113 |
|---|---|
| Connector Name | BACK DOOR LOCK ASSEMBLY |
| Connector Type | NS04FW-CS |

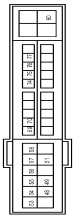
| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | R | - |
| 2 | G | - |
| 3 | B | - |
| 4 | Y | - |
| 5 | V | - |
| 6 | B | - |

| Connector No. | E6 |
|---|---|
| Connector Name | PDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Type | TH08FW-NH |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 19 | W | - |
| 25 | G | - |
| 26 | R | - |
| 27 | BG | - |
| 28 | L | - |
| 30 | GR | - |
| 36 | G | - |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 39 | P | - |
| 40 | L | - |
| 41 | B/W | - |
| 43 | SB | - |
| 44 | BR | - |
| 45 | G | - |
| 46 | R | - |

| Connector No. | E7 |
|---|---|
| Connector Name | PDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Type | TH20FW-CS12-M4 |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 48 | L | - |
| 49 | BG | - |
| 51 | Y | - |
| 53 | W | - |

| Connector No. | B216 |
|---|---|
| Connector Name | FRONT DOOR SWITCH (PASSENGER SIDE) |
| Connector Type | A03FW |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 2 | L | - |

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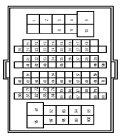
INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

| | |
|---|---|
| 54 | P |
| 55 | SB |
| 56 | LG |
| 57 | G |
| 58 | V |
| 69 | BR |
| 70 | BG |
| 74 | P |
| 75 | SB |
| 76 | Y |
| 77 | R |
| 80 | W |

| | |
|---|---|
| 25 | LG |
| 27 | GR |
| 28 | Y |
| 29 | P |
| 30 | R |
| 31 | BR |
| 32 | Y |
| 33 | G |
| 34 | BG |
| 37 | SHIELD |
| 38 | L |
| 39 | P |
| 40 | R |
| 41 | W |
| 42 | LG |
| 43 | G |
| 45 | BG |
| 46 | SHIELD |
| 47 | W |
| 48 | BR |
| 49 | G |
| 50 | B |
| 51 | SB |
| 52 | R |

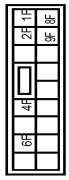
| | |
|---|---|
| 14 | P |
| 15 | SHIELD |
| 19 | P |
| 25 | Y |
| 26 | LG |
| 27 | GR |
| 28 | G |
| 29 | LG |
| 30 | SB |
| 31 | R |
| 35 | L |
| 45 | B |

| | |
|---|---|
| Connector No. | E106 |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH80FW-CS16-TM4 |



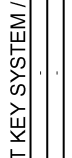
| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | R | - |
| 2 | W | - |
| 3 | B | - |
| 4 | GR | - |
| 5 | GR | - |
| 8 | Y | - |
| 9 | BR | - |
| 10 | BG | - |
| 11 | SB | - |
| 12 | BG | - |
| 13 | L | - |
| 14 | R | - |
| 15 | P | - |
| 16 | V | - |
| 17 | SB | - |
| 18 | V | - |
| 20 | BG | - |
| 21 | L | - |
| 22 | V | - |
| 23 | G | - |
| 24 | P | - |
| 25 | Y | - |
| 26 | V | - |
| 27 | W | - |
| 28 | G | - |
| 31 | BG | - |
| 32 | W | - |
| 33 | B | - |
| 34 | R | - |
| 35 | G | - |
| 36 | SHIELD | - |
| 37 | V | - |
| 38 | BR | - |
| 39 | BG | - |
| 41 | W | - |
| 42 | G | - |

| | |
|---|---|
| Connector No. | E103 |
| Connector Name | FUSE BLOCK (J/B) |
| Connector Type | NS16FW-CS |



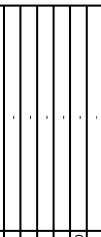

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1F | SB | - |
| 2F | W | - |
| 4F | G | - |
| 6F | BR | - |
| 8F | L | - |
| 9F | R | - |

| | |
|---|---|
| Connector No. | E13 |
| Connector Name | WIRE TO WIRE |
| Connector Type | SAA36MB-RS8-SHZ8 |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | L/Y | - |
| 2 | SHIELD | - |
| 3 | L/B | - |
| 4 | SHIELD | - |
| 5 | BR | - |
| 7 | G | - |
| 8 | W | - |
| 9 | W | - |
| 10 | Y | - |
| 11 | P | - |
| 12 | SB | - |
| 13 | L | - |
| 14 | G | - |
| 15 | R | - |
| 16 | LG | - |
| 18 | Y | - |
| 19 | BG | - |
| 20 | B | - |
| 21 | SB | - |
| 22 | W | - |
| 23 | L | - |
| 24 | G | - |

| | |
|---|---|
| Connector No. | E41 |
| Connector Name | ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) |
| Connector Type | BAA42FB-AHZ4-LH |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | B | GROUND |
| 2 | G | UBMR |
| 3 | R | UBVR |
| 4 | B | GROUND |
| 5 | Y | DS FL |
| 6 | BG | DP RL |
| 7 | BR | DP RR |
| 9 | B | DP FR |
| 10 | W | DS FR |
| 12 | L | VAC |

JRKWD1283GB

INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

| | | |
|---|---|---|
| 43 | BR | - |
| 45 | W | - |
| 49 | L | - |
| 50 | P | - |
| 51 | L | - |
| 54 | BG | - |
| 57 | BR | - |
| 59 | W | - |
| 60 | LG | - |
| 61 | G | - |
| 62 | SB | - |
| 63 | W | - |
| 64 | B | - |
| 65 | G | - |
| 66 | R | - |
| 67 | SHIELD | - |
| 68 | Y | - |
| 69 | LG | - |
| 70 | W | - |
| 71 | R | - |
| 72 | Y | - |
| 73 | B | - |
| 74 | BR | - [With ICC] |
| 74 | L | - [Without ICC] |
| 75 | G | - [With ICC] |
| 75 | W | - [Without ICC] |
| 76 | W | - [With ICC] |
| 76 | Y | - [Without ICC] |
| 77 | P | - [Without ICC] |
| 77 | R | - [With ICC] |
| 78 | BR | - [Without ICC] |
| 78 | L | - [With ICC] |
| 79 | L | - [Without ICC] |
| 79 | Y | - [With ICC] |
| 80 | SB | - |
| 81 | R | - |
| 82 | SB | - |
| 83 | BG | - |
| 84 | G | - |
| 85 | L | - |
| 86 | P | - |
| 87 | V | - |
| 89 | GR | - |
| 90 | SHIELD | - |
| 91 | W | - |
| 92 | Y | - |
| 93 | V | - |
| 94 | LG | - |
| 95 | BG | - |
| 96 | P | - |
| 97 | R | - |
| 98 | SHIELD | - |
| 99 | L | - |
| 100 | P | - |

| | |
|---|---|
| Connector No. | E110 |
| Connector Name | STOP LAMP SWITCH |
| Connector Type | M04FW-LC |

H.S.




| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | L | - |
| 2 | W | - |
| 3 | Y | - |
| 4 | SB | - |

| | |
|---|---|
| Connector No. | F40 |
| Connector Name | WIRE TO WIRE |
| Connector Type | SAA36FB-RS8-SHZ8 |

H.S.



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | L/Y | - |
| 2 | SHIELD | - |
| 3 | L/B | - |
| 4 | SHIELD | - |
| 5 | BR | - |
| 7 | G | - |
| 8 | W | - |
| 9 | W | - |
| 10 | G | - |
| 11 | R | - |
| 12 | P | - |
| 13 | L | - |
| 14 | LG | - |
| 15 | BR | - |
| 16 | Y | - |
| 18 | LG | - |
| 19 | P | - |
| 20 | O | - |
| 21 | Y | - |
| 22 | G | - |
| 23 | Y | - |
| 24 | LG | - |
| 25 | V | - |
| 27 | GR | - |
| 28 | BR | - |
| 29 | L | - |
| 30 | R | - |
| 31 | P | - |
| 32 | W | - |
| 33 | SB | - |
| 34 | O | - |
| 37 | SHIELD | - |
| 38 | W | - |
| 39 | Y | - |
| 40 | G | - |
| 41 | B | - |
| 42 | GR | - |
| 43 | R | - |
| 45 | O | - |
| 46 | SHIELD | - |
| 47 | W/L | - |
| 48 | LG | - |
| 49 | O/L | - |
| 50 | L/Y | - |
| 51 | W | - |
| 52 | L/G | - |

| | |
|---|---|
| Connector No. | F51 |
| Connector Name | A/T ASSEMBLY |
| Connector Type | RK10FG-DGY |

H.S.




| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | Y | POWER SUPPLY |
| 2 | BR | POWER SUPPLY (MEMORY BACK-UP) |
| 3 | O | CAN-H |
| 4 | V | K LINE |
| 5 | B | GROUND |
| 6 | Y | POWER SUPPLY |
| 7 | R | BACK-UP LAMP RELAY |
| 8 | LG | CAN-L |
| 9 | GR | STARTER RELAY |
| 10 | B | GROUND |

| | |
|---|---|
| Connector No. | F301 |
| Connector Name | TCM (TRANSMISSION CONTROL MODULE) |
| Connector Type | SP10FG |

H.S.




| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | - | POWER SUPPLY |
| 2 | - | POWER SUPPLY (MEMORY BACK-UP) |
| 3 | - | CAN-H |
| 4 | - | K LINE |
| 5 | - | GROUND |
| 6 | - | POWER SUPPLY |
| 7 | - | BACK-UP LAMP RELAY |
| 8 | - | CAN-L |
| 9 | - | STARTER RELAY |
| 10 | - | GROUND |

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INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

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

H.S.




| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1A | GR | - |
| 2A | G | - |
| 3A | L | - |
| 4A | P | - [For push button] |
| 4A | R | - [For key slot] |
| 5A | V | - |
| 6A | Y | - |
| 7A | R | - |
| 8A | L | - |

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

H.S.




| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 3B | P | - |
| 4B | G | - |
| 5B | BG | - |
| 6B | Y | - |
| 7B | P | - |
| 8B | R | - |
| 9B | SB | - |

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

H.S.




| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 10C | L | - |
| 11C | R | - |
| 12C | BG | - |
| 6C | R | - |
| 7C | B | - |
| 9C | BG | - |

| Connector No. | M6 |
|---|---|
| Connector Name | WIRE TO WIRE |
| Connector Type | TH80MW-CS16-TM4 |

H.S.



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | W | - |
| 2 | R | - |
| 3 | B | - |
| 4 | SHIELD | - |
| 5 | G | - |
| 8 | Y | - |
| 9 | BR | - |
| 10 | R | - |
| 11 | BR | - |
| 12 | BG | - |
| 13 | L | - |
| 14 | R | - |
| 15 | P | - |
| 16 | V | - |
| 17 | SB | - |
| 18 | V | - |
| 20 | BG | - |
| 21 | L | - |
| 22 | W | - |
| 23 | P | - |
| 24 | BR | - |
| 25 | Y | - |
| 26 | V | - |
| 27 | G | - |
| 28 | G | - |
| 31 | L | - |
| 32 | G | - |
| 33 | B | - |
| 34 | W | - |
| 35 | R | - |
| 36 | SHIELD | - |
| 37 | V | - |
| 38 | BG | - |
| 39 | BR | - |
| 41 | W | - |
| 42 | BG | - |
| 43 | BG | - |
| 45 | W | - |
| 49 | L | - |
| 50 | P | - |
| 51 | BR | - |
| 54 | Y | - |
| 57 | G | - |
| 59 | W | - |
| 60 | L | - |
| 61 | G | - |
| 62 | SB | - |
| 63 | G | - |
| 64 | B | - |
| 65 | W | - |
| 66 | R | - |
| 67 | SHIELD | - |
| 68 | Y | - |
| 69 | GR | - |
| 70 | LG | - |
| 71 | LG | - |
| 72 | Y | - |
| 73 | SB | - |
| 74 | BR | - [With ICC] |
| 74 | L | - [Without ICC] |
| 75 | G | - |
| 76 | GR | - [Without ICC] |
| 76 | W | - [With ICC] |
| 77 | P | - [Without ICC] |
| 77 | R | - [With ICC] |
| 78 | L | - [With ICC] |
| 78 | R | - [Without ICC] |
| 79 | W | - [Without ICC] |
| 79 | Y | - [With ICC] |
| 80 | SB | - |
| 81 | SB | - |
| 82 | SB | - |
| 83 | V | - |
| 84 | G | - |
| 85 | L | - |
| 86 | P | - |
| 87 | W | - |
| 89 | GR | - |
| 90 | SHIELD | - |
| 91 | W | - |
| 92 | Y | - |
| 93 | BR | - |
| 94 | P | - |
| 95 | GR | - |
| 96 | W | - |
| 97 | L | - |
| 98 | SHIELD | - |
| 99 | V | - |
| 100 | SB | - |

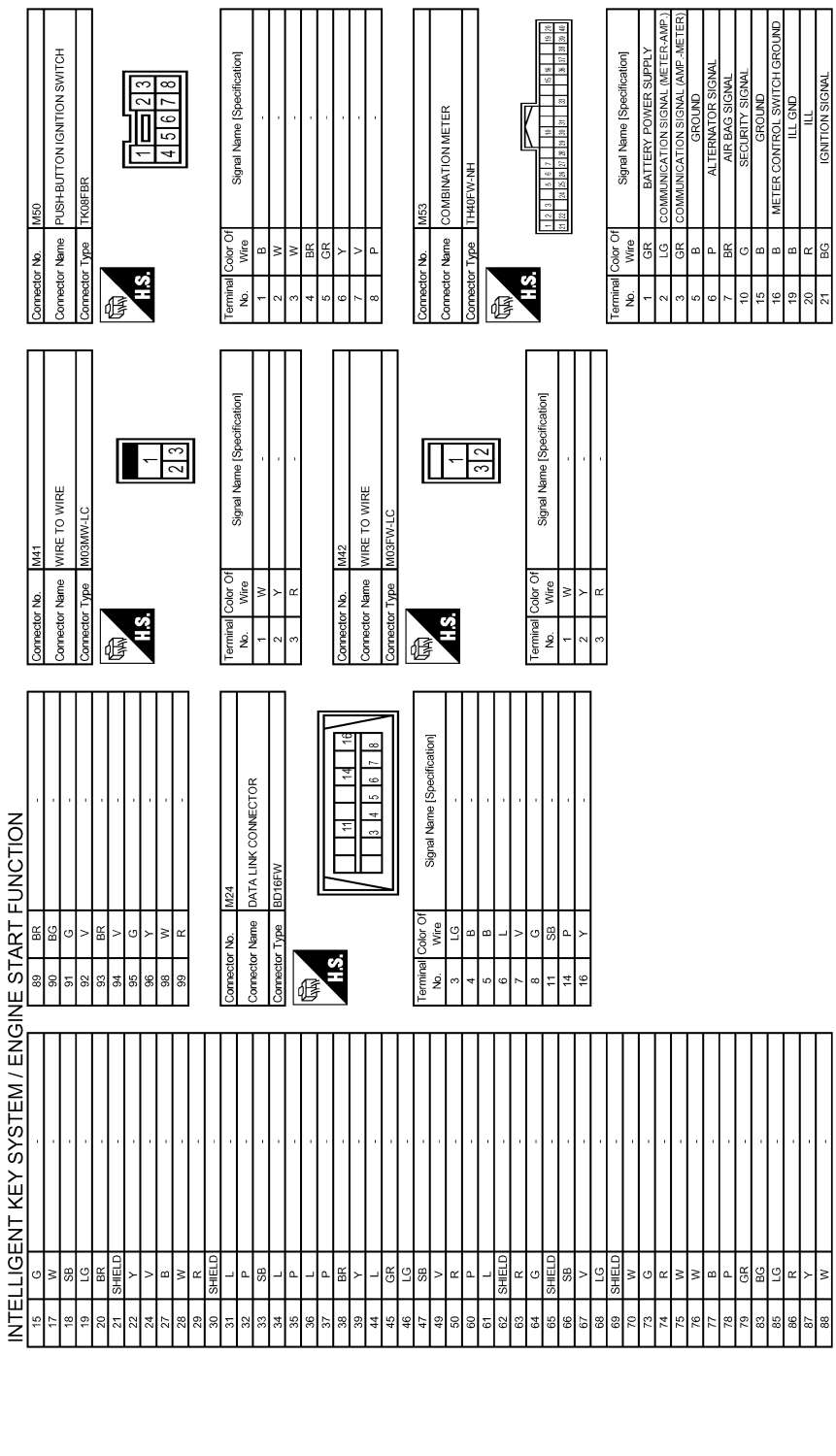
| Connector No. | M7 |
|---|---|
| Connector Name | WIRE TO WIRE |
| Connector Type | TH80MW-CS16-TM4 |

H.S.



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 3 | SB | - [With automatic drive positioner] |
| 3 | W | - [Without automatic drive positioner] |
| 5 | G | - |
| 6 | BG | - |
| 7 | W | - |
| 8 | B | - |
| 12 | SB | - |
| 13 | LG | - |
| 14 | Y | - |

JRKWD1285GB

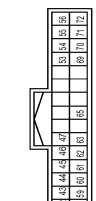



JRKWD1286GB

INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

| | | |
|---|---|---|
| 22 | B | GROUND |
| 24 | BR | COMMUNICATION SIGNAL (LCD-AMP.) |
| 25 | Y | COMMUNICATION SIGNAL (AMP.-LCD) |
| 26 | R | VEHICLE SPEED SIGNAL (8-PULSE) |
| 27 | V | PARKING BRAKE SWITCH SIGNAL |
| 28 | W | BRAKE FLUID LEVEL SWITCH SIGNAL |
| 29 | SB | SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE) |
| 30 | G | SEAT BELT BUCKLE SWITCH SIGNAL (PASSENGER SIDE) |
| 31 | L | WASHER LEVEL SWITCH SIGNAL |
| 33 | B | ILLUMINATION CONTROL SIGNAL |
| 36 | LG | SELECT SWITCH SIGNAL |
| 37 | SB | ENTER SWITCH SIGNAL |
| 38 | L | TRIP A/B RESET SWITCH SIGNAL |
| 39 | P | ILLUMINATION CONTROL SWITCH SIGNAL (-) |
| 40 | BG | ILLUMINATION CONTROL SWITCH SIGNAL (+) |

| | |
|---|---|
| Connector No. | M67 |
| Connector Name | UNIFIED METER AND A/C AMP. |
| Connector Type | TH32FW-NH |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 41 | V | ACC POWER SUPPLY |
| 42 | Y | FUEL LEVEL SENSOR SIGNAL |
| 43 | R | INTAKE SENSOR SIGNAL |
| 44 | LG | IN-VEHICLE SENSOR SIGNAL |
| 45 | P | AMBIENT SENSOR SIGNAL |
| 46 | BG | SUNLOAD SENSOR SIGNAL |
| 47 | G | EXHAUST GAS (OUTSIDE CO2/HC DETECTING) SENSOR SIGNAL |
| 53 | G | IGNITION POWER SUPPLY |
| 54 | Y | BATTERY POWER SUPPLY |
| 55 | B | GROUND |
| 56 | L | CAN-H |
| 57 | W | BRAKE FLUID LEVEL SWITCH SIGNAL |
| 58 | BR | FUEL LEVEL SENSOR GROUND |
| 59 | GR | INTAKE SENSOR GROUND |
| 60 | L | IN-VEHICLE SENSOR GROUND |
| 61 | BR | AMBIENT SENSOR GROUND |
| 62 | SB | SUNLOAD SENSOR GROUND |
| 63 | R | - |
| 65 | BG | EGV SIGNAL |
| 69 | L | A/C LAN SIGNAL |
| 70 | R | EACH DOOR MOTOR POWER SUPPLY |
| 71 | B | GROUND |
| 72 | P | CAN-L |

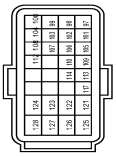
| | |
|---|---|
| Connector No. | M66 |
| Connector Name | UNIFIED METER AND A/C AMP. |
| Connector Type | TH40FW-NH |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 5 | L | MANUAL MODE SHIFT UP SIGNAL |
| 7 | GR | COMMUNICATION SIGNAL (AMP.-METER) |
| 8 | L | VEHICLE SPEED SIGNAL (2-PULSE) |
| 9 | SB | SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE) |
| 10 | W | MANUAL MODE SIGNAL |
| 11 | G | NON-MANUAL MODE SIGNAL |
| 14 | BR | COMMUNICATION SIGNAL (LCD-AMP.) |
| 20 | L | IGN ON/OFF SIGNAL |
| 23 | Y | AT SNOW SWITCH SIGNAL |
| 25 | V | MANUAL MODE SHIFT DOWN SIGNAL |
| 27 | LG | COMMUNICATION SIGNAL (METER-AMP.) |
| 28 | R | VEHICLE SPEED SIGNAL (8-PULSE) |
| 30 | V | PARKING BRAKE SWITCH SIGNAL |
| 34 | Y | COMMUNICATION SIGNAL (AMP.-LCD) |
| 38 | P | BLOWER MOTOR CONTROL SIGNAL |

| | |
|---|---|
| Connector No. | M104 |
| Connector Name | REMOTE KEYLESS ENTRY RECEIVER |
| Connector Type | JA804FB |

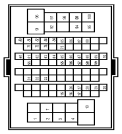
| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | BG | GROUND |
| 2 | Y | SIGNAL OUTPUT |
| 4 | LG | BATTERY |

| | |
|---|---|
| Connector No. | M107 |
| Connector Name | ECM |
| Connector Type | RH24FGY-RZ8-R-LH-Z |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 97 | R | ACCELERATOR PEDAL POSITION SENSOR 1 |
| 98 | P | ACCELERATOR PEDAL POSITION SENSOR 2 (Without ICC) |
| 98 | Y | ACCELERATOR PEDAL POSITION SENSOR 2 (With ICC) |
| 99 | G | SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 1) (With ICC) |
| 99 | L | SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 1) (Without ICC) |
| 100 | W | SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 1) |
| 101 | SB | ASCD/ICC STEERING SWITCH |
| 102 | LG | EVAP CONTROL SYSTEM PRESS SENSOR |
| 103 | G | SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 2) (With ICC) |
| 103 | L | SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 2) (Without ICC) |
| 104 | BR | SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 2) (With ICC) |
| 104 | GR | SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 2) (Without ICC) |
| 105 | L | REFRIGERANT PRESS SENSOR |
| 106 | W | FUEL TANK TEMPERATURE SENSOR |
| 107 | BG | SENSOR POWER SUPPLY (REFRIGERANT PRESSURE SENSOR) |
| 108 | Y | SENSOR GROUND (ASCD/ICC STEERING SWITCH) |
| 109 | G | PNP signal |
| 110 | R | ENGINE SPEED OUTPUT SIGNAL |
| 112 | V | SENSOR GROUND (EVAP CONTROL SYSTEM PRESS SENSOR) |
| 113 | P | CAN COMMUNICATION LINE |
| 114 | L | CAN COMMUNICATION LINE |
| 117 | V | DATA LINK CONNECTOR |
| 121 | LG | EVAP CANISTER VENT CONTROL VALVE |
| 122 | P | STOP LAMP SWITCH |
| 123 | B | ECM GROUND |
| 124 | B | ECM GROUND |
| 125 | R | POWER SUPPLY FOR ECM |
| 126 | BR | ASCD/ICC BRAKE SWITCH |
| 127 | B | ECM GROUND |
| 128 | B | ECM GROUND |

| | |
|---|---|
| Connector No. | M117 |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH80MW-CS16-TM4 |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | L | - |
| 2 | G | - |
| 3 | GR | - |
| 4 | SB | - |
| 7 | W | - |
| 10 | W | - |
| 15 | SB | - |
| 16 | V | - |
| 17 | BR | - |
| 26 | BR | - |
| 27 | LG | - |
| 28 | Y | - |
| 29 | Y | - |
| 30 | V | - |
| 31 | R | - |
| 32 | BR | - |
| 33 | G | - |
| 51 | R | - |
| 55 | W | - |
| 56 | B | - |
| 57 | R | - |

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INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

| | | |
|---|---|---|
| 58 | G | - |
| 59 | SHIELD | - |
| 60 | V | - |
| 61 | LG | - |
| 62 | BR | - |
| 63 | L | - |
| 64 | LG | - |
| 65 | B | - |
| 66 | R | - |
| 67 | W | - |
| 68 | SHIELD | - |
| 69 | V | - |
| 70 | Y | - |
| 71 | SB | - |
| 72 | W | - |
| 73 | G | - |
| 75 | W | - |
| 80 | V | - |
| 81 | SB | - |
| 82 | V | - |
| 83 | P | - |
| 84 | R | - |
| 85 | L | - |
| 86 | BG | - |
| 87 | L | - |
| 88 | P | - |
| 91 | V | - |
| 92 | G | - |
| 94 | G | - |
| 95 | W | - |
| 96 | G | - |
| 97 | Y | - |
| 98 | BR | - |
| 99 | P | - [Without BOSE audio] |
| 99 | V | - [With BOSE audio] |
| 100 | L | - [Without BOSE audio] |
| 100 | SB | - [With BOSE audio] |

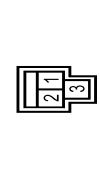
| Connector No. | M118 |
|---|---|
| Connector Name | BCM (BODY CONTROL MODULE) |
| Connector Type | M03FB-LC |

H.S.

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | W | BAT (F/L) |
| 2 | W | POWER WINDOW POWER SUPPLY(BAT) |
| 3 | Y | POWER WINDOW POWER SUPPLY(RAP) |

| Connector No. | M119 |
|---|---|
| Connector Name | BCM (BODY CONTROL MODULE) |
| Connector Type | NS16FW-CS |

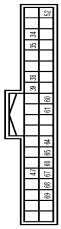
H.S.



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 4 | LG | INTERIOR ROOM LAMP POWER SUPPLY |
| 5 | L | PASSENGER DOOR UNLOCK OUTPUT |
| 7 | Y | STEP LAMP CONT |
| 8 | V | ALL DOOR, FUEL LID LOCK OUTPUT |
| 9 | G | DRIVER DOOR, FUEL LID UNLOCK OUTPUT |
| 10 | BR | REAR DOOR UNLOCK OUTPUT |
| 11 | R | BAT (FUSE) |
| 13 | B | GROUND |
| 14 | W | PUSH-BUTTON IGNITION SW ILL GND |
| 15 | Y | ACC IND |
| 17 | W | TURN SIGNAL RH (FRONT) |
| 18 | BG | TURN SIGNAL LH (FRONT) |
| 19 | V | INT ROOM LAMP CONT |

| Connector No. | M121 |
|---|---|
| Connector Name | BCM (BODY CONTROL MODULE) |
| Connector Type | TH40FGY-NH |

H.S.



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 34 | SB | LUGGAGE ROOM ANT- |
| 35 | V | LUGGAGE ROOM ANT+ |
| 38 | B | BACK DOOR ANT- |
| 39 | W | BACK DOOR ANT+ |
| 47 | Y | IGN RELAY (IPDM E/R) CONT |
| 52 | SB | STARTER RELAY CONT |
| 60 | BR | PUSH SW |
| 61 | W | BACK DOOR OPENER REQUEST SW |
| 64 | V | I-KEY WARN BUZZER (ENG ROOM) |
| 65 | BG | REAR WIPER STOP POSITION |
| 66 | R | BACK DOOR SW |
| 67 | GR | BACK DOOR OPENER SW |
| 68 | BR | REAR RH DOOR SW |
| 69 | R | REAR LH DOOR SW |

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

H.S.

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 74 | SB | PASSENGER DOOR ANT- |
| 75 | GR | PASSENGER DOOR ANT+ |
| 76 | V | DRIVER DOOR ANT- |
| 77 | LG | DRIVER DOOR ANT+ |
| 78 | Y | ROOM ANT1- |
| 79 | BR | ROOM ANT1+ |

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 80 | GR | NATS ANT AMP. |
| 81 | W | NATS ANT AMP. |
| 82 | R | IGN RELAY (F/B) CONT |
| 83 | Y | KEYLESS ENTRY RECEIVER COMM |
| 87 | BR | COMBI SW INPUT 5 |
| 88 | V | COMBI SW INPUT 3 |
| 90 | P | CAN-L |
| 91 | L | CAN-H |
| 92 | LG | KEY SLOT ILL CONT |
| 93 | V | ON IND |
| 94 | Y | PUDDLE LAMP CONT |
| 95 | BG | ACC RELAY CONT |
| 96 | GR | A/T SHIFT SELECTOR POWER SUPPLY |
| 99 | R | SHIFT P |
| 100 | G | PASSENGER DOOR REQUEST SW |
| 101 | SB | DRIVER DOOR REQUEST SW |
| 102 | BG | BLOWER FAN MOTOR RELAY CONT |
| 103 | LG | KEYLESS ENTRY RECEIVER POWER SUPPLY |
| 107 | LG | COMBI SW INPUT 1 |
| 108 | R | COMBI SW INPUT 4 |
| 109 | Y | COMBI SW INPUT 2 |
| 110 | G | HAZARD SW |

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

H.S.



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 113 | P | OPLICAL SENSOR |
| 116 | SB | STOP LAMP SW 1 |
| 118 | P | STOP LAMP SW 2 |
| 119 | SB | DR DOOR UNLOCK SENSOR |
| 121 | BR | KEY SLOT SW |
| 123 | W | IGN F/B |
| 124 | LG | PASSENGER DOOR SW |
| 132 | BR | POWER WINDOW SW COMM |
| 133 | W | PUSH-BUTTON IGNITION SW ILL POWER |
| 134 | GR | LOCK IND |
| 137 | BG | RECEIVER/SENSOR GND |
| 138 | Y | RECEIVER/SENSOR POWER SUPPLY |

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INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

| | | |
|---|---|---|
| 139 | L | TIRE PRESSURE RECEIVER COMM |
| 140 | GR | SHIFT NP |
| 141 | G | SECURITY IND LAMP CONT |
| 142 | BG | COMBI SW OUTPUT 5 |
| 143 | P | COMBI SW OUTPUT 1 |
| 144 | G | COMBI SW OUTPUT 2 |
| 145 | L | COMBI SW OUTPUT 3 |
| 146 | SB | COMBI SW OUTPUT 4 |
| 150 | LG | DRIVER DOOR SW |
| 151 | G | REAR WINDOW DEFOGGER RELAY CONT |

| | | |
|---|---|---|
| 8 | SB | - |
| 9 | B | - |
| 10 | GR | - |
| 11 | R | - |

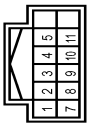
| | |
|---|---|
| Connector No. | M131 |
| Connector Name | INSIDE KEY ANTENNA (INSTRUMENT CENTER) |
| Connector Type | RK02FGY |

H.S.


| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | BR | - |
| 2 | Y | - |

| | |
|---|---|
| Connector No. | M137 |
| Connector Name | A/T SHIFT SELECTOR |
| Connector Type | TH12FW-NH |

H.S.




| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | W | - |
| 2 | V | - |
| 3 | L | - |
| 4 | B | - |
| 5 | G | - |
| 7 | R | - |

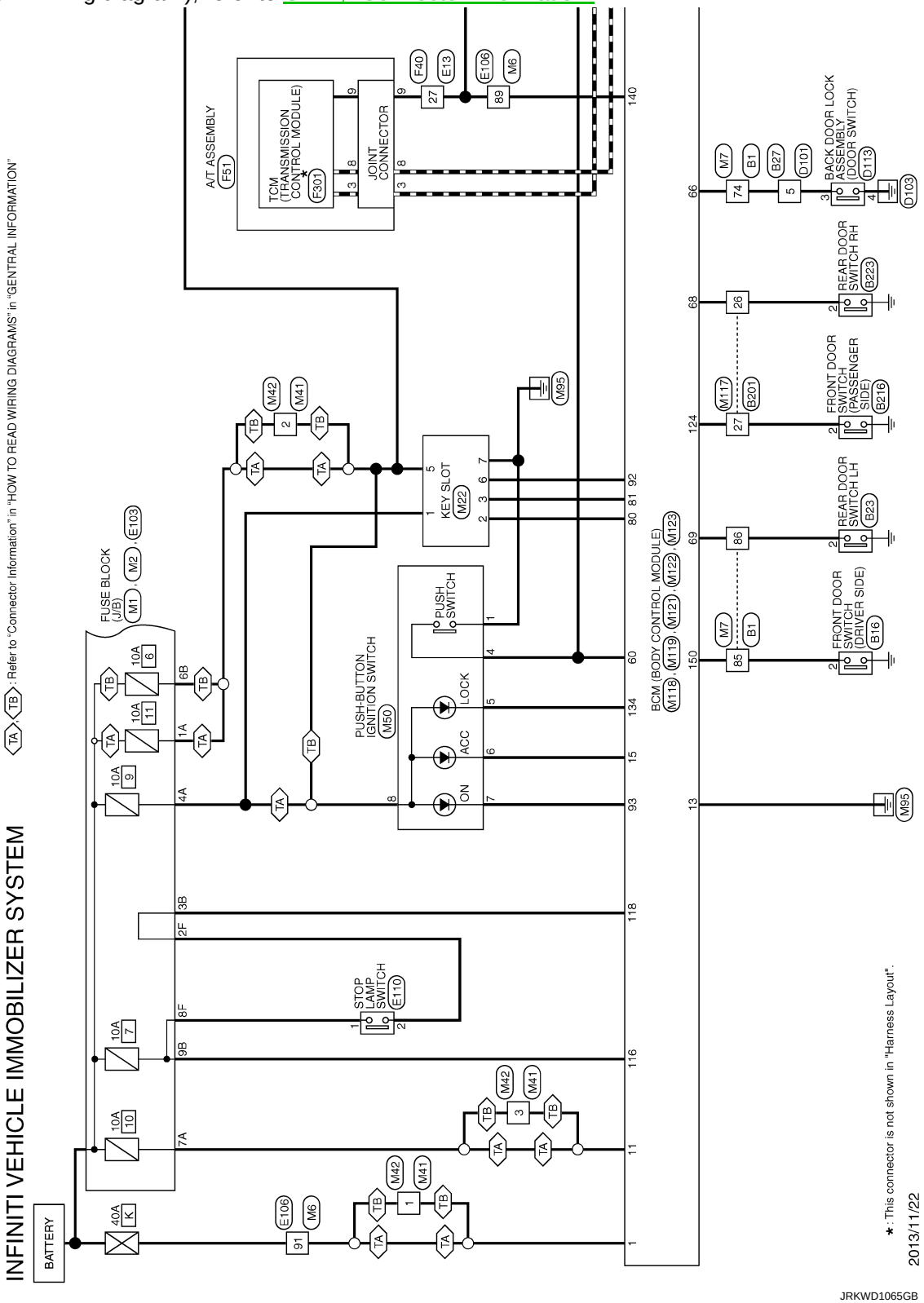
JRKWD1289GB

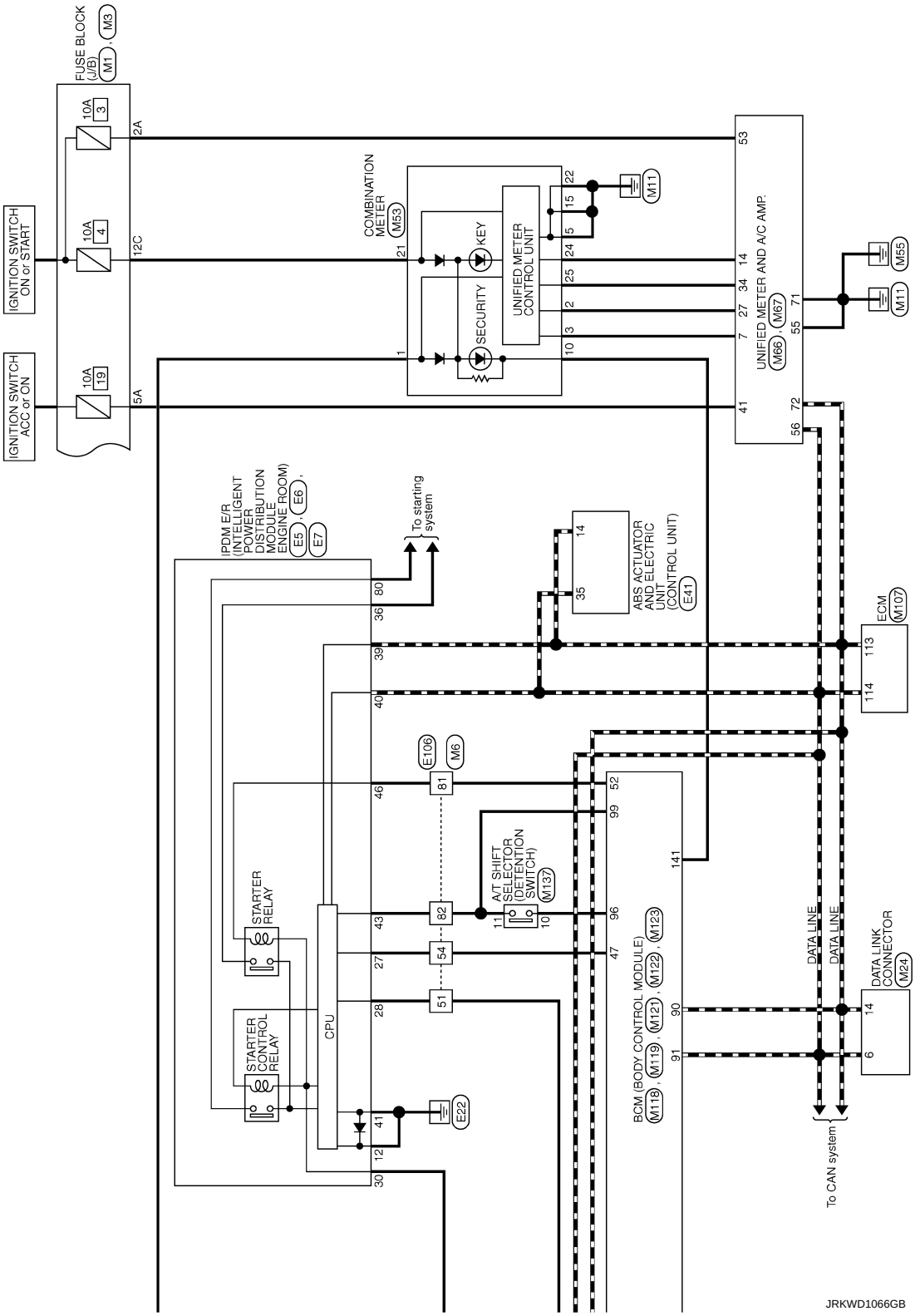
# INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS

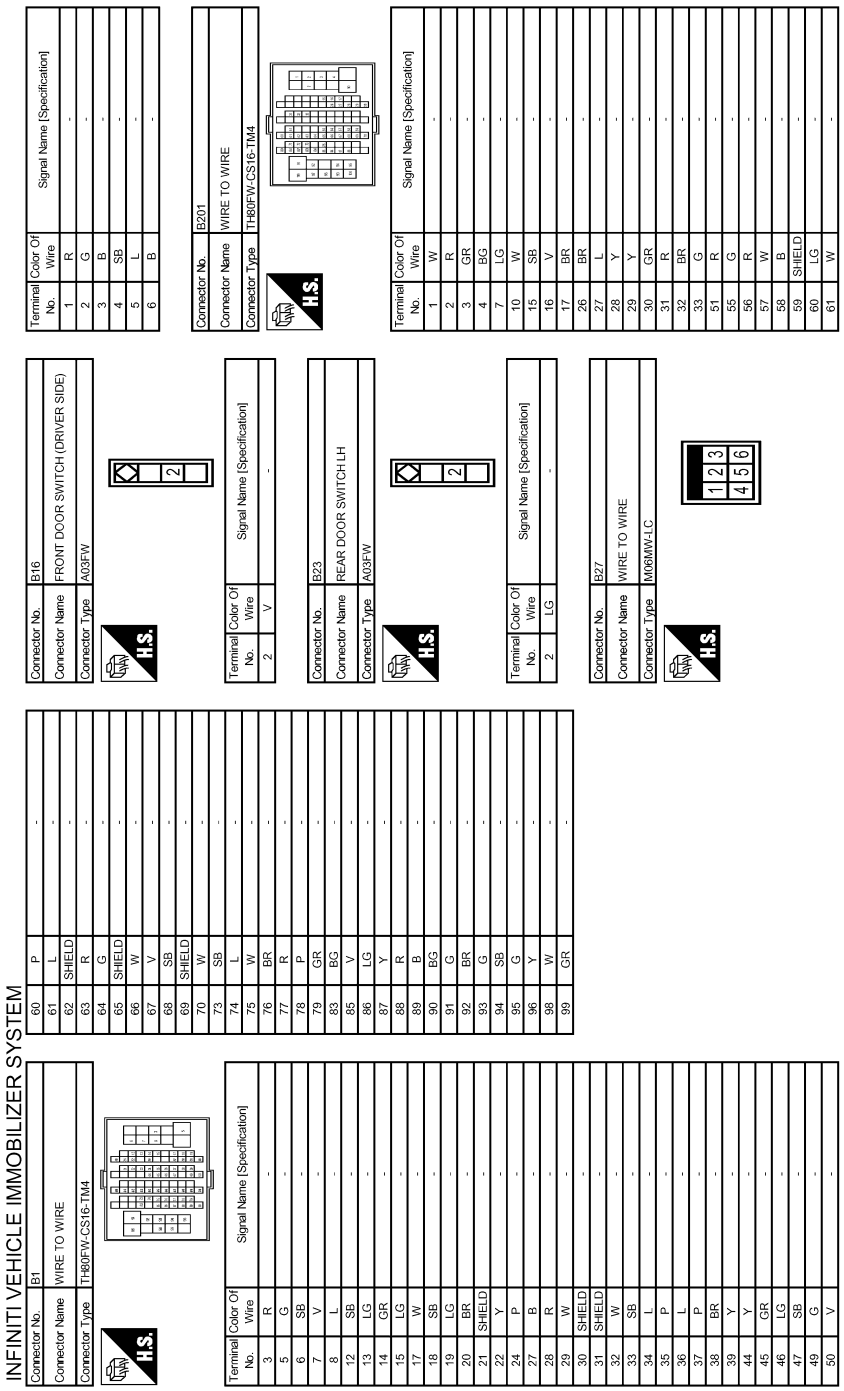
## Wiring Diagram - IVIS -

INFOID:0000000008284536

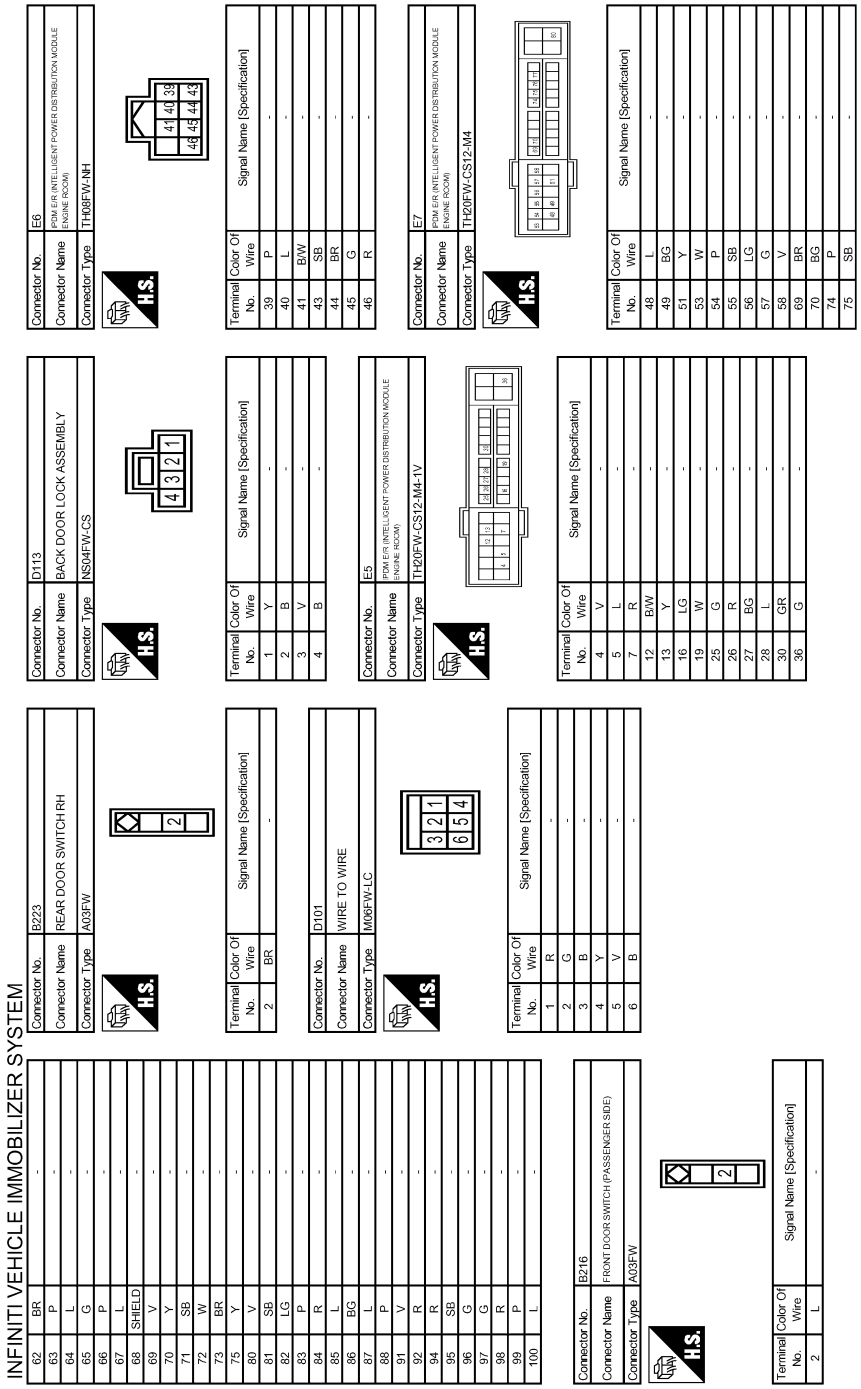
For connector terminal arrangements, harness layouts, and alphabets in a ⬡ (option abbreviation; if not described in wiring diagram), refer to GI-12, "Connector Information".




FUSE BLOCK (J/B) M1, M3
10A 3
10A 4
10A 19
2A
12C
5A
IGNITION SWITCH ON or START
IGNITION SWITCH ACC or ON
COMBINATION METER M53
KEY
SECURITY
UNIFIED METER CONTROL UNIT
M11
UNIFIED METER AND A/C AMP. M66, M67
M55
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) E5, E6, E7
To starting system
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) E41
ECM M107
E106
M6
STARTER RELAY
STARTER CONTROL RELAY
CPU
A/T SHIFT SELECTOR (DETENTION SWITCH) M137
BCM (BODY CONTROL MODULE) M118, M119, M121, M122, M123
DATA LINE
DATA LINK CONNECTOR M24
E22
To CAN system
JRKWD1066GB




JRKWD1298GB




JRKWD1299GB

INFINITI VEHICLE IMMOBILIZER SYSTEM

| 76 | Y | - |
|---|---|---|
| 77 | R | - |
| 80 | W | - |

Connector No. E13
Connector Name WIRE TO WIRE
Connector Type SMA36MB-RS8-SHZ8

H.S.

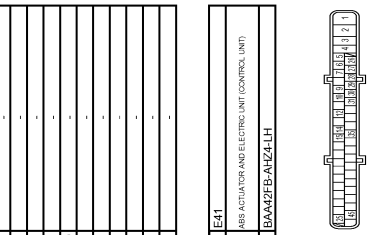


| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | L/Y | - |
| 2 | SHIELD | - |
| 3 | L/B | - |
| 4 | SHIELD | - |
| 5 | BR | - |
| 7 | G | - |
| 8 | W | - |
| 9 | W | - |
| 10 | Y | - |
| 11 | P | - |
| 12 | SB | - |
| 13 | L | - |
| 14 | G | - |
| 15 | R | - |
| 16 |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

| 37 | SHIELD | - |
|---|---|---|
| 38 | L | - |
| 39 | P | - |
| 40 | R | - |
| 41 | W | - |
| 42 | LG | - |
| 43 | G | - |
| 45 | BG | - |
| 46 | SHIELD | - |
| 47 | W | - |
| 48 | BR | - |
| 49 | G | - |
| 50 | B | - |
| 51 | SB | - |
| 52 | R | - |

Connector No. E41
Connector Name ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type BAA42FB-AHZ4-LH

H.S.

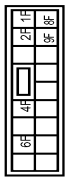


| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | B | GROUND |
| 2 | G | UBMR |
| 3 | R | UBVR |
| 4 | B | GROUND |
| 5 | Y | DS FL |
| 6 | BG | DP RL |
| 7 | BR | DP RR |
| 9 | B | DP FR |
| 10 | W | DS FR |
| 12 | L | VAC |
| 14 | P | CAN-L |
| 15 | SHIELD | GROUND |
| 19 | P | UST |
| 25 | Y | BUS-L |
| 26 | LG | DP FL |
| 27 | GR | DS RL |
| 28 | G | UZ |
| 29 | LG | DS RR |
| 30 | SB | BLS |

| 31 | R | VDC OFF SW |
|---|---|---|
| 35 | L | CAN-H |
| 45 | B | BUS-H |

Connector No. E103
Connector Name FUSE BLOCK (J/B)
Connector Type NS16FW-CS

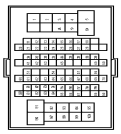
H.S.



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1F | SB | - |
| 2F | W | - |
| 4F | G | - |
| 6F | BR | - |
| 8F | L | - |
| 9F | R | - |

Connector No. E106
Connector Name WIRE TO WIRE
Connector Type TH80FW-CS16-TM4

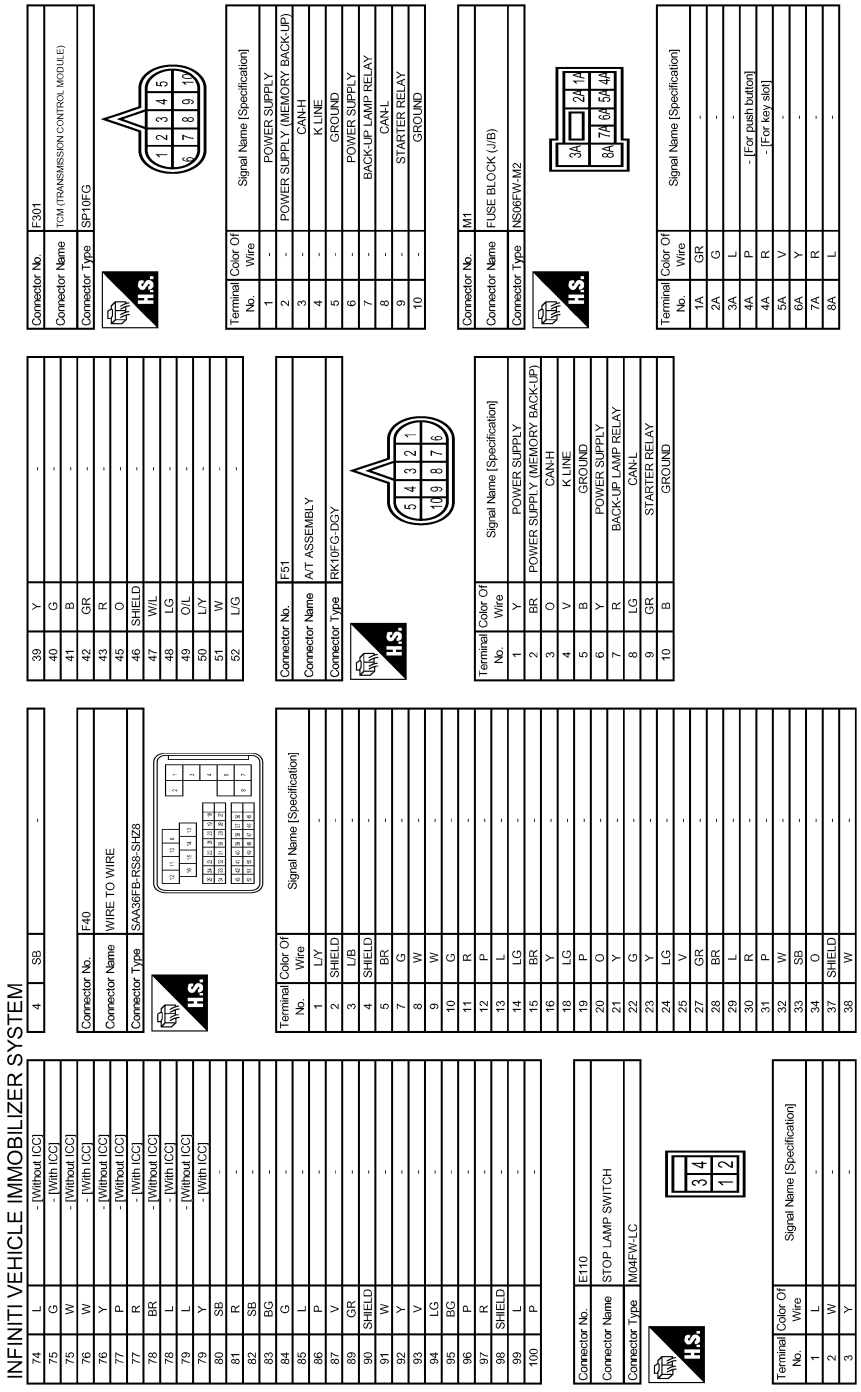
H.S.



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | R | - |
| 2 | W | - |
| 3 | B | - |
| 4 | GR | - |
| 5 | GR | - |
| 8 | Y | - |
| 9 | BR | - |
| 10 | BG | - |
| 11 | SB | - |

| 12 | BG | - |
|---|---|---|
| 13 | L | - |
| 14 | R | - |
| 15 | P | - |
| 16 | V | - |
| 17 | SB | - |
| 18 | V | - |
| 20 | BG | - |
| 21 | L | - |
| 22 | V | - |
| 23 | G | - |
| 24 | P | - |
| 25 | Y | - |
| 26 | V | - |
| 27 | W | - |
| 28 | G | - |
| 31 | BG | - |
| 32 | W | - |
| 33 | B | - |
| 34 | R | - |
| 35 | G | - |
| 36 | SHIELD | - |
| 37 | V | - |
| 38 | BR | - |
| 39 | BG | - |
| 41 | W | - |
| 42 | G | - |
| 43 | BR | - |
| 45 | W | - |
| 49 | L | - |
| 50 | P | - |
| 51 | L | - |
| 54 | BG | - |
| 57 | BR | - |
| 59 | W | - |
| 60 | LG | - |
| 61 | G | - |
| 62 | SB | - |
| 63 | W | - |
| 64 | B | - |
| 65 | G | - |
| 66 | R | - |
| 67 | SHIELD | - |
| 68 | Y | - |
| 69 | LG | - |
| 70 | W | - |
| 71 | R | - |
| 72 | Y | - |
| 73 | B | - |
| 74 | BR | - [With ICC] |

JRKWD1300GB




JRKWD1301GB

INFINITI VEHICLE IMMOBILIZER SYSTEM

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



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 3B | P | - |
| 4B | G | - |
| 5B | BG | - |
| 6B | Y | - |
| 7B | P | - |
| 8B | R | - |
| 9B | SB | - |

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



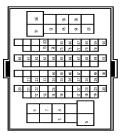
| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 10C | L | - |
| 11C | R | - |
| 12C | BG | - |
| 6C | R | - |
| 7C | B | - |
| 9C | BG | - |

| Connector No. | M6 |
|---|---|
| Connector Name | WIRE TO WIRE |
| Connector Type | TH80MW-CS16-TM4 |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | W | - |
| 2 | R | - |
| 3 | B | - |
| 4 | SHIELD | - |
| 5 | G | - |
| 8 | Y | - |
| 9 | BR | - |
| 10 | R | - |
| 11 | BR | - |
| 12 | BG | - |
| 13 | L | - |
| 14 | R | - |
| 15 | P | - |
| 16 | V | - |
| 17 | SB | - |
| 18 | V | - |
| 20 | BG | - |
| 21 | L | - |
| 22 | W | - |
| 23 | P | - |
| 24 | BR | - |
| 25 | Y | - |
| 26 | V | - |
| 27 | G | - |
| 28 | G | - |
| 31 | L | - |
| 32 | G | - |
| 33 | B | - |
| 34 | W | - |
| 35 | R | - |
| 36 | SHIELD | - |
| 37 | V | - |
| 38 | BG | - |
| 39 | BR | - |
| 41 | W | - |
| 42 | BG | - |
| 43 | BG | - |
| 45 | W | - |
| 49 | L | - |
| 50 | P | - |
| 51 | BR | - |
| 54 | Y | - |
| 57 | G | - |
| 59 | W | - |
| 60 | L | - |
| 61 | G | - |
| 62 | SB | - |
| 63 | G | - |
| 64 | B | - |
| 65 | W | - |
| 66 | R | - |
| 67 | SHIELD | - |
| 68 | Y | - |
| 69 | GR | - |
| 70 | LG | - |
| 71 | LG | - |
| 72 | Y | - |
| 73 | SB | - |
| 74 | BR | - [With ICC]<br>- [Without ICC] |
| 74 | L | |
| 75 | G | - |
| 76 | GR | - [Without ICC]<br>- [With ICC] |
| 76 | W | |
| 77 | P | - [Without ICC]<br>- [With ICC] |
| 77 | R | |
| 78 | L | - [With ICC]<br>- [Without ICC] |
| 78 | R | |
| 79 | W | - [Without ICC]<br>- [With ICC] |
| 79 | Y | |
| 80 | SB | - |
| 81 | SB | - |
| 82 | SB | - |
| 83 | V | - |
| 84 | G | - |
| 85 | L | - |
| 86 | P | - |
| 87 | W | - |
| 89 | GR | - |
| 90 | SHIELD | - |
| 91 | W | - |
| 92 | Y | - |
| 93 | BR | - |
| 94 | P | - |
| 95 | GR | - |
| 96 | W | - |
| 97 | L | - |
| 98 | SHIELD | - |
| 99 | V | - |
| 100 | SB | - |

| Connector No. | M7 |
|---|---|
| Connector Name | WIRE TO WIRE |
| Connector Type | TH80MW-CS16-TM4 |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 3 | SB | - [With automatic drive positioner] |
| 3 | W | - [Without automatic drive positioner] |
| 5 | G | - |
| 6 | BG | - |
| 7 | W | - |
| 8 | B | - |
| 12 | SB | - |
| 13 | LG | - |
| 14 | Y | - |
| 15 | G | - |
| 17 | W | - |
| 18 | SB | - |
| 19 | LG | - |
| 20 | BR | - |
| 21 | SHIELD | - |
| 22 | Y | - |
| 24 | V | - |
| 27 | B | - |
| 28 | W | - |
| 29 | R | - |
| 30 | SHIELD | - |
| 31 | L | - |
| 32 | P | - |
| 33 | SB | - |
| 34 | L | - |
| 35 | P | - |
| 36 | L | - |
| 37 | P | - |
| 38 | BR | - |
| 39 | Y | - |
| 44 | L | - |

JRKWD1302GB

INFINITI VEHICLE IMMOBILIZER SYSTEM

| | | |
|---|---|---|
| 45 | GR | - |
| 46 | LG | - |
| 47 | SB | - |
| 49 | V | - |
| 50 | R | - |
| 60 | P | - |
| 61 | L | - |
| 62 | SHIELD | - |
| 63 | R | - |
| 64 | G | - |
| 65 | SHIELD | - |
| 66 | SB | - |
| 67 | V | - |
| 68 | LG | - |
| 69 | SHIELD | - |
| 70 | W | - |
| 73 | G | - |
| 74 | R | - |
| 75 | W | - |
| 76 | W | - |
| 77 | B | - |
| 78 | P | - |
| 79 | GR | - |
| 83 | BG | - |
| 85 | LG | - |
| 86 | R | - |
| 87 | Y | - |
| 88 | W | - |
| 89 | BR | - |
| 90 | BG | - |
| 91 | G | - |
| 92 | V | - |
| 93 | BR | - |
| 94 | V | - |
| 95 | G | - |
| 96 | Y | - |
| 98 | W | - |
| 99 | R | - |

| Connector No. | M22 |
|---|---|
| Connector Name | KEY SLOT |
| Connector Type | TH12FW-NH |

H.S.




| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | R | BAT |
| 2 | GR | CLOCK |
| 3 | W | DATA |
| 5 | Y | ILL BAT |
| 6 | LG | ILL |
| 7 | B | GROUND |
| 11 | BR | KEY SWITCH SIGNAL |

| Connector No. | M24 |
|---|---|
| Connector Name | DATA LINK CONNECTOR |
| Connector Type | BD16FW |

H.S.




| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 3 | LG | - |
| 4 | B | - |
| 5 | B | - |
| 6 | L | - |
| 7 | V | - |
| 8 | G | - |
| 11 | SB | - |
| 14 | P | - |
| 16 | Y | - |

| Connector No. | M41 |
|---|---|
| Connector Name | WIRE TO WIRE |
| Connector Type | M03MW-LC |

H.S.




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

| Connector No. | M42 |
|---|---|
| Connector Name | WIRE TO WIRE |
| Connector Type | M03FW-LC |

H.S.




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

| Connector No. | M50 |
|---|---|
| Connector Name | PUSH-BUTTON IGNITION SWITCH |
| Connector Type | TK08FBR |

H.S.




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

| Connector No. | M53 |
|---|---|
| Connector Name | COMBINATION METER |
| Connector Type | TH40FW-NH |

H.S.



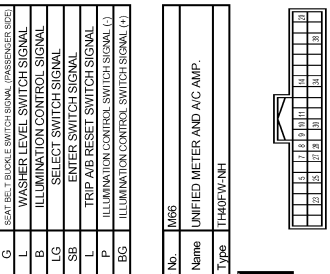

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | GR | BATTERY POWER SUPPLY |
| 2 | LG | COMMUNICATION SIGNAL (METER-AMP.) |
| 3 | GR | COMMUNICATION SIGNAL (AMP.-METER) |
| 5 | B | GROUND |
| 6 | P | ALTERNATOR SIGNAL |
| 7 | BR | AIR BAG SIGNAL |
| 10 | G | SECURITY SIGNAL |
| 15 | B | GROUND |
| 16 | B | METER CONTROL SWITCH GROUND |
| 19 | B | ILL GND |
| 20 | R | ILL |
| 21 | BG | IGNITION SIGNAL |

JRKWD1303GB

INFINITI VEHICLE IMMOBILIZER SYSTEM

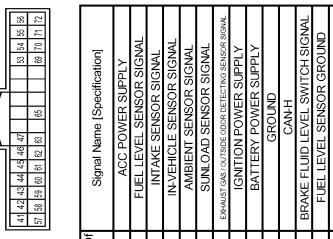
| | | |
|---|---|---|
| 22 | B | GROUND |
| 24 | BR | COMMUNICATION SIGNAL (LCD-AMP.) |
| 25 | Y | COMMUNICATION SIGNAL (AMP.-LCD) |
| 26 | R | VEHICLE SPEED SIGNAL (8-PULSE) |
| 27 | V | PARKING BRAKE SWITCH SIGNAL |
| 28 | W | BRAKE FLUID LEVEL SWITCH SIGNAL |
| 29 | SB | SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE) |
| 30 | G | SEAT BELT BUCKLE SWITCH SIGNAL (PASSENGER SIDE) |
| 31 | L | WASHER LEVEL SWITCH SIGNAL |
| 33 | B | ILLUMINATION CONTROL SIGNAL |
| 36 | LG | SELECT SWITCH SIGNAL |
| 37 | SB | ENTER SWITCH SIGNAL |
| 38 | L | TRIP A/B RESET SWITCH SIGNAL |
| 39 | P | ILLUMINATION CONTROL SWITCH SIGNAL (-) |
| 40 | BG | ILLUMINATION CONTROL SWITCH SIGNAL (+) |

| Connector No. | M66 |
|---|---|
| Connector Name | UNIFIED METER AND A/C AMP. |
| Connector Type | TH40FW-NH |



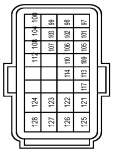
| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 5 | L | MANUAL MODE SHIFT UP SIGNAL |
| 7 | GR | COMMUNICATION SIGNAL (AMP.-METER) |
| 8 | L | VEHICLE SPEED SIGNAL (2-PULSE) |
| 9 | SB | SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE) |
| 10 | W | MANUAL MODE SIGNAL |
| 11 | G | NON-MANUAL MODE SIGNAL |
| 14 | BR | COMMUNICATION SIGNAL (LCD-AMP.) |
| 20 | L | ION ON/OFF SIGNAL |
| 23 | Y | AT SNOW SWITCH SIGNAL |
| 25 | V | MANUAL MODE SHIFT DOWN SIGNAL |
| 27 | LG | COMMUNICATION SIGNAL (METER-AMP.) |
| 28 | R | VEHICLE SPEED SIGNAL (8-PULSE) |
| 30 | V | PARKING BRAKE SWITCH SIGNAL |
| 34 | Y | COMMUNICATION SIGNAL (AMP.-LCD) |
| 38 | P | BLOWER MOTOR CONTROL SIGNAL |

| Connector No. | M67 |
|---|---|
| Connector Name | UNIFIED METER AND A/C AMP. |
| Connector Type | TH32FW-NH |



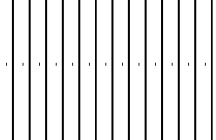
| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 41 | V | ACC POWER SUPPLY |
| 42 | Y | FUEL LEVEL SENSOR SIGNAL |
| 43 | R | INTAKE SENSOR SIGNAL |
| 44 | LG | IN-VEHICLE SENSOR SIGNAL |
| 45 | P | AMBIENT SENSOR SIGNAL |
| 46 | BG | SUNLOAD SENSOR SIGNAL |
| 47 | G | EXHAUST GAS / OUTSIDE ODOR DETECTING SENSOR SIGNAL |
| 53 | G | IGNITION POWER SUPPLY |
| 54 | Y | BATTERY POWER SUPPLY |
| 55 | B | GROUND |
| 56 | L | CAN-H |
| 57 | W | BRAKE FLUID LEVEL SWITCH SIGNAL |
| 58 | BR | FUEL LEVEL SENSOR GROUND |
| 59 | GR | INTAKE SENSOR GROUND |
| 60 | L | IN-VEHICLE SENSOR GROUND |
| 61 | BR | AMBIENT SENSOR GROUND |
| 62 | SB | SUNLOAD SENSOR GROUND |
| 63 | R | - |
| 65 | BG | ECV SIGNAL |
| 69 | L | A/C LAN SIGNAL |
| 70 | R | EACH DOOR MOTOR POWER SUPPLY |
| 71 | B | GROUND |
| 72 | P | CAN-L |

| Connector No. | M107 |
|---|---|
| Connector Name | ECM |
| Connector Type | RH24FGY-RZ8-R-LH-Z |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 97 | R | ACCELERATOR PEDAL POSITION SENSOR 1 |
| 98 | P | ACCELERATOR PEDAL POSITION SENSOR 2 [Without ICC] |
| 98 | Y | ACCELERATOR PEDAL POSITION SENSOR 2 [With ICC] |
| 99 | G | SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 1) [With ICC] |
| 99 | L | SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 1) [Without ICC] |
| 100 | W | SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 1) |
| 101 | SB | ASCD/ICC STEERING SWITCH |
| 102 | LG | EVAP CONTROL SYSTEM PRESS SENSOR |
| 103 | G | SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 2) [Without ICC] |
| 103 | L | SENSOR POWER SUPPLY (ACCELERATOR PEDAL POSITION SENSOR 2) [With ICC] |
| 104 | BR | SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 2) [With ICC] |
| 104 | GR | SENSOR GROUND (ACCELERATOR PEDAL POSITION SENSOR 2) [Without ICC] |
| 105 | L | REFRIGERANT PRESS SENSOR |
| 106 | W | FUEL TANK TEMPERATURE SENSOR |
| 107 | BG | SENSOR POWER SUPPLY (REFRIGERANT PRESSURE SENSOR) |
| 108 | Y | SENSOR GROUND (ASCD/ICC STEERING SWITCH) |
| 109 | G | PNP signal |
| 110 | R | ENGINE SPEED OUTPUT SIGNAL |
| 112 | V | SENSOR GROUND (EVAP CONTROL SYSTEM PRESS SENSOR) |
| 113 | P | CAN COMMUNICATION LINE |
| 114 | L | CAN COMMUNICATION LINE |
| 117 | V | DATA LINK CONNECTOR |
| 121 | LG | EVAP CANISTER VENT CONTROL VALVE |
| 122 | P | STOP LAMP SWITCH |
| 123 | B | ECM GROUND |
| 124 | B | ECM GROUND |
| 125 | R | POWER SUPPLY FOR ECM |
| 126 | BR | ASCD/ICC BRAKE SWITCH |
| 127 | B | ECM GROUND |
| 128 | B | ECM GROUND |

| Connector No. | M117 |
|---|---|
| Connector Name | WIRE TO WIRE |
| Connector Type | TH80MW-CS16-TM4 |



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | L | - |
| 2 | G | - |
| 3 | GR | - |
| 4 | SB | - |
| 7 | W | - |
| 10 | W | - |
| 15 | SB | - |
| 16 | V | - |
| 17 | BR | - |
| 26 | BR | - |
| 27 | LG | - |
| 28 | Y | - |
| 29 | Y | - |
| 30 | V | - |
| 31 | R | - |
| 32 | BR | - |
| 33 | G | - |
| 51 | R | - |
| 55 | W | - |
| 56 | B | - |
| 57 | R | - |
| 58 | G | - |
| 59 | SHIELD | - |
| 60 | V | - |
| 61 | LG | - |
| 62 | BR | - |
| 63 | L | - |
| 64 | LG | - |
| 65 | B | - |
| 66 | R | - |
| 67 | W | - |
| 68 | SHIELD | - |
| 69 | V | - |
| 70 | Y | - |
| 71 | SB | - |
| 72 | W | - |

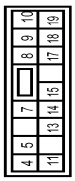
JRKWD1304GB

INFINITI VEHICLE IMMOBILIZER SYSTEM

| | | |
|---|---|---|
| 73 | G | - |
| 75 | W | - |
| 80 | V | - |
| 81 | SB | - |
| 82 | V | - |
| 83 | P | - |
| 84 | R | - |
| 85 | L | - |
| 86 | BG | - |
| 87 | L | - |
| 88 | P | - |
| 91 | V | - |
| 92 | G | - |
| 94 | G | - |
| 95 | W | - |
| 96 | G | - |
| 97 | Y | - |
| 98 | BR | - |
| 99 | P | - [Without BOSE audio] |
| 99 | V | - [With BOSE audio] |
| 100 | L | - [Without BOSE audio] |
| 100 | SB | - [With BOSE audio] |

| | |
|---|---|
| Connector No. | M119 |
| Connector Name | BCM (BODY CONTROL MODULE) |
| Connector Type | NS16FW-CS |

H.S.




| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 4 | LG | INTERIOR ROOM LAMP POWER SUPPLY |
| 5 | L | PASSENGER DOOR UNLOCK OUTPUT |
| 7 | Y | STEP LAMP CONT |
| 8 | V | ALL DOOR, FUEL LID LOCK OUTPUT |
| 9 | G | DRIVER DOOR, FUEL LID UNLOCK OUTPUT |
| 10 | BR | REAR DOOR UNLOCK OUTPUT |
| 11 | R | BAT (FUSE) |
| 13 | B | GROUND |
| 14 | W | PUSH-BUTTON IGNITION SW ILL GND |
| 15 | Y | ACC IND |
| 17 | W | TURN SIGNAL RH (FRONT) |
| 18 | BG | TURN SIGNAL LH (FRONT) |
| 19 | V | INT ROOM LAMP CONT |

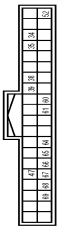
| | |
|---|---|
| Connector No. | M118 |
| Connector Name | BCM (BODY CONTROL MODULE) |
| Connector Type | M03FB-LC |

H.S.


| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | W | BAT (F/L) |
| 2 | W | POWER WINDOW POWER SUPPLY(BAT) |
| 3 | Y | POWER WINDOW POWER SUPPLY(RAP) |

| | |
|---|---|
| Connector No. | M121 |
| Connector Name | BCM (BODY CONTROL MODULE) |
| Connector Type | TH40FGY-NH |

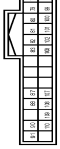
H.S.




| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 34 | SB | LUGGAGE ROOM ANT- |
| 35 | V | LUGGAGE ROOM ANT+ |
| 38 | B | BACK DOOR ANT- |
| 39 | W | BACK DOOR ANT+ |
| 47 | Y | IGN RELAY (IPDM E/R) CONT |
| 52 | SB | STARTER RELAY CONT |
| 60 | BR | PUSH SW |
| 61 | W | BACK DOOR OPENER REQUEST SW |
| 64 | V | I-KEY WARN BUZZER (ENG ROOM) |
| 65 | BG | REAR WIPER STOP POSITION |
| 66 | R | BACK DOOR SW |
| 67 | GR | BACK DOOR OPENER SW |
| 68 | BR | REAR RH DOOR SW |
| 69 | R | REAR LH DOOR SW |

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

H.S.




| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 74 | SB | PASSENGER DOOR ANT- |
| 75 | GR | PASSENGER DOOR ANT+ |
| 76 | V | DRIVER DOOR ANT- |
| 77 | LG | DRIVER DOOR ANT+ |
| 78 | Y | ROOM ANT1- |
| 79 | BR | ROOM ANT1+ |
| 80 | GR | NATS ANT AMP. |
| 81 | W | NATS ANT AMP. |
| 82 | R | IGN RELAY (F/B) CONT |
| 83 | Y | KEYLESS ENTRY RECEIVER COMM |
| 87 | BR | COMBI SW INPUT 5 |
| 88 | V | COMBI SW INPUT 3 |
| 90 | P | CAN-L |
| 91 | L | CAN-H |
| 92 | LG | KEY SLOT ILL CONT |
| 93 | V | ON IND |
| 94 | Y | PUDDLE LAMP CONT |
| 95 | BG | ACC RELAY CONT |
| 96 | GR | A/T SHIFT SELECTOR POWER SUPPLY |
| 99 | R | SHIFT P |
| 100 | G | PASSENGER DOOR REQUEST SW |
| 101 | SB | DRIVER DOOR REQUEST SW |
| 102 | BG | BLOWER FAN MOTOR RELAY CONT |
| 103 | LG | KEYLESS ENTRY RECEIVER POWER SUPPLY |
| 107 | LG | COMBI SW INPUT 1 |
| 108 | R | COMBI SW INPUT 4 |
| 109 | Y | COMBI SW INPUT 2 |
| 110 | G | HAZARD SW |

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

H.S.




| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 113 | P | OPLICAL SENSOR |
| 116 | SB | STOP LAMP SW 1 |
| 118 | P | STOP LAMP SW 2 |
| 119 | SB | DR DOOR UNLOCK SENSOR |
| 121 | BR | KEY SLOT SW |
| 123 | W | IGN F/B |
| 124 | LG | PASSENGER DOOR SW |
| 132 | BR | POWER WINDOW SW COMM |
| 133 | W | PUSH-BUTTON IGNITION SW ILL POWER |
| 134 | GR | LOCK IND |
| 137 | BG | RECEIVER/SENSOR GND |
| 138 | Y | RECEIVER/SENSOR POWER SUPPLY |
| 139 | L | TIRE PRESSURE RECEIVER COMM |
| 140 | GR | SHIFT N/P |
| 141 | G | SECURITY IND LAMP CONT |
| 142 | BG | COMBI SW OUTPUT 5 |
| 143 | P | COMBI SW OUTPUT 1 |
| 144 | G | COMBI SW OUTPUT 2 |
| 145 | L | COMBI SW OUTPUT 3 |
| 146 | SB | COMBI SW OUTPUT 4 |
| 150 | LG | DRIVER DOOR SW |
| 151 | G | REAR WINDOW DEFOGGER RELAY CONT |

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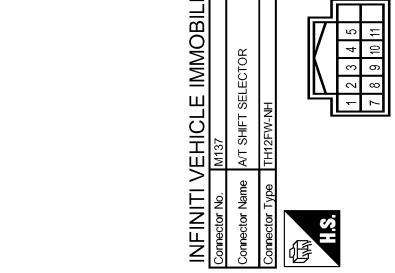
INFINITI VEHICLE IMMOBILIZER SYSTEM

| Connector No. | M137 |
|---|---|
| Connector Name | A/T SHIFT SELECTOR |
| Connector Type | TH12FW-NH |




| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | W | - |
| 2 | V | - |
| 3 | L | - |
| 4 | B | - |
| 5 | G | - |
| 7 | R | - |
| 8 | SB | - |
| 9 | B | - |
| 10 | GR | - |
| 11 | R | - |

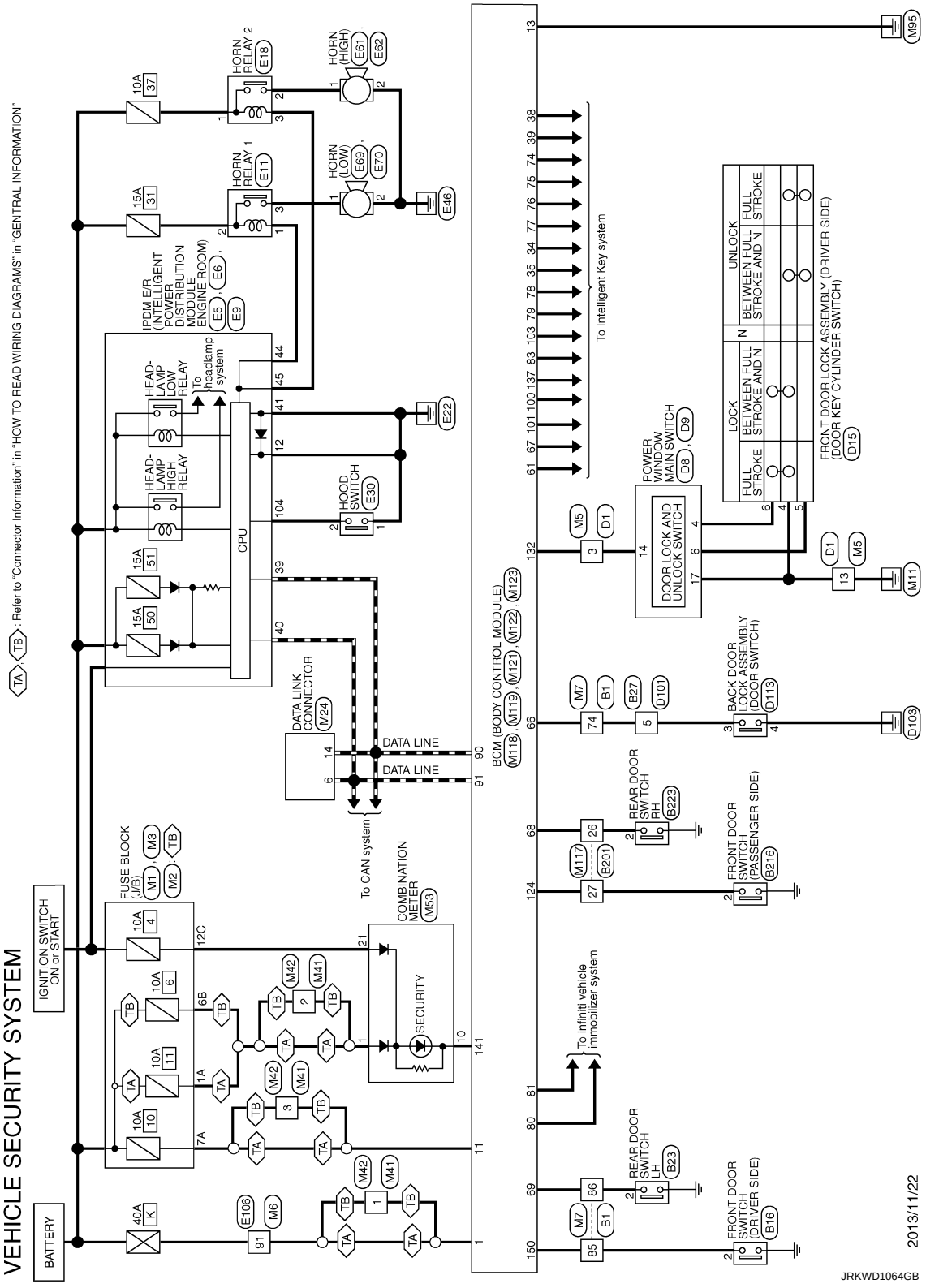
JRKWD1306GB

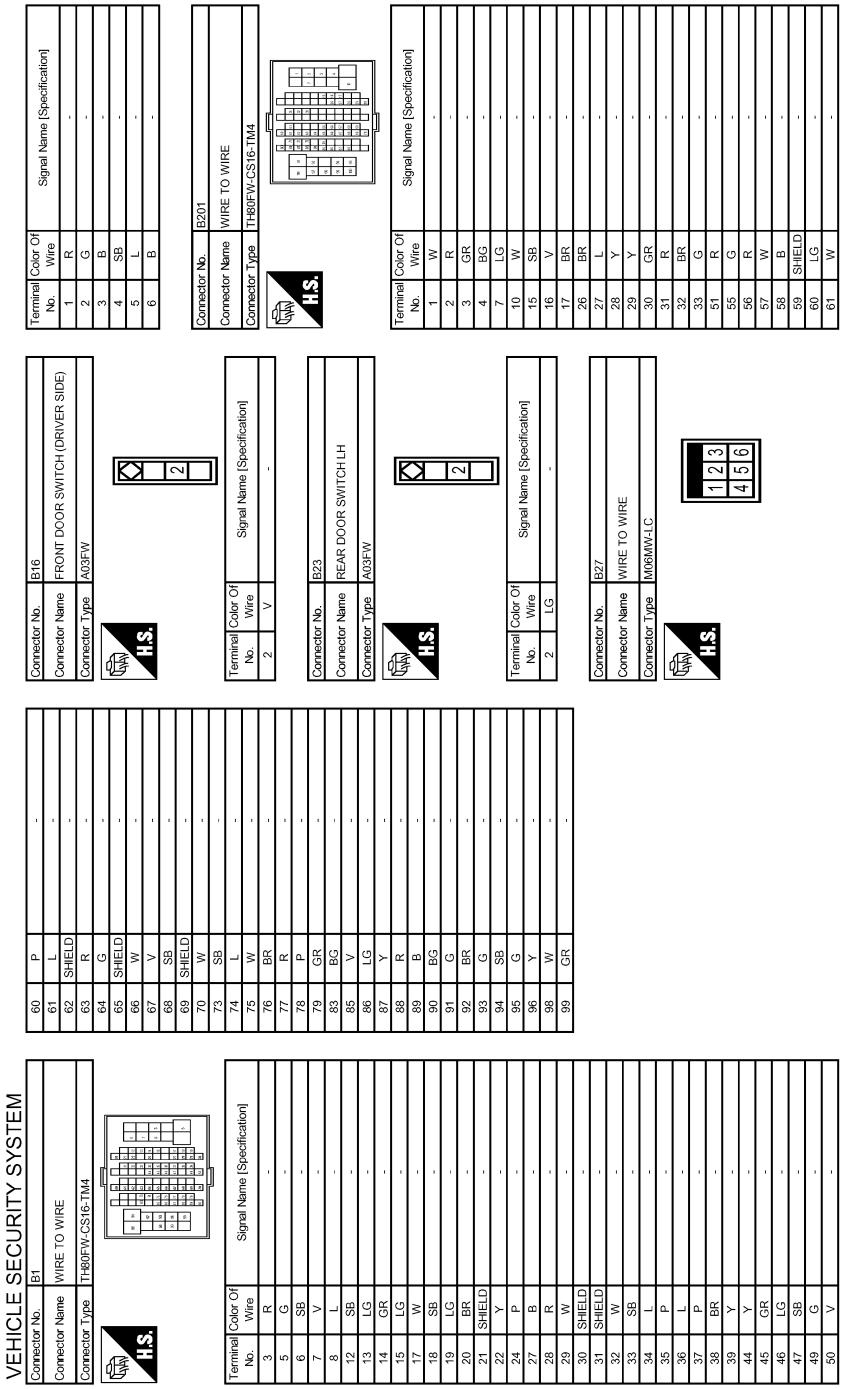
# VEHICLE SECURITY SYSTEM

## Wiring Diagram - VEHICLE SECURITY SYSTEM -

INFOID:0000000008284537

For connector terminal arrangements, harness layouts, and alphabets in a ⬡ (option abbreviation; if not described in wiring diagram), refer to GI-12, "Connector Information".



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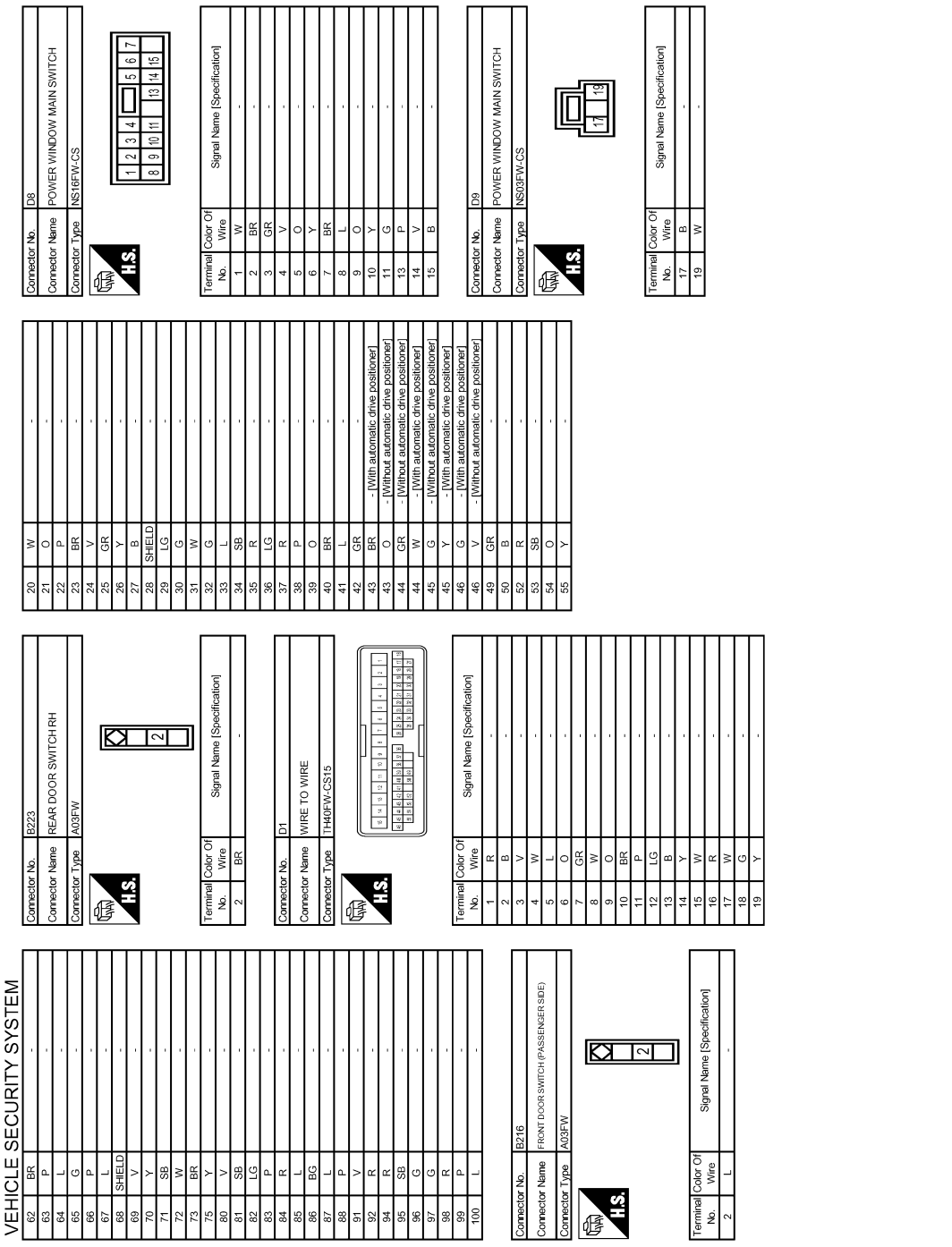
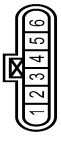



JRKWD1291GB

VEHICLE SECURITY SYSTEM

| Connector No. | D15 |
|---|---|
| Connector Name | FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE) |
| Connector Type | E06FGY-RS |

H.S.




| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | LG | - |
| 2 | P | - |
| 3 | L | - |
| 4 | B | - |
| 5 | Y | - |
| 6 | V | - |

| Connector No. | D101 |
|---|---|
| Connector Name | WIRE TO WIRE |
| Connector Type | M06FW-LC |

H.S.




| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | R | - |
| 2 | G | - |
| 3 | B | - |
| 4 | Y | - |
| 5 | V | - |
| 6 | B | - |

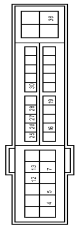
| Connector No. | D113 |
|---|---|
| Connector Name | BACK DOOR LOCK ASSEMBLY |
| Connector Type | NS04FW-CS |

H.S.


| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | Y | - |
| 2 | B | - |
| 3 | V | - |
| 4 | B | - |

| Connector No. | E5 |
|---|---|
| Connector Name | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Type | TH20FW-CS12-M4-1V |

H.S.



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 4 | V | - |
| 5 | L | - |
| 7 | R | - |
| 12 | B/W | - |
| 13 | Y | - |
| 16 | LG | - |
| 19 | W | - |
| 25 | G | - |
| 26 | R | - |
| 27 | BG | - |
| 28 | L | - |
| 30 | GR | - |
| 36 | G | - |

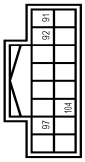
| Connector No. | E6 |
|---|---|
| Connector Name | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Type | TH40FW-NH |

H.S.


| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 39 | P | - |
| 40 | L | - |
| 41 | B/W | - |
| 43 | SB | - |
| 44 | BR | - |
| 45 | G | - |
| 46 | R | - |

| Connector No. | E9 |
|---|---|
| Connector Name | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Type | TH16FW-NH |

H.S.




| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 91 | P | - |
| 92 | BG | - |
| 97 | V | - |
| 104 | LG | - |

| Connector No. | E11 |
|---|---|
| Connector Name | HORN RELAY 1 |
| Connector Type | Relay_24381_7990A |

H.S.

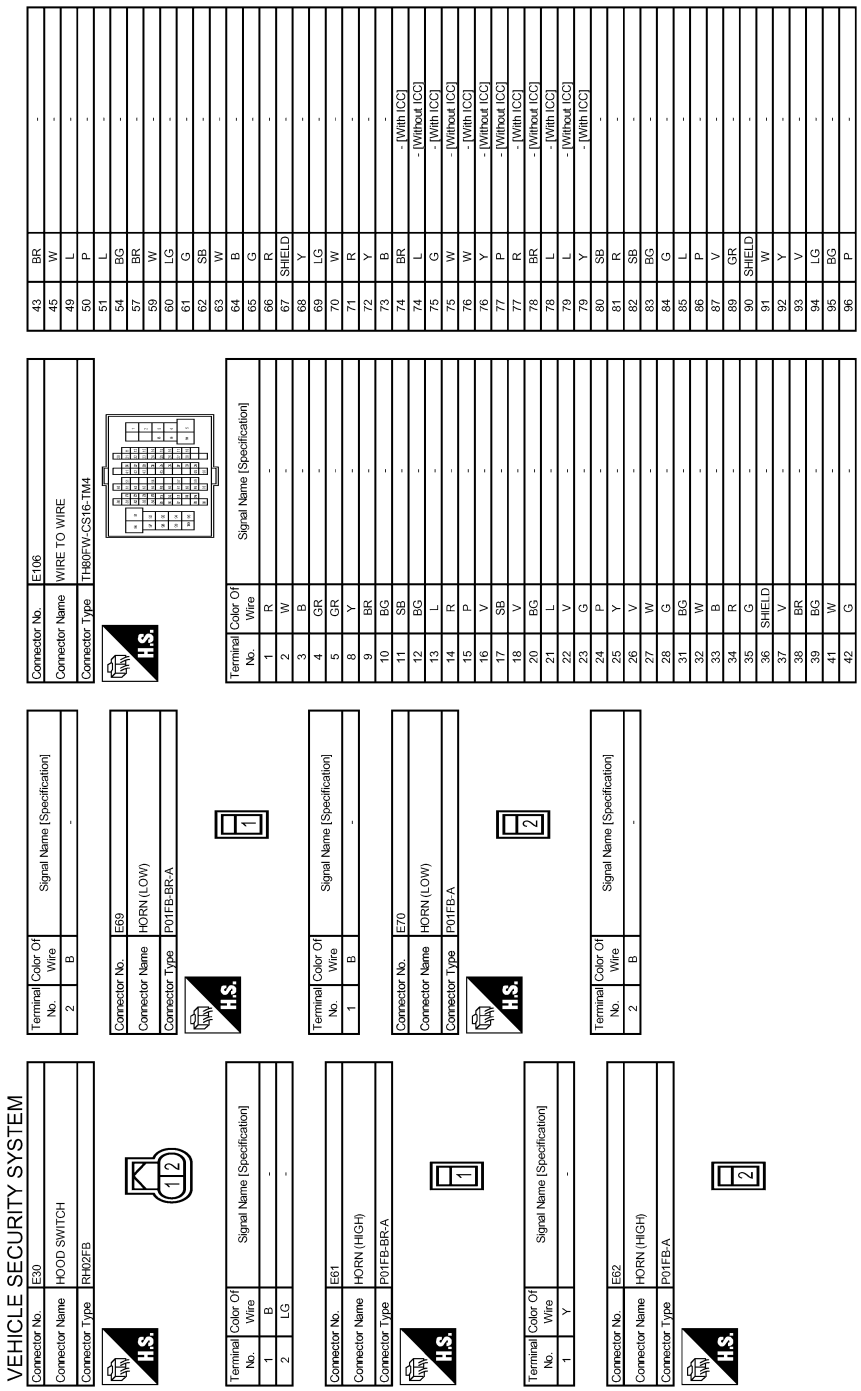

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | BR | - |
| 2 | LG | - |
| 3 | B | - |

| Connector No. | E18 |
|---|---|
| Connector Name | HORN RELAY 2 |
| Connector Type | M03FW-R-LC |

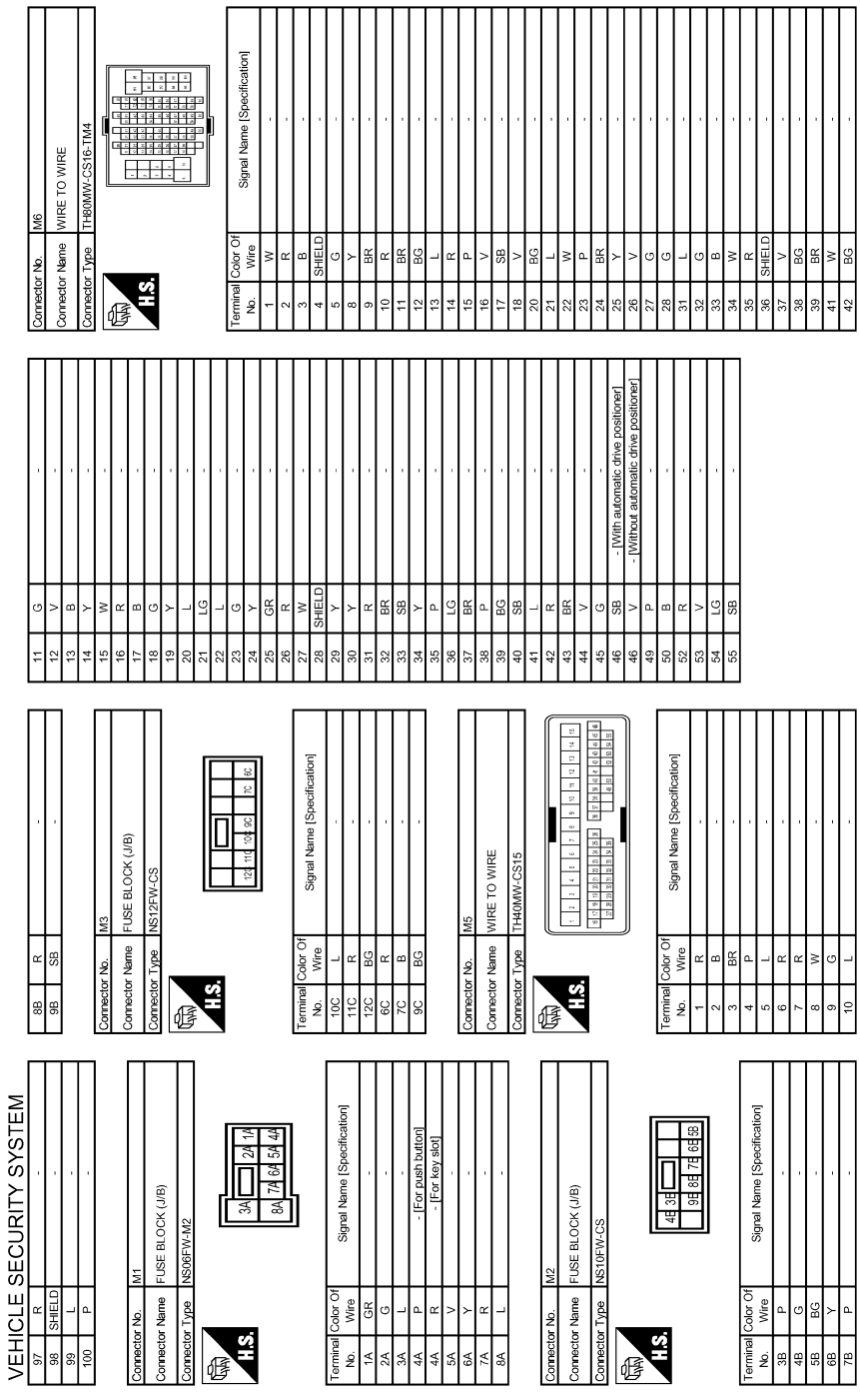
H.S.


| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | BR | - |
| 2 | Y | - |
| 3 | G | - |

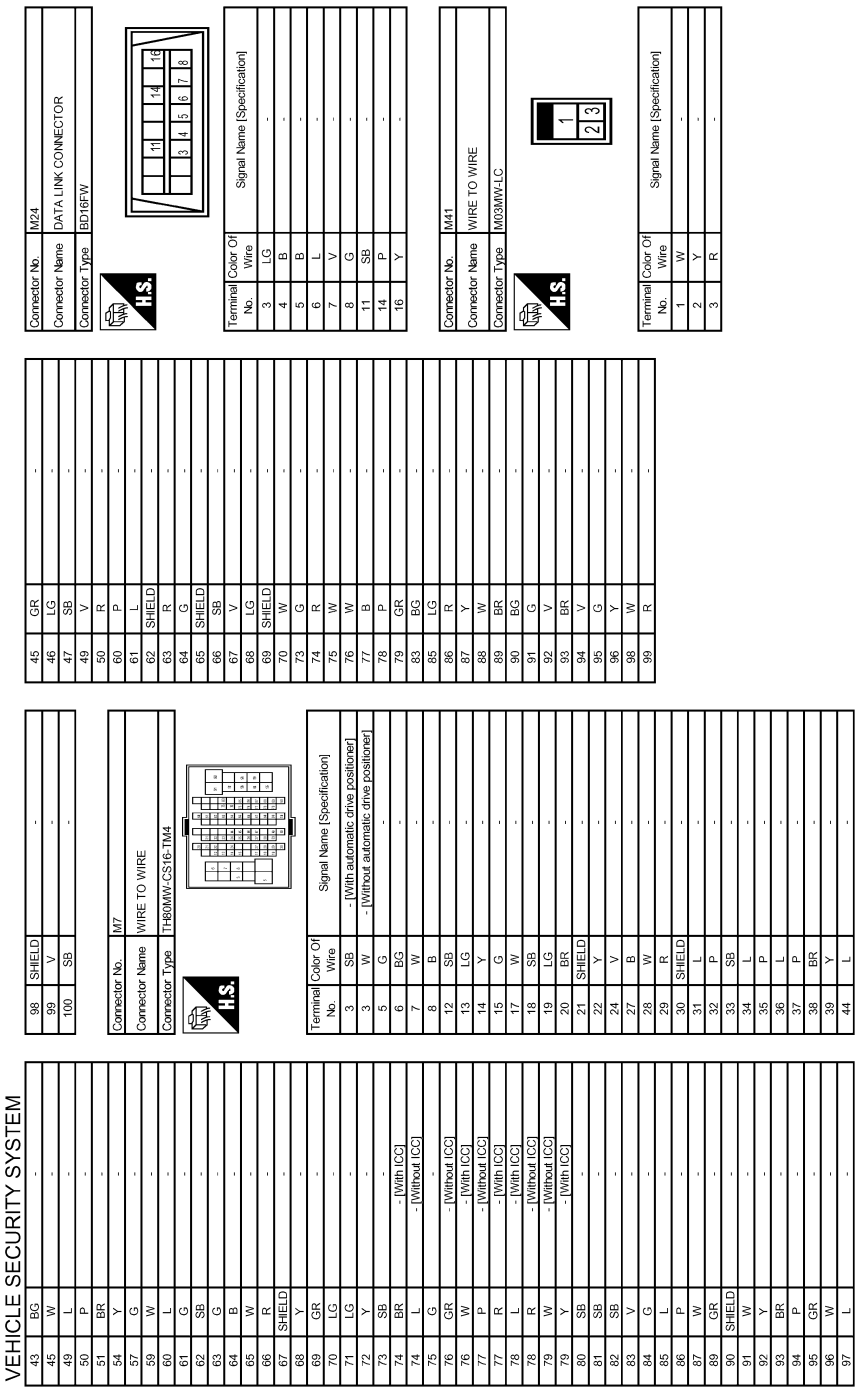
JRKWD1292GB




JRKWD1293GB




JRKWD1294GB




JRKWD1295GB

VEHICLE SECURITY SYSTEM

| Connector No. | M42 |
|---|---|
| Connector Name | WIRE TO WIRE |
| Connector Type | M03FW-LC |

H.S.

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

| Connector No. | M53 |
|---|---|
| Connector Name | COMBINATION METER |
| Connector Type | TH40FW-NH |

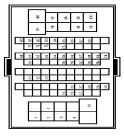
H.S.



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | GR | BATTERY POWER SUPPLY |
| 2 | LG | COMMUNICATION SIGNAL (METER-AMP.) |
| 3 | GR | COMMUNICATION SIGNAL (AMP.-METER) |
| 5 | B | GROUND |
| 6 | P | ALTERNATOR SIGNAL |
| 7 | BR | AIR BAG SIGNAL |
| 10 | G | SECURITY SIGNAL |
| 15 | B | GROUND |
| 16 | B | METER CONTROL SWITCH GROUND |
| 19 | B | ILL GND |
| 20 | R | ILL |
| 21 | BG | IGNITION SIGNAL |
| 22 | B | GROUND |
| 24 | BR | COMMUNICATION SIGNAL (LCD-AMP.) |
| 25 | Y | COMMUNICATION SIGNAL (AMP.-LCD) |
| 26 | R | VEHICLE SPEED SIGNAL (8-PULSE) |
| 27 | V | PARKING BRAKE SWITCH SIGNAL |
| 28 | W | BRAKE FLUID LEVEL SWITCH SIGNAL |
| 29 | SB | SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE) |
| 30 | G | SEAT BELT BUCKLE SWITCH SIGNAL (PASSENGER SIDE) |
| 31 | L | WASHER LEVEL SWITCH SIGNAL |
| 33 | B | ILLUMINATION CONTROL SIGNAL |
| 36 | LG | SELECT SWITCH SIGNAL |
| 37 | SB | ENTER SWITCH SIGNAL |
| 38 | L | TRIP A/B RESET SWITCH SIGNAL |
| 39 | P | ILLUMINATION CONTROL SWITCH SIGNAL (-) |
| 40 | BG | ILLUMINATION CONTROL SWITCH SIGNAL (+) |

| Connector No. | M117 |
|---|---|
| Connector Name | WIRE TO WIRE |
| Connector Type | TH80MW-CS16-TM4 |

H.S.



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | L | - |
| 2 | G | - |
| 3 | GR | - |
| 4 | SB | - |
| 7 | W | - |
| 10 | W | - |
| 15 | SB | - |
| 16 | V | - |
| 17 | BR | - |
| 26 | BR | - |
| 27 | LG | - |
| 28 | Y | - |
| 29 | Y | - |
| 30 | V | - |
| 31 | R | - |
| 32 | BR | - |
| 33 | G | - |
| 51 | R | - |
| 55 | W | - |
| 56 | B | - |
| 57 | R | - |
| 58 | G | - |
| 59 | SHIELD | - |
| 60 | V | - |
| 61 | LG | - |
| 62 | BR | - |
| 63 | L | - |
| 64 | LG | - |
| 65 | B | - |
| 66 | R | - |
| 67 | W | - |
| 68 | SHIELD | - |
| 69 | V | - |
| 70 | Y | - |
| 71 | SB | - |
| 72 | W | - |
| 73 | G | - |
| 75 | W | - |
| 80 | V | - |
| 81 | SB | - |
| 82 | V | - |
| 83 | P | - |
| 84 | R | - |
| 85 | L | - |
| 86 | BG | - |
| 87 | L | - |
| 88 | P | - |
| 91 | V | - |
| 92 | G | - |
| 94 | G | - |
| 95 | W | - |
| 96 | G | - |
| 97 | Y | - |
| 98 | BR | - |
| 99 | P | - [Without BOSE audio]<br>- [With BOSE audio] |
| 99 | V | - [Without BOSE audio]<br>- [With BOSE audio] |
| 100 | L | |
| 100 | SB | |

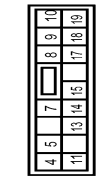
| Connector No. | M118 |
|---|---|
| Connector Name | BCM (BODY CONTROL MODULE) |
| Connector Type | M03FB-LC |

H.S.

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 1 | W | BAT (F/L) |
| 2 | W | POWER WINDOW POWER SUPPLY(BAT) |
| 3 | Y | POWER WINDOW POWER SUPPLY(RAP) |

| Connector No. | M119 |
|---|---|
| Connector Name | BCM (BODY CONTROL MODULE) |
| Connector Type | NS16FW-CS |

H.S.



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 4 | LG | INTERIOR ROOM LAMP POWER SUPPLY |
| 5 | L | PASSENGER DOOR UNLOCK OUTPUT |
| 7 | Y | STEP LAMP CONT |
| 8 | V | ALL DOOR, FUEL LID LOCK OUTPUT |
| 9 | G | DRIVER DOOR, FUEL LID UNLOCK OUTPUT |
| 10 | BR | REAR DOOR UNLOCK OUTPUT |
| 11 | R | BAT (FUSE) |
| 13 | B | GROUND |
| 14 | W | PUSH-BUTTON IGNITION SW ILL GND |
| 15 | Y | ACC IND |
| 17 | W | TURN SIGNAL RH (FRONT) |
| 18 | BG | TURN SIGNAL LH (FRONT) |
| 19 | V | INT ROOM LAMP CONT |

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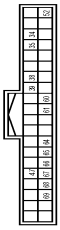
VEHICLE SECURITY SYSTEM

| Connector No. | M121 |
|---|---|
| Connector Name | BCM (BODY CONTROL MODULE) |
| Connector Type | TH40FGY-NH |

H.S.



| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 34 | SB | LUGGAGE ROOM ANT- |
| 35 | V | LUGGAGE ROOM ANT+ |
| 38 | B | BACK DOOR ANT- |
| 39 | W | BACK DOOR ANT+ |
| 47 | Y | IGN RELAY (IPDM E/R) CONT |
| 52 | SB | STARTER RELAY CONT |
| 60 | BR | PUSH SW |
| 61 | W | BACK DOOR OPENER REQUEST SW |
| 64 | V | I-KEY WARN BUZZER (ENG ROOM) |
| 65 | BG | REAR WIPER STOP POSITION |
| 66 | R | BACK DOOR SW |
| 67 | GR | BACK DOOR OPENER SW |
| 68 | BR | REAR RH DOOR SW |
| 69 | R | REAR LH DOOR SW |

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

H.S.

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 74 | SB | PASSENGER DOOR ANT- |
| 75 | GR | PASSENGER DOOR ANT+ |
| 76 | V | DRIVER DOOR ANT- |
| 77 | LG | DRIVER DOOR ANT+ |
| 78 | Y | ROOM ANT1- |
| 79 | BR | ROOM ANT1+ |
| 80 | GR | NATS ANT AMP. |
| 81 | W | NATS ANT AMP. |
| 82 | R | IGN RELAY (F/B) CONT |
| 83 | Y | KEYLESS ENTRY RECEIVER COMM |
| 87 | BR | COMBI SW INPUT 5 |
| 88 | V | COMBI SW INPUT 3 |
| 90 | P | CAN-L |
| 91 | L | CAN-H |
| 92 | LG | KEY SLOT ILL CONT |
| 93 | V | ON IND |
| 94 | Y | PUDDLE LAMP CONT |
| 95 | BG | ACC RELAY CONT |
| 96 | GR | A/T SHIFT SELECTOR POWER SUPPLY |
| 99 | R | SHIFT P |
| 100 | G | PASSENGER DOOR REQUEST SW |
| 101 | SB | DRIVER DOOR REQUEST SW |
| 102 | BG | BLOWER FAN MOTOR RELAY CONT |
| 103 | LG | KEYLESS ENTRY RECEIVER POWER SUPPLY |
| 107 | LG | COMBI SW INPUT 1 |
| 108 | R | COMBI SW INPUT 4 |
| 109 | Y | COMBI SW INPUT 2 |
| 110 | G | HAZARD SW |

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

H.S.

| Terminal No. | Color Of Wire | Signal Name [Specification] |
|---|---|---|
| 113 | P | OPLICAL SENSOR |
| 116 | SB | STOP LAMP SW 1 |
| 118 | P | STOP LAMP SW 2 |
| 119 | SB | DR DOOR UNLOCK SENSOR |
| 121 | BR | KEY SLOT SW |
| 123 | W | IGN F/B |
| 124 | LG | PASSENGER DOOR SW |
| 132 | BR | POWER WINDOW SW COMM |
| 133 | W | PUSH-BUTTON IGNITION SW ILL POWER |
| 134 | GR | LOCK IND |
| 137 | BG | RECEIVER/SENSOR GND |
| 138 | Y | RECEIVER/SENSOR POWER SUPPLY |
| 139 | L | TIRE PRESSURE RECEIVER COMM |
| 140 | GR | SHIFT N/P |
| 141 | G | SECURITY IND LAMP CONT |
| 142 | BG | COMBI SW OUTPUT 5 |
| 143 | P | COMBI SW OUTPUT 1 |
| 144 | G | COMBI SW OUTPUT 2 |
| 145 | L | COMBI SW OUTPUT 3 |
| 146 | SB | COMBI SW OUTPUT 4 |
| 150 | LG | DRIVER DOOR SW |
| 151 | G | REAR WINDOW DEFOGGER RELAY CONT |

JRKWD1297GB

# ECU DIAGNOSIS INFORMATION

## BCM

### Reference Value

INFOID:0000000008776156

#### VALUES ON THE DIAGNOSIS TOOL

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

CONSULT 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 |
| RR WIPER ON | Other than rear wiper switch ON | Off |
| | Rear wiper switch ON | On |
| RR WIPER INT | Other than rear wiper switch INT | Off |
| | Rear wiper switch INT | On |
| RR WASHER SW | Rear washer switch OFF | Off |
| | Rear washer switch ON | On |
| RR WIPER STOP | Rear wiper is in STOP position | Off |
| | Rear wiper is not in STOP position | On |
| 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 |

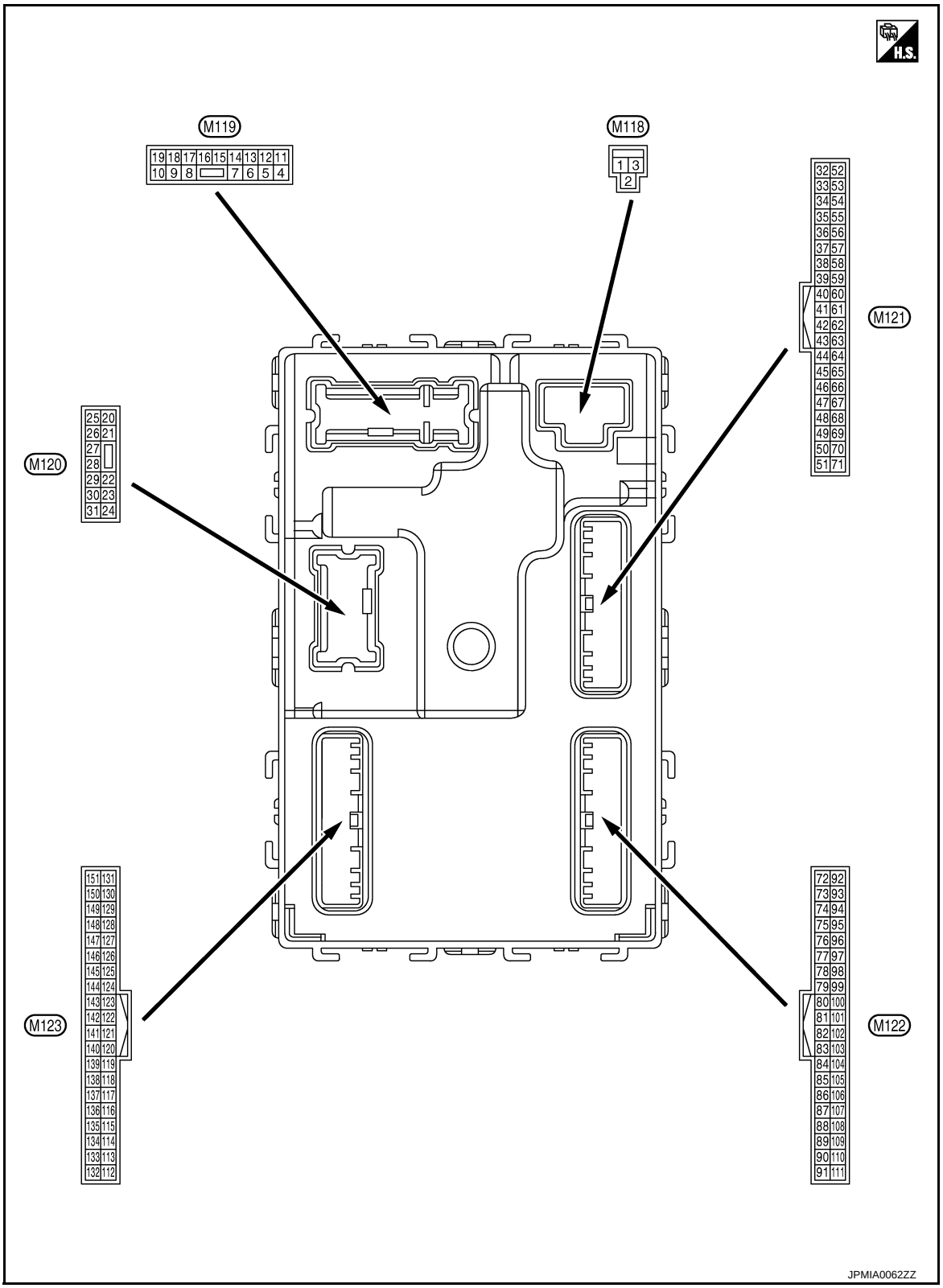
| Monitor Item | Condition | Value/Status |
|---|---|---|
| FR FOG SW | Front fog lamp switch OFF | Off |
| | Front fog lamp switch ON | On |
| RR FOG SW | **NOTE:**<br>The item is indicated, but not monitored. | Off |
| DOOR SW-DR | Driver door closed | Off |
| | Driver door opened | On |
| DOOR SW-AS | Passenger door closed | Off |
| | Passenger door opened | On |
| DOOR SW-RR | Rear RH door closed | Off |
| | Rear RH door opened | On |
| DOOR SW-RL | Rear LH door closed | Off |
| | Rear LH door opened | On |
| DOOR SW-BK | Back door closed | Off |
| | Back door opened | On |
| CDL LOCK SW | Other than power door lock switch LOCK | Off |
| | Power door lock switch LOCK | On |
| CDL UNLOCK SW | Other than power door lock switch UNLOCK | Off |
| | Power door lock switch UNLOCK | On |
| KEY CYL LK-SW | Other than driver door key cylinder LOCK position | Off |
| | Driver door key cylinder LOCK position | On |
| KEY CYL UN-SW | Other than driver door key cylinder UNLOCK position | Off |
| | Driver door key cylinder UNLOCK position | On |
| KEY CYL SW-TR | **NOTE:**<br>The item is indicated, but not monitored. | Off |
| HAZARD SW | Hazard switch is OFF | Off |
| | Hazard switch is ON | On |
| REAR DEF SW | **NOTE:**<br>The item is indicated, but not monitored. | Off |
| TR CANCEL SW | **NOTE:**<br>The item is indicated, but not monitored. | Off |
| TR/BD OPEN SW | Back door opener switch OFF | Off |
| | While the back door opener switch is turned ON | On |
| TRNK/HAT MNTR | **NOTE:**<br>The item is indicated, but not monitored. | Off |
| REVERSE SW | **NOTE:**<br>The item is indicated, but not monitored. | Off |
| RKE-LOCK | LOCK button of the key is not pressed | Off |
| | LOCK button of the key is pressed | On |
| RKE-UNLOCK | UNLOCK button of the key is not pressed | Off |
| | UNLOCK button of the key is pressed | On |
| RKE-TR/BD | **NOTE:**<br>The item is indicated, but not monitored. | Off |
| RKE-PANIC | PANIC button of the key is not pressed | Off |
| | PANIC button of the key is pressed | On |
| RKE-P/W OPEN | UNLOCK button of the key is not pressed | Off |
| | UNLOCK button of the key is pressed and held | On |

| Monitor Item | Condition | Value/Status |
|---|---|---|
| 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 |
| REQ SW -RR | **NOTE:** The item is indicated, but not monitored. | Off |
| REQ SW -RL | **NOTE:** The item is indicated, but not monitored. | Off |
| REQ SW -BD/TR | Back door request switch is not pressed | Off |
| | Back door 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 | **NOTE:** The item is indicated, but not monitored. | Off |
| ACC RLY -F/B | **NOTE:** The item is indicated, but not monitored. | Off |
| CLUCH SW | **NOTE:** The item is indicated, but not monitored. | Off |
| BRAKE SW 1 | The brake pedal is depressed when No. 7 fuse is blown | Off |
| | The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is normal | On |
| BRAKE SW 2 | The brake pedal is not depressed | Off |
| | The brake pedal is depressed | On |
| 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 | **NOTE:** The item is indicated, but not monitored. | Off |
| S/L -UNLOCK | **NOTE:** The item is indicated, but not monitored. | Off |
| S/L RELAY-F/B | **NOTE:** The item is indicated, but not monitored. | Off |
| 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 any position other than P | Off |
| | Selector lever in P position | On |
| SFT PN -IPDM | Selector lever in any position other than P and N | Off |
| | Selector lever in P or N position | On |

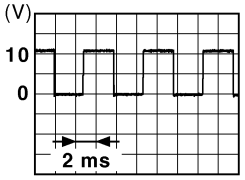
| Monitor Item | Condition | Value/Status |
|---|---|---|
| SFT P -MET | Selector lever in any position other than P | Off |
| | Selector lever in P position | On |
| SFT N -MET | Selector lever in any position other than N | Off |
| | Selector lever in N position | On |
| ENGINE STATE | Engine stopped | Stop |
| | While the engine stalls | Stall |
| | At engine cranking | Crank |
| | Engine running | Run |
| S/L LOCK-IPDM | **NOTE:**<br>The item is indicated, but not monitored. | Off |
| S/L UNLK-IPDM | **NOTE:**<br>The item is indicated, but not monitored. | Off |
| S/L RELAY-REQ | **NOTE:**<br>The item is indicated, but not monitored. | Off |
| VEH SPEED 1 | While driving | Equivalent to speed-ometer reading |
| VEH SPEED 2 | While driving | Equivalent to speed-ometer reading |
| DOOR STAT-DR | Driver door is locked | LOCK |
| | Wait with selective UNLOCK operation (5 seconds) | READY |
| | Driver door is unlocked | UNLOCK |
| DOOR STAT-AS | Passenger door is locked | LOCK |
| | Wait with selective UNLOCK operation (5 seconds) | READY |
| | Passenger door is unlocked | UNLOCK |
| ID OK FLAG | Driver side door is open after ignition switch is turned OFF<br>(Shift position is in the P position) | Reset |
| | Ignition switch ON | Set |
| PRMT ENG STRT | The engine start is prohibited | Reset |
| | The engine start is permitted | Set |
| PRMT RKE STRT | **NOTE:**<br>The item is indicated, but not monitored. | Reset |
| KEY SW -SLOT | The key is not inserted into key slot | Off |
| | The key is inserted into key slot | On |
| RKE OPE COUN1 | During the operation of the key | Operation frequency of the key |
| RKE OPE COUN2 | **NOTE:**<br>The item is indicated, but not monitored. | — |
| CONFRM 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 |
| 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 |
| 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 |

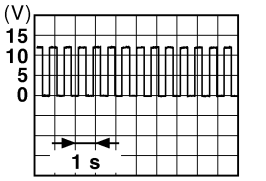
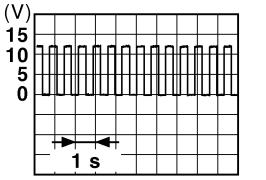
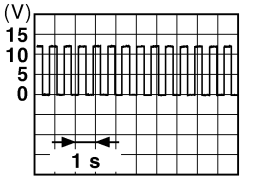
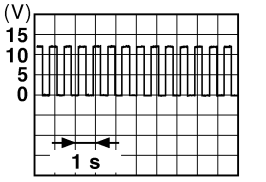
| Monitor Item | Condition | Value/Status |
|---|---|---|
| CONFIRM ID2 | The key ID that the key slot receives does not accord with the second key ID registered to BCM. | Yet |
| | The key ID that the key slot receives accords with the second key ID registered to BCM. | Done |
| CONFIRM ID1 | The key 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 |
| 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 |
| 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 |
| AIR PRESS FL | Ignition switch ON (Only when the signal from the transmitter is received) | Air pressure of front LH tire |
| AIR PRESS FR | Ignition switch ON (Only when the signal from the transmitter is received) | Air pressure of front RH tire |
| AIR PRESS RR | Ignition switch ON (Only when the signal from the transmitter is received) | Air pressure of rear RH tire |
| AIR PRESS RL | Ignition switch ON (Only when the signal from the transmitter is received) | Air pressure of rear LH tire |
| ID REGST FL1 | ID of front LH tire transmitter is registered | Done |
| | ID of front LH tire transmitter is not registered | Yet |
| ID REGST FR1 | ID of front RH tire transmitter is registered | Done |
| | ID of front RH tire transmitter is not registered | Yet |
| ID REGST RR1 | ID of rear RH tire transmitter is registered | Done |
| | ID of rear RH tire transmitter is not registered | Yet |
| ID REGST RL1 | ID of rear LH tire transmitter is registered | Done |
| | ID of rear LH tire transmitter is not registered | Yet |
| WARNING LAMP | Tire pressure indicator OFF | Off |
| | Tire pressure indicator ON | On |
| BUZZER | Tire pressure warning alarm is not sounding | Off |
| | Tire pressure warning alarm is sounding | On |

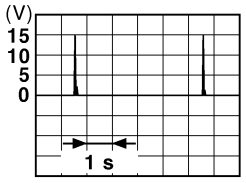
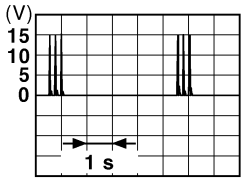
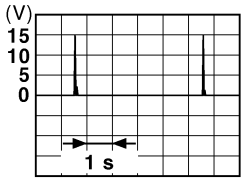
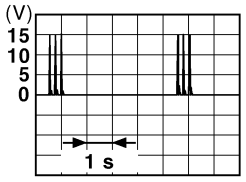
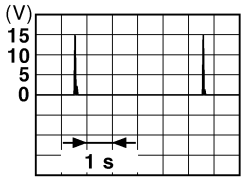
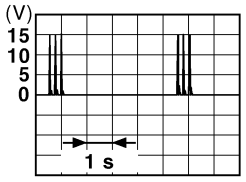
TERMINAL LAYOUT

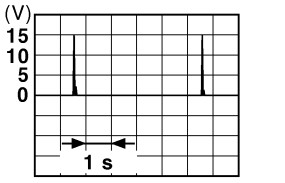
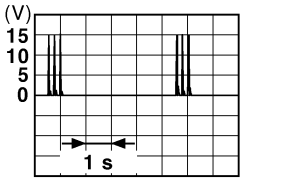
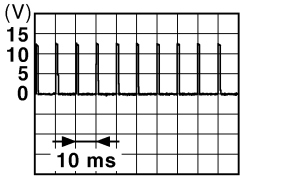
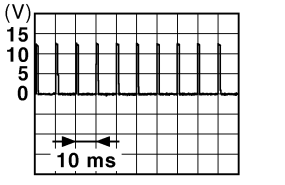


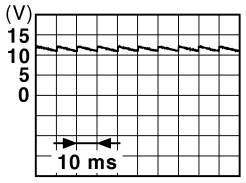
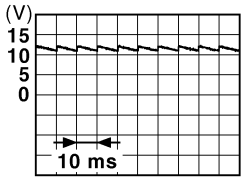
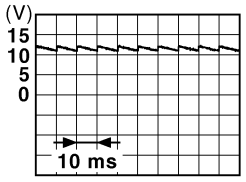
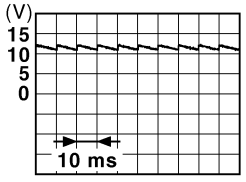

PHYSICAL VALUES

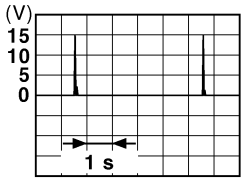
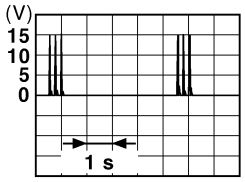
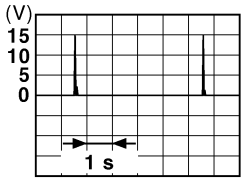
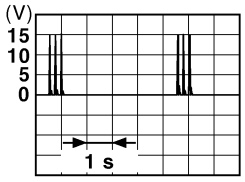
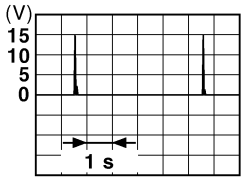
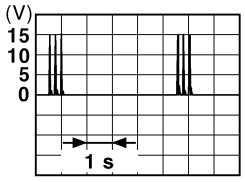
| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|---|---|---|---|---|---|---|
| + | – | Signal name | Input/ Output | | | |
| 1 (W) | Ground | Battery power supply | Input | Ignition switch OFF | | Battery voltage |
| 2 (W) | Ground | P/W power supply (BAT) | Output | Ignition switch OFF | | Battery voltage |
| 3 (Y) | Ground | P/W power supply (RAP) | Output | Ignition switch ON | | Battery voltage |
| 4 (LG) | 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 (L) | Ground | Passenger door UNLOCK | Output | Passenger door | UNLOCK (Actuator is activated) | Battery voltage |
| | | | | | Other than UNLOCK (Actuator is not activated) | 0 V |
| 7 (Y) | Ground | Step lamp | Output | Step lamp | ON | 0 V |
| | | | | | OFF | Battery voltage |
| 8 (V) | Ground | All doors, fuel lid LOCK | Output | All doors | LOCK (Actuator is activated) | Battery voltage |
| | | | | | Other than LOCK (Actuator is not activated) | 0 V |
| 9 (G) | Ground | Driver door, fuel lid UNLOCK | Output | Driver door | UNLOCK (Actuator is activated) | Battery voltage |
| | | | | | Other than UNLOCK (Actuator is not activated) | 0 V |
| 10 (BR) | Ground | Rear RH door and rear LH door 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 (R) | Ground | Battery power supply | Input | Ignition switch OFF | | Battery voltage |
| 13 (B) | Ground | Ground | — | Ignition switch ON | | 0 V |
| 14 (W) | Ground | Push-button ignition switch illumination ground | Output | Tail lamp | OFF | 0 V |
| | | | | | ON | **NOTE:** When the illumination brightening/dimming level is in the neutral position   JSNIA0010GB |
| 15 (Y) | Ground | ACC indicator lamp | Output | Ignition switch | OFF or ON | Battery voltage |
| | | | | | ACC | 0 V |

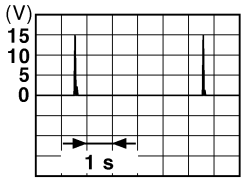
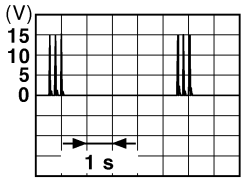
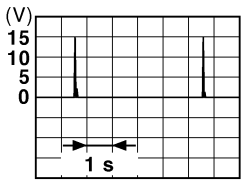
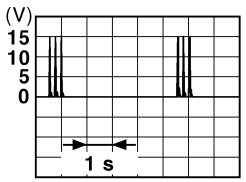
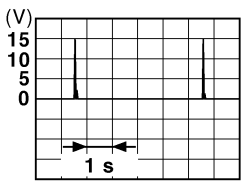
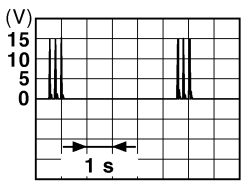
| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|---|---|---|---|---|---|---|
| + | – | Signal name | Input/ Output | | | |
| 17 (W) | Ground | Turn signal RH (Front) | Output | Ignition switch ON | Turn signal switch OFF | 0 V |
| | | | | | Turn signal switch RH |  PKID0926E 6.5 V |
| 18 (BG) | Ground | Turn signal LH (Front) | Output | Ignition switch ON | Turn signal switch OFF | 0 V |
| | | | | | Turn signal switch LH |  PKID0926E 6.5 V |
| 19 (V) | Ground | Room lamp timer control | Output | Interior room lamp | OFF | Battery voltage |
| | | | | | ON | 0 V |
| 20 (V) | Ground | Turn signal RH (Rear) | Output | Ignition switch ON | Turn signal switch OFF | 0 V |
| | | | | | Turn signal switch RH |  PKID0926E 6.5 V |
| 23 (G) | Ground | Back door open | Output | Back door | OPEN (Back door opener actuator is activated) | Battery voltage |
| | | | | | Other than OPEN (Back door opener actuator is not activated) | 0 V |
| 25 (G) | Ground | Turn signal LH (Rear) | Output | Ignition switch ON | Turn signal switch OFF | 0 V |
| | | | | | Turn signal switch LH |  PKID0926E 6.5 V |
| 26 (G) | Ground | Rear wiper | Output | Rear wiper | OFF (Stopped) | 0 V |
| | | | | | ON (Operated) | Battery voltage |

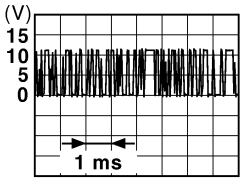
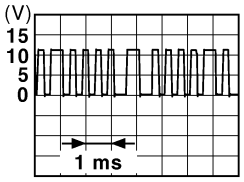
| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|---|---|---|---|---|---|---|
| + | – | Signal name | Input/ Output | | | |
| 34 (SB) | Ground | Luggage room antenna (–) | Output | Ignition switch OFF | When Intelligent Key is in the passenger compartment |  JMKIA0062GB |
| | | | | | When Intelligent Key is not in the passenger compartment |  JMKIA0063GB |
| 35 (V) | Ground | Luggage room antenna (+) | Output | Ignition switch OFF | When Intelligent Key is in the passenger compartment |  JMKIA0062GB |
| | | | | | When Intelligent Key is not in the passenger compartment |  JMKIA0063GB |
| 38 (B) | Ground | Back door antenna (–) | Output | When the back door 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 |  JMKIA0063GB |

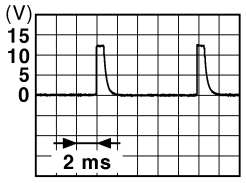
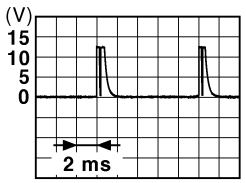
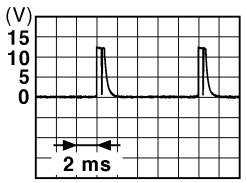
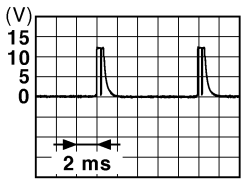
| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|---|---|---|---|---|---|---|
| + | – | Signal name | Input/ Output | | | |
| 39 (W) | Ground | Back door antenna (+) | Output | When the back door opener request switch is operated with ignition switch OFF | When Intelligent Key is in the antenna detection area |  JMKIA0062GB |
| | | | | | When Intelligent Key is not in the antenna detection area |  JMKIA0063GB |
| 47 (Y) | Ground | Ignition relay (IPDM E/R) control | Output | Ignition switch | OFF or ACC | Battery voltage |
| | | | | | ON | 0 V |
| 52 (SB) | 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 V |
| 60 (BR) | Ground | Push-button ignition switch (Push switch) | Input | Push-button ignition switch (push switch) | Pressed | 0 V |
| | | | | | Not pressed | Battery voltage |
| 61 (W) | Ground | Back door opener request switch | Input | Back door opener request switch | ON (Pressed) | 0 V |
| | | | | | OFF (Not pressed) |  JPMIA0016GB<br>1.0 V |
| 64 (V) | Ground | Intelligent Key warning buzzer (Engine room) | Output | Intelligent Key warning buzzer (Engine room) | Sounding | 0 V |
| | | | | | Not sounding | Battery voltage |
| 65 (BG) | Ground | Rear wiper stop position | Input | Rear wiper | In stop position |  JPMIA0016GB<br>1.0 V |
| | | | | | Not in stop position | 0 V |

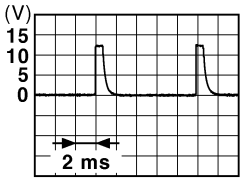
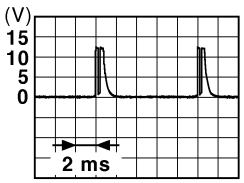
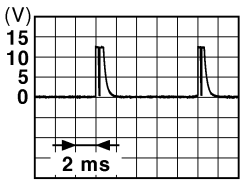
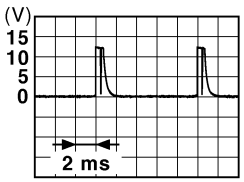
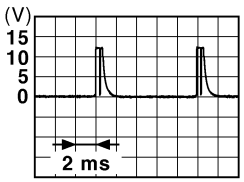
| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|---|---|---|---|---|---|---|
| + | – | Signal name | Input/ Output | | | |
| 66 (R) | Ground | Back door switch | Input | Back door switch | OFF (Door close) |  JPMIA0011GB 11.8 V |
| | | | | | ON (Door open) | 0 V |
| 67 (GR) | Ground | Back door opener switch | Input | Back door opener switch | Pressed | 0 V |
| | | | | | Not pressed |  JPMIA0011GB 11.8 V |
| 68 (BR) | Ground | Rear RH door switch | Input | Rear RH door switch | OFF (Door close) |  JPMIA0011GB 11.8 V |
| | | | | | ON (Door open) | 0 V |
| 69 (R) | Ground | Rear LH door switch | Input | Rear LH door switch | OFF (Door close) |  JPMIA0011GB 11.8 V |
| | | | | | ON (Door open) | 0 V |

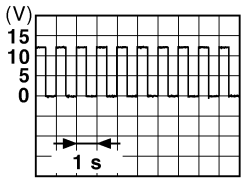
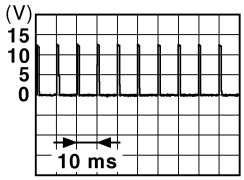
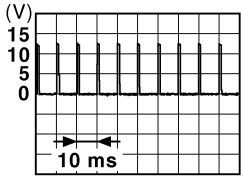
| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|---|---|---|---|---|---|---|
| + | – | Signal name | Input/ Output | | | |
| 74 (SB) | Ground | Passenger door antenna (–) | Output | When the passenger door request switch is operated with ignition switch OFF | When Intelligent Key is in the antenna detection area |  JMKIA0062GB |
| | | | | | When Intelligent Key is not in the antenna detection area |  JMKIA0063GB |
| 75 (GR) | Ground | Passenger door antenna (+) | Output | When the passenger door 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 |  JMKIA0063GB |
| 76 (V) | Ground | Driver door antenna (–) | Output | When the driver door 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 |  JMKIA0063GB |

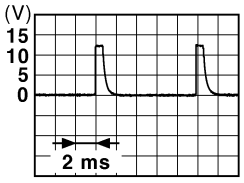
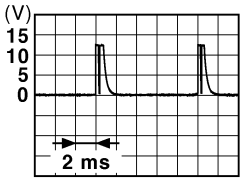
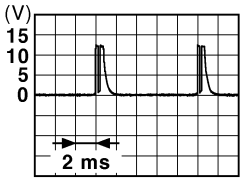
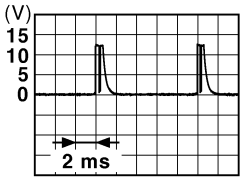
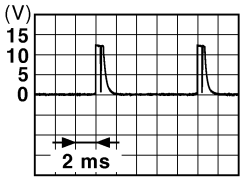
| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|---|---|---|---|---|---|---|
| + | – | Signal name | Input/ Output | | | |
| 77 (LG) | Ground | Driver door antenna (+) | Output | When the driver door request switch is operated with ignition switch OFF | When Intelligent Key is in the antenna detection area |  JMKIA0062GB |
| | | | | | When Intelligent Key is not in the antenna detection area |  JMKIA0063GB |
| 78 (Y) | Ground | Room antenna 1 (–) (Instrument panel) | Output | Ignition switch OFF | When Intelligent Key is in the passenger compartment |  JMKIA0062GB |
| | | | | | When Intelligent Key is not in the passenger compartment |  JMKIA0063GB |
| 79 (BR) | Ground | Room antenna 1 (+) (Instrument panel) | Output | Ignition switch OFF | When Intelligent Key is in the passenger compartment |  JMKIA0062GB |
| | | | | | When Intelligent Key is not in the passenger compartment |  JMKIA0063GB |

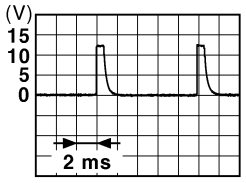
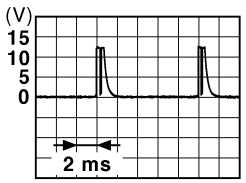
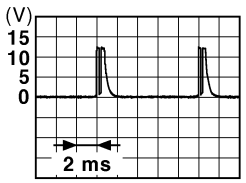
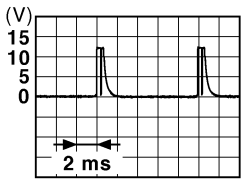
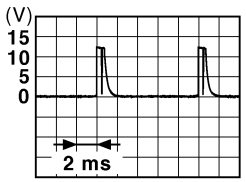
| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|---|---|---|---|---|---|---|
| + | – | Signal name | Input/ Output | | | |
| 80 (GR) | Ground | NATS antenna amp. | Input/ Output | During waiting | Ignition switch is pressed while inserting the key into the key slot. | Just after pressing ignition switch. Pointer of tester should move. |
| 81 (W) | Ground | NATS antenna amp. | 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) | Ground | Ignition relay [Fuse block (J/B)] control | Output | Ignition switch | OFF or ACC | 0 V |
| | | | | | ON | Battery voltage |
| 83 (Y) | Ground | Remote keyless entry receiver communication | Input/ Output | During waiting | |  JMKIA0064GB |
| | | | | When operating either button on the key | |  JMKIA0065GB |

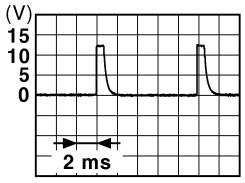
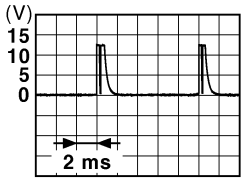
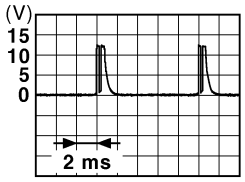
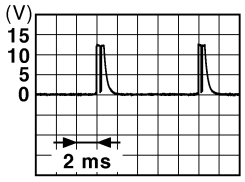
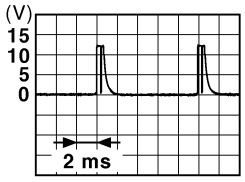
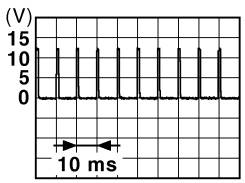
| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|---|---|---|---|---|---|---|
| + | – | Signal name | Input/ Output | | | |
| 87 (BR) | Ground | Combination switch INPUT 5 | Input | Combination switch | All switches OFF<br>(Wiper intermittent dial 4) |  <br>JPMIA0041GB<br>1.4 V |
| | | | | | Front fog lamp switch ON<br>(Wiper intermittent dial 4) |  <br>JPMIA0037GB<br>1.3 V |
| | | | | | Rear wiper switch ON<br>(Wiper intermittent dial 4) |  <br>JPMIA0039GB<br>1.3 V |
| | | | | | Any of the conditions below with all switches OFF<br>• Wiper intermittent dial 1<br>• Wiper intermittent dial 2<br>• Wiper intermittent dial 6<br>• Wiper intermittent dial 7 |  <br>JPMIA0040GB<br>1.3 V |

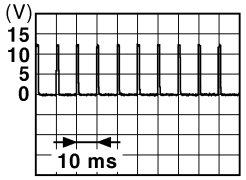
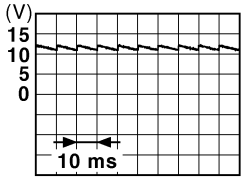
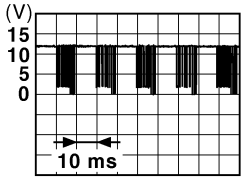
| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|---|---|---|---|---|---|---|
| + | – | Signal name | Input/ Output | | | |
| 88 (V) | Ground | Combination switch INPUT 3 | Input | Combination switch | All switches OFF (Wiper intermittent dial 4) |  JPMIA0041GB 1.4 V |
| | | | | | Lighting switch HI (Wiper intermittent dial 4) |  JPMIA0036GB 1.3 V |
| | | | | | Lighting switch 2ND (Wiper intermittent dial 4) |  JPMIA0037GB 1.3 V |
| | | | | | Rear washer switch ON (Wiper intermittent dial 4) |  JPMIA0039GB 1.3 V |
| | | | | | Any of the conditions below with all switches OFF<br>• Wiper intermittent dial 1<br>• Wiper intermittent dial 2<br>• Wiper intermittent dial 3 |  JPMIA0040GB 1.3 V |
| 90 (P) | Ground | CAN-L | Input/ Output | — | | — |
| 91 (L) | Ground | CAN-H | Input/ Output | — | | — |

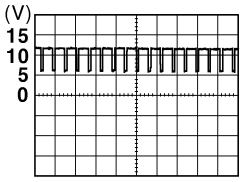
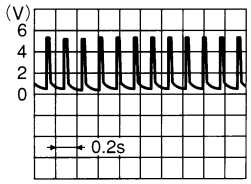
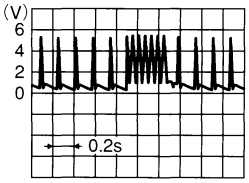
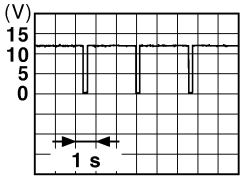
| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|---|---|---|---|---|---|---|
| + | – | Signal name | Input/ Output | | | |
| 92 (LG) | Ground | Key slot illumination | Output | Key slot illumination | OFF | Battery voltage |
| | | | | | Blinking |  JPMIA0015GB 6.5 V |
| | | | | | ON | 0 V |
| 93 (V) | Ground | ON indicator lamp | Output | Ignition switch | OFF or ACC | Battery voltage |
| | | | | | ON | 0 V |
| 94 (Y) | Ground | Puddle lamp control | Output | Puddle lamp | OFF | Battery voltage |
| | | | | | ON | 0 V |
| 95 (BG) | Ground | ACC relay control | Output | Ignition switch | OFF | 0 V |
| | | | | | ACC or ON | Battery voltage |
| 96 (GR) | Ground | A/T shift selector (Detention switch) power supply | Output | — | | Battery voltage |
| 99 (R) | Ground | Selector lever P position switch | Input | Selector lever | P position | 0 V |
| | | | | | Any position other than P | Battery voltage |
| 100 (G) | Ground | Passenger door request switch | Input | Passenger door request switch | ON (Pressed) | 0 V |
| | | | | | OFF (Not pressed) |  JPMIA0016GB 1.0 V |
| 101 (SB) | Ground | Driver door request switch | Input | Driver door request switch | ON (Pressed) | 0 V |
| | | | | | OFF (Not pressed) |  JPMIA0016GB 1.0 V |
| 102 (BG) | Ground | Blower fan motor relay control | Output | Ignition switch | OFF or ACC | 0 V |
| | | | | | ON | Battery voltage |
| 103 (LG) | Ground | Remote keyless entry receiver power supply | Output | Ignition switch OFF | | Battery voltage |

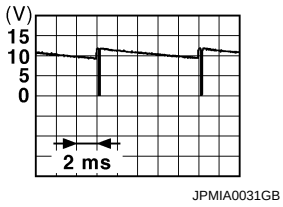
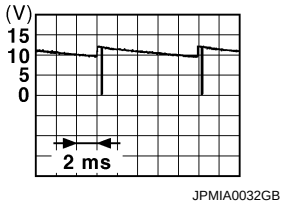
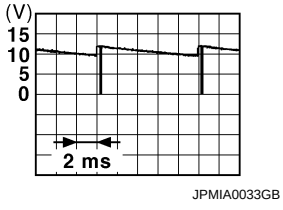
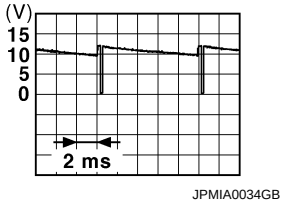
| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|---|---|---|---|---|---|---|
| + | – | Signal name | Input/ Output | | | |
| 107 (LG) | Ground | Combination switch INPUT 1 | Input | Combination switch (Wiper intermittent dial 4) | All switches OFF |  JPMIA0041GB<br>1.4 V |
| | | | | | Turn signal switch LH |  JPMIA0037GB<br>1.3 V |
| | | | | | Turn signal switch RH |  JPMIA0036GB<br>1.3 V |
| | | | | | Front wiper switch LO |  JPMIA0038GB<br>1.3 V |
| | | | | | Front washer switch ON |  JPMIA0039GB<br>1.3 V |

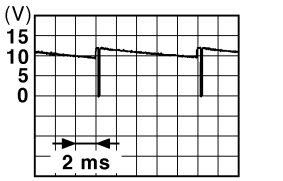
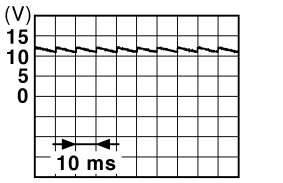
| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|---|---|---|---|---|---|---|
| + | – | Signal name | Input/ Output | | | |
| 108 (R) | Ground | Combination switch INPUT 4 | Input | Combination switch | All switches OFF (Wiper intermittent dial 4) |  JPMIA0041GB 1.4 V |
| | | | | | Lighting switch AUTO (Wiper intermittent dial 4) |  JPMIA0038GB 1.3 V |
| | | | | | Lighting switch 1ST (Wiper intermittent dial 4) |  JPMIA0036GB 1.3 V |
| | | | | | Rear wiper switch INT (Wiper intermittent dial 4) |  JPMIA0040GB 1.3 V |
| | | | | | Any of the conditions below with all switches OFF<br>• Wiper intermittent dial 1<br>• Wiper intermittent dial 5<br>• Wiper intermittent dial 6 |  JPMIA0039GB 1.3 V |

| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|---|---|---|---|---|---|---|
| + | – | Signal name | Input/ Output | | | |
| 109 (Y) | Ground | Combination switch INPUT 2 | Input | Combination switch (Wiper intermittent dial 4) | All switches 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) | Ground | Hazard switch | Input | Hazard switch | ON | 0 V |
| | | | | | OFF |  JPMIA0012GB 1.1 V |

| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|---|---|---|---|---|---|---|
| + | – | Signal name | Input/ Output | | | |
| 113 (P) | Ground | Optical sensor | Input | Ignition switch ON | When bright outside of the vehicle | Close to 5 V |
| | | | | | When dark outside of the vehicle | Close to 0 V |
| 116 (SB) | Ground | Stop lamp switch 1 | Input | — | | Battery voltage |
| 118 (P) | Ground | Stop lamp switch 2 (Without ICC) | Input | Stop lamp switch | OFF (Brake pedal is not depressed) | 0 V |
| | | | | | ON (Brake pedal is depressed) | Battery voltage |
| | | Stop lamp switch 2 (With ICC) | | Stop lamp switch OFF (Brake pedal is not depressed) and ICC brake hold relay OFF | | 0 V |
| | | | | Stop lamp switch ON (Brake pedal is depressed) or ICC brake hold relay ON | | Battery voltage |
| 119 (SB) | Ground | Front door lock assembly driver side (Unlock sensor) | Input | Driver door | LOCK status (Unlock sensor switch OFF) |  JPMIA0012GB 1.1 V |
| | | | | | UNLOCK status (Unlock switch sensor ON) | 0 V |
| 121 (BR) | 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 |
| 123 (W) | Ground | IGN feedback | Input | Ignition switch | OFF or ACC | 0 V |
| | | | | | ON | Battery voltage |
| 124 (LG) | Ground | Passenger door switch | Input | Passenger door switch | OFF (Door close) |  JPMIA0011GB 11.8 V |
| | | | | | ON (Door open) | 0 V |
| 132 (BR) | Ground | Power window switch communication | Input/ Output | Ignition switch ON | |  JPMIA0013GB 10.2 V |
| | | | | Ignition switch OFF or ACC | | Battery voltage |

| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|---|---|---|---|---|---|---|
| + | – | Signal name | Input/ Output | | | |
| 133 (W) | Ground | Push-button ignition switch illumination | Output | Push-button ignition switch illumination | ON (Tail lamps OFF) | 9.5 V |
| | | | | | ON (Tail lamps ON) | **NOTE:** The pulse width of this wave is varied by the illumination brightening/dimming level.   JPMIA0159GB |
| | | | | | OFF | 0 V |
| 134 (GR) | Ground | LOCK indicator lamp | Output | LOCK indicator lamp | OFF | Battery voltage |
| | | | | | ON | 0 V |
| 137 (BG) | Ground | Receiver and sensor ground | Input | Ignition switch ON | | 0 V |
| 138 (Y) | Ground | Receiver and sensor power supply | Output | Ignition switch | OFF | 0 V |
| | | | | | ACC or ON | 5.0 V |
| 139 (L) | Ground | Tire pressure receiver communication | Input/ Output | Ignition switch ON | Standby state |   OCC3881D |
| | | | | | When receiving the signal from the transmitter |   OCC3880D |
| 140 (GR) | Ground | Selector lever P/N position | Input | Selector lever | P or N position | Battery voltage |
| | | | | | Except P and N positions | 0 V |
| 141 (G) | Ground | Security indicator | Output | Security indicator | ON | 0 V |
| | | | | | Blinking |   JPMIA0014GB 11.3 V |
| | | | | | OFF | Battery voltage |

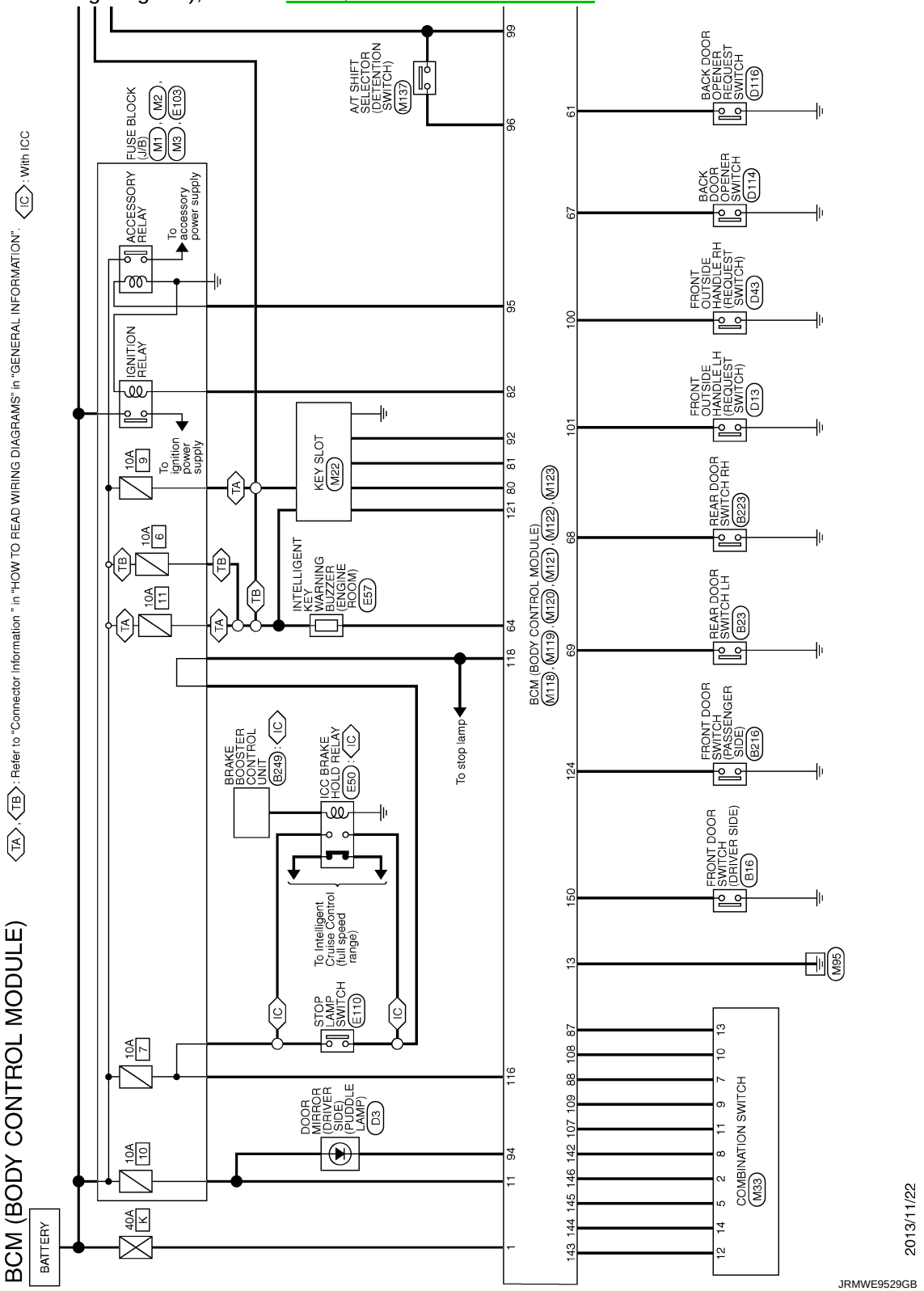
| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|---|---|---|---|---|---|---|
| + | – | Signal name | Input/ Output | | | |
| 142 (BG) | Ground | Combination switch OUTPUT 5 | Output | Combination switch (Wiper intermittent dial 4) | All switches OFF | 0 V |
| | | | | | Lighting switch 1ST |  JPMIA0031GB 10.7 V |
| | | | | | Lighting switch HI | |
| | | | | | Lighting switch 2ND | |
| | | | | | Turn signal switch RH | |
| 143 (P) | Ground | Combination switch OUTPUT 1 | Output | Combination switch | All switches OFF (Wiper intermittent dial 4) | 0 V |
| | | | | | Front wiper switch HI (Wiper intermittent dial 4) |  JPMIA0032GB 10.7 V |
| | | | | | Rear wiper switch INT (Wiper intermittent dial 4) | |
| | | | | | Any of the conditions below with all switches OFF<br>• Wiper intermittent dial 1<br>• Wiper intermittent dial 2<br>• Wiper intermittent dial 3<br>• Wiper intermittent dial 6<br>• Wiper intermittent dial 7 | |
| 144 (G) | Ground | Combination switch OUTPUT 2 | Output | Combination switch | All switches OFF (Wiper intermittent dial 4) | 0 V |
| | | | | | Front washer switch ON (Wiper intermittent dial 4) |  JPMIA0033GB 10.7 V |
| | | | | | Rear wiper switch ON (Wiper intermittent dial 4) | |
| | | | | | Rear washer switch ON (Wiper intermittent dial 4) | |
| | | | | | Any of the conditions below with all switches OFF<br>• Wiper intermittent dial 1<br>• Wiper intermittent dial 5<br>• Wiper intermittent dial 6 | |
| 145 (L) | Ground | Combination switch OUTPUT 3 | Output | Combination switch (Wiper intermittent dial 4) | All switches OFF | 0 V |
| | | | | | Front wiper switch INT |  JPMIA0034GB 10.7 V |
| | | | | | Front wiper switch LO | |
| | | | | | Lighting switch AUTO | |

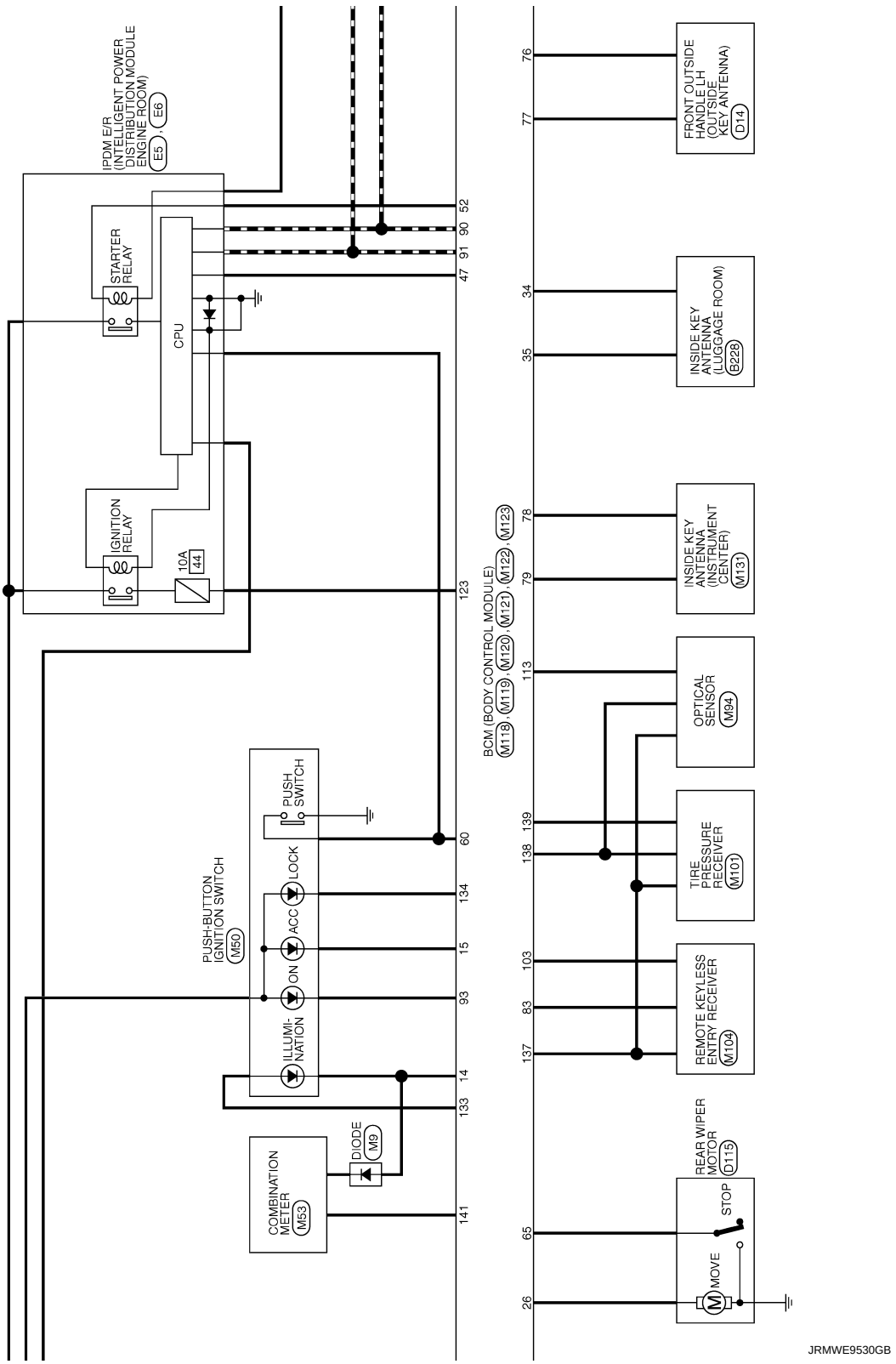
| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|---|---|---|---|---|---|---|
| + | – | Signal name | Input/ Output | | | |
| 146 (SB) | Ground | Combination switch OUTPUT 4 | Output | Combination switch (Wiper intermittent dial 4) | All switches OFF | 0 V |
| | | | | | Front fog lamp switch ON |  JPMIA0035GB 10.7 V |
| | | | | | Lighting switch 2ND | |
| | | | | | Lighting switch PASS | |
| | | | | | Turn signal switch LH | |
| 150 (LG) | Ground | Driver door switch | Input | Driver door switch | OFF (Door close) |  JPMIA0011GB 11.8 V |
| | | | | | ON (Door open) | 0 V |
| 151 (G) | Ground | Rear window defogger relay control | Output | Rear window defogger | Active | 0 V |
| | | | | | Not activated | Battery voltage |

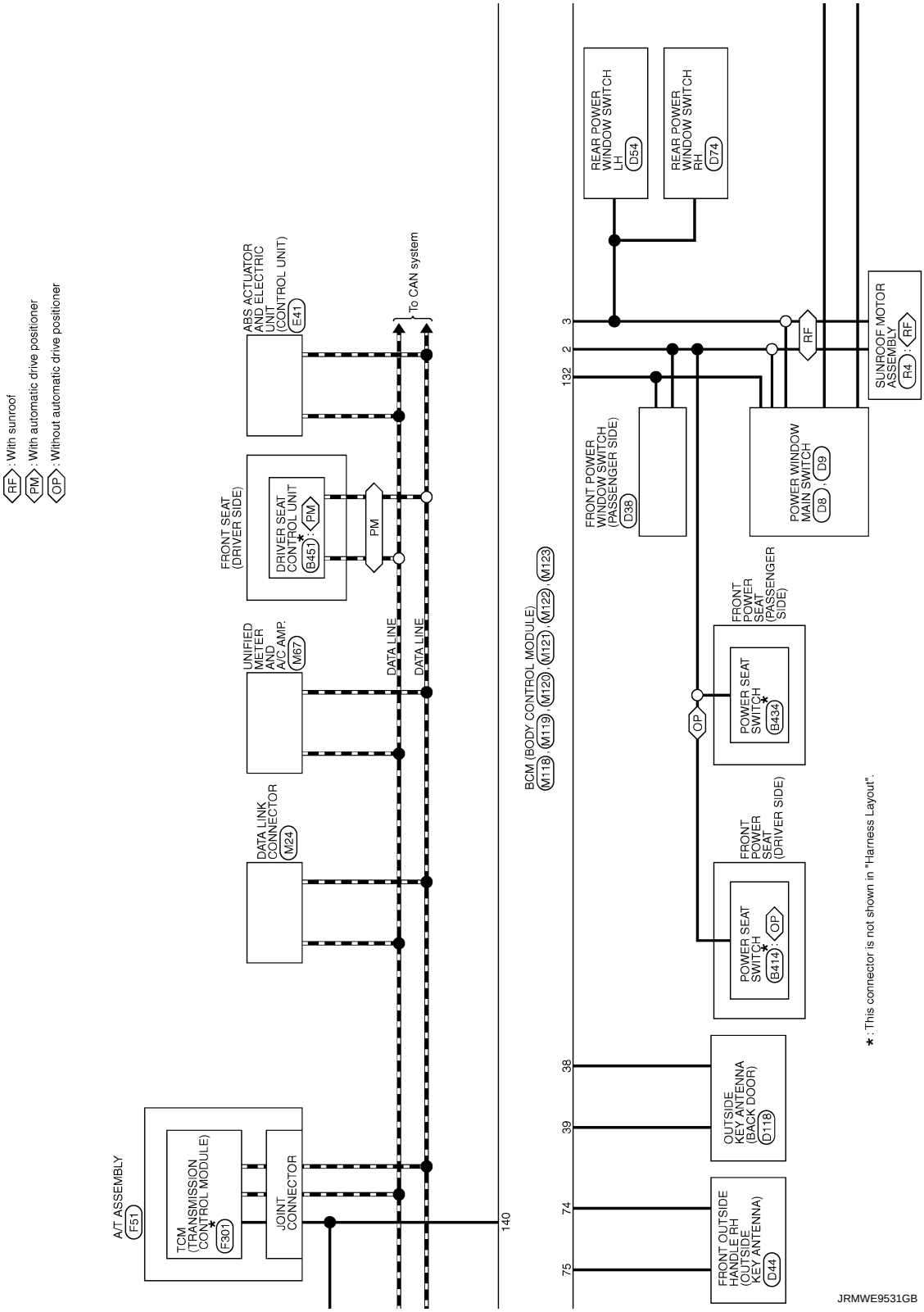
## Wiring Diagram - BCM -

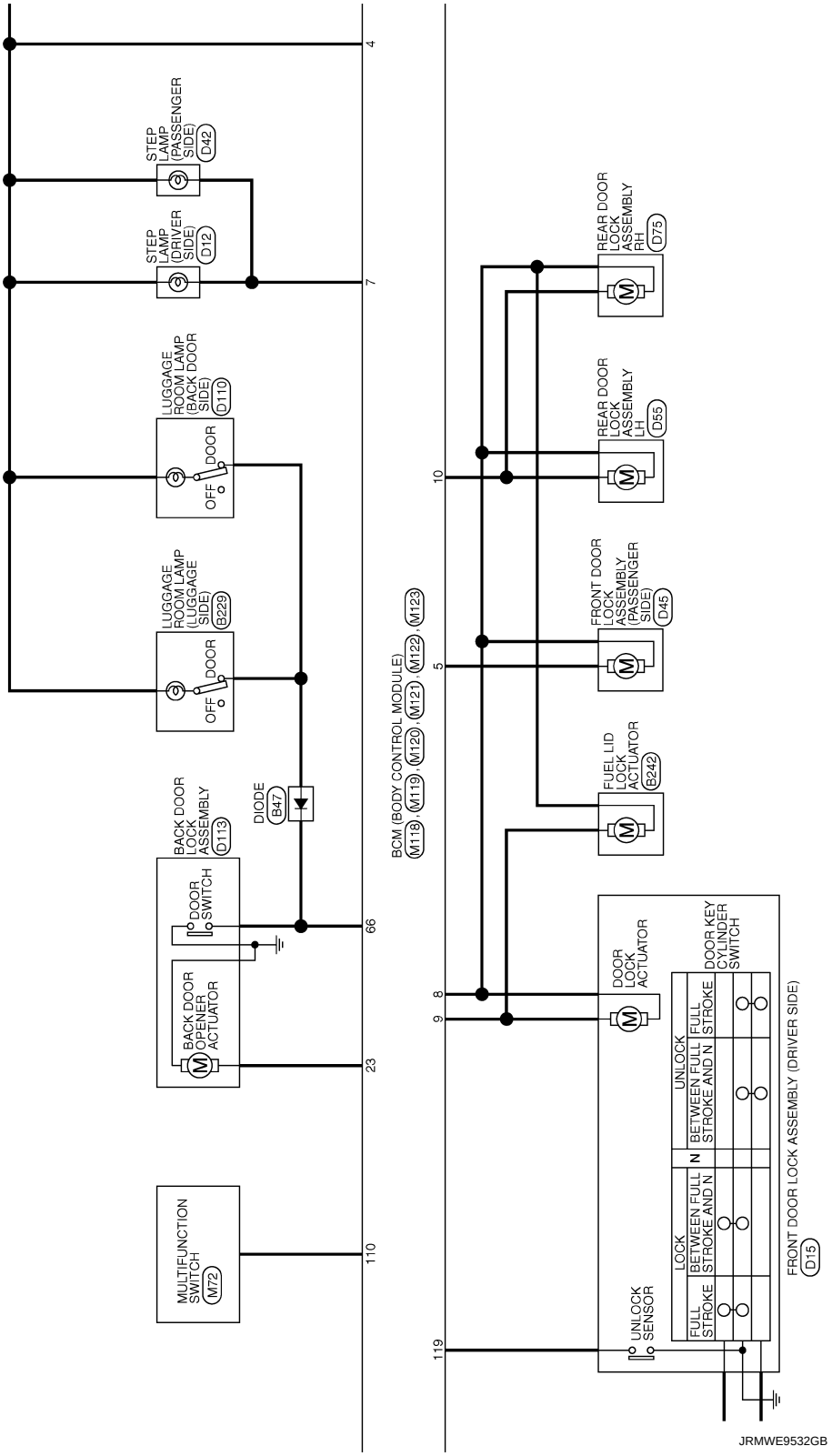
INFOID:0000000008776157

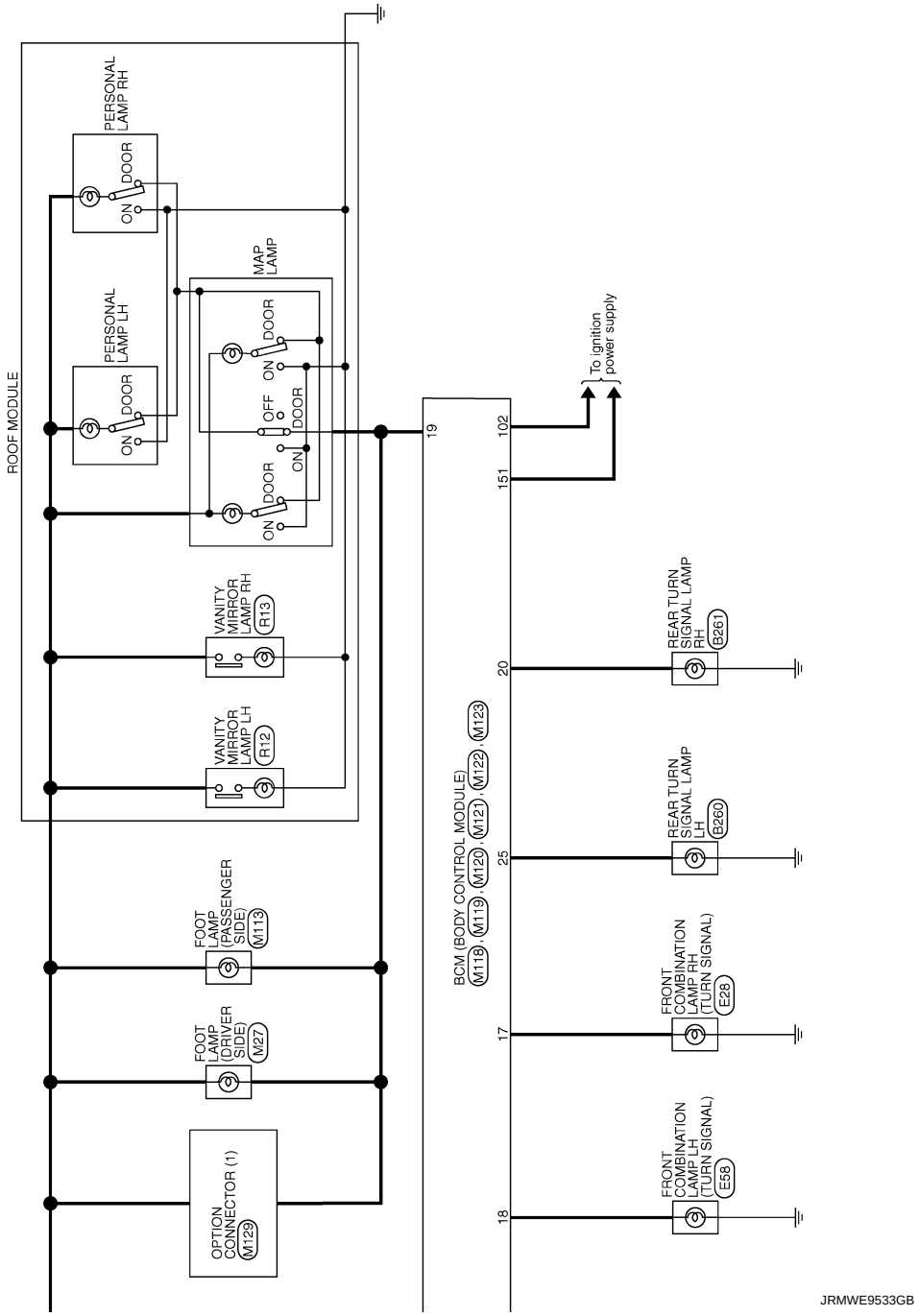
For connector terminal arrangements, harness layouts, and alphabets in a ⬡ (option abbreviation; if not described in wiring diagram), refer to GI-12, "Connector Information".

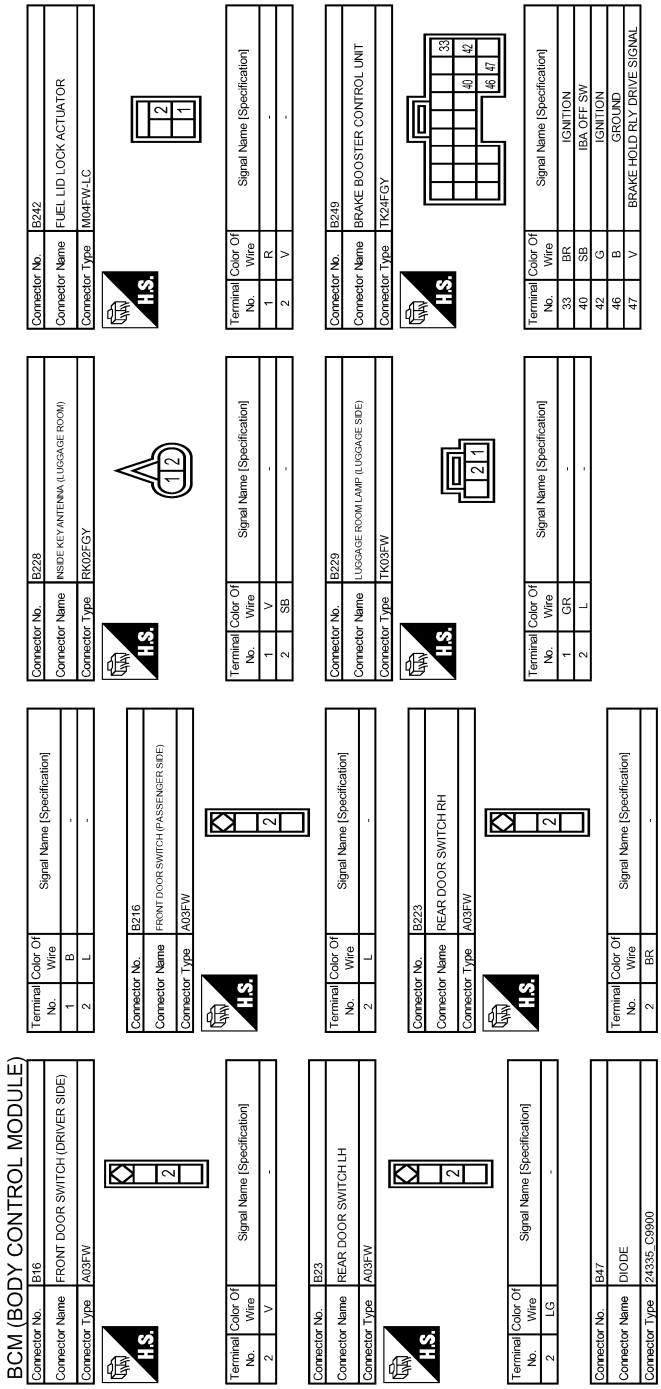



IPDM E/R
(INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E5, E6
STARTER RELAY
CPU
IGNITION RELAY
10A
44
PUSH-BUTTON IGNITION SWITCH
M50
PUSH SWITCH
LOCK
ACC
ON
ILLUMI-NATION
COMBINATION METER
M53
DIODE
M9
BCM (BODY CONTROL MODULE)
M118, M119, M120, M121, M122, M123
FRONT OUTSIDE HANDLE LH (OUTSIDE KEY ANTENNA)
D14
INSIDE KEY ANTENNA (LUGGAGE ROOM)
B228
INSIDE KEY ANTENNA (INSTRUMENT CENTER)
M131
OPTICAL SENSOR
M94
TIRE PRESSURE RECEIVER
M101
REMOTE KEYLESS ENTRY RECEIVER
M104
REAR WIPER MOTOR
D115
STOP
MOVE
JRMWE9530GB

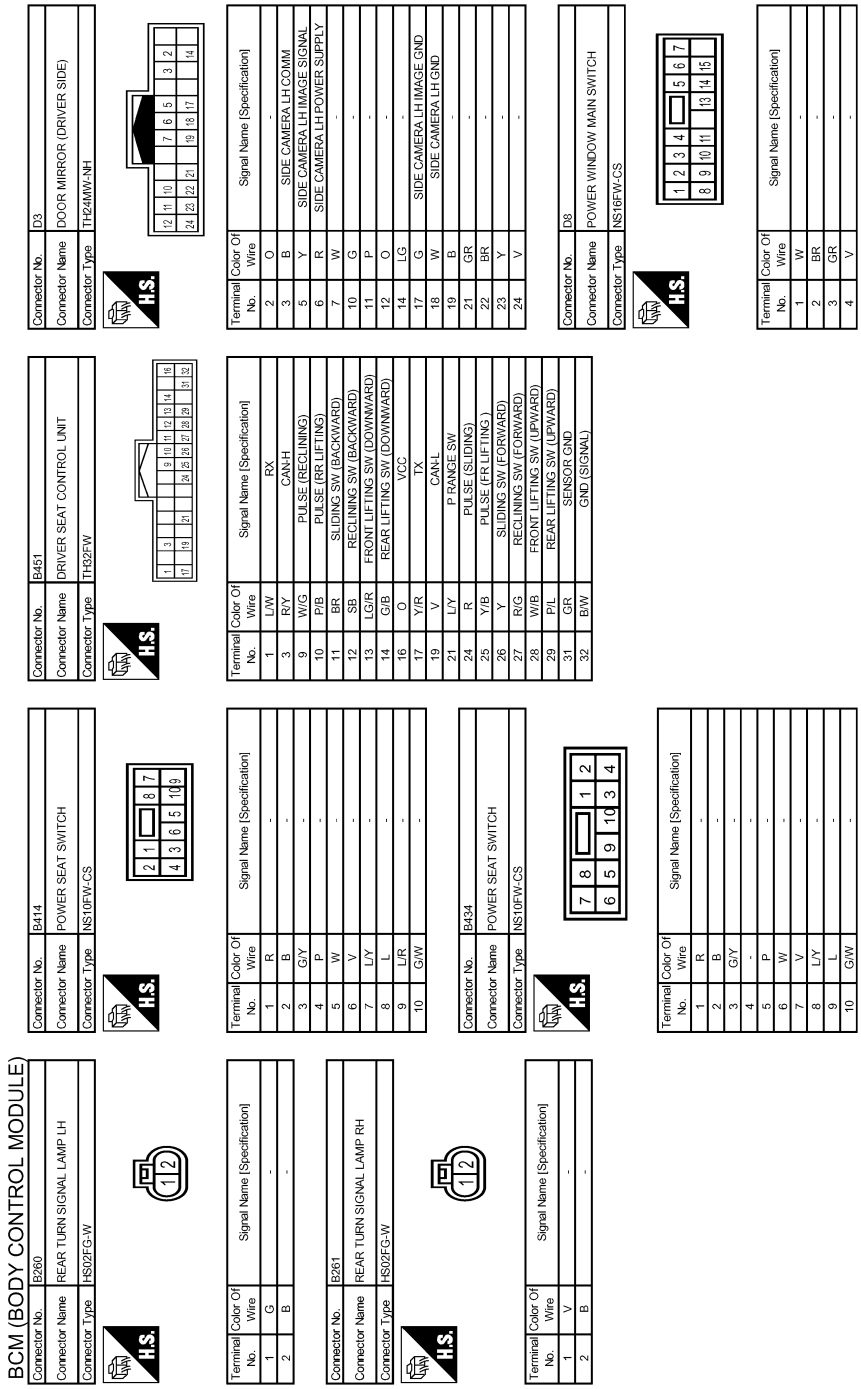

RF : With sunroof
PM : With automatic drive positioner
OP : Without automatic drive positioner
A/T ASSEMBLY (F51)
TCM (TRANSMISSION CONTROL MODULE) (F301)*
JOINT CONNECTOR
140
DATA LINK CONNECTOR (M24)
UNIFIED METER AND A/C AMP. (M67)
DATA LINE
DATA LINE
FRONT SEAT (DRIVER SIDE)
DRIVER SEAT CONTROL UNIT (B451) : PM
PM
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) (E41)
To CAN system
BCM (BODY CONTROL MODULE) (M118), (M119), (M120), (M121), (M122), (M123)
38
39
74
75
OUTSIDE KEY ANTENNA (BACK DOOR) (D118)
FRONT OUTSIDE HANDLE RH (OUTSIDE KEY ANTENNA) (D44)
FRONT POWER SEAT (DRIVER SIDE)
POWER SEAT SWITCH* (B414) : OP
OP
FRONT POWER SEAT (PASSENGER SIDE)
POWER SEAT SWITCH* (B434)
132
2
3
FRONT POWER WINDOW SWITCH (PASSENGER SIDE) (D38)
POWER WINDOW MAIN SWITCH (D8) : D9
REAR POWER WINDOW SWITCH LH (D54)
REAR POWER WINDOW SWITCH RH (D74)
RF
SUNROOF MOTOR ASSEMBLY (R4) : RF
* : This connector is not shown in "Harness Layout".
JRMWE9531GB


STEP LAMP (PASSENGER SIDE) D42
STEP LAMP (DRIVER SIDE) D12
LUGGAGE ROOM LAMP (BACK DOOR SIDE) D110
LUGGAGE ROOM LAMP (LUGGAGE SIDE) B229
DOOR
OFF
BACK DOOR LOCK ASSEMBLY D113
DOOR SWITCH
BACK DOOR OPENER ACTUATOR
DIODE B47
MULTIFUNCTION SWITCH M72
4
7
66
23
110
BCM (BODY CONTROL MODULE) M118, M119, M120, M121, M122, M123
10
5
8
9
119
REAR DOOR LOCK ASSEMBLY RH D75
REAR DOOR LOCK ASSEMBLY LH D55
FRONT DOOR LOCK ASSEMBLY (PASSENGER SIDE) D45
FUEL LID LOCK ACTUATOR B242
DOOR LOCK ACTUATOR
UNLOCK SENSOR
DOOR KEY CYLINDER SWITCH
LOCK
UNLOCK
N
FULL STROKE
BETWEEN FULL STROKE AND N
FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE) D15
JRMWE9532GB

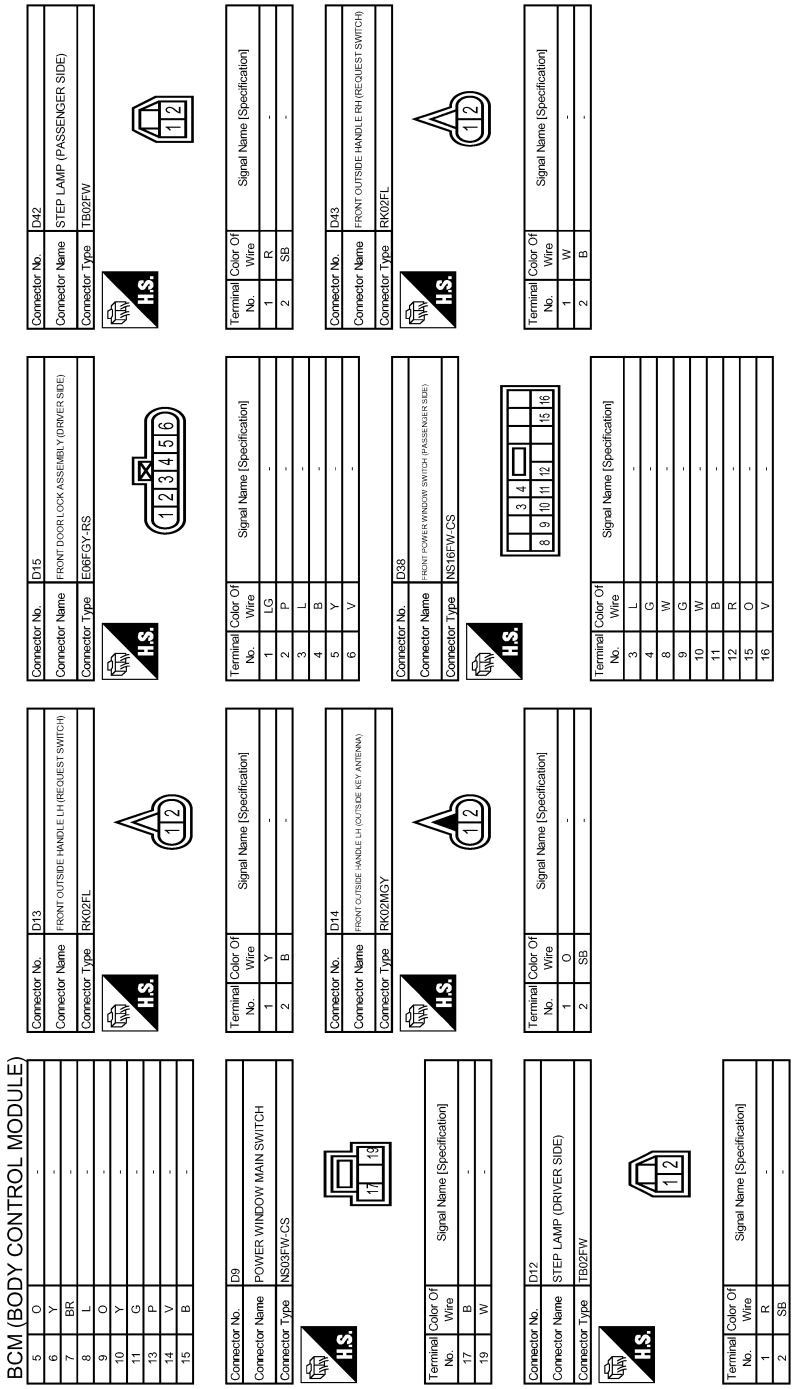

ROOF MODULE
PERSONAL LAMP RH
PERSONAL LAMP LH
MAP LAMP
DOOR
ON
OFF
VANITY MIRROR LAMP RH (R13)
VANITY MIRROR LAMP LH (R12)
FOOT LAMP (PASSENGER SIDE) (M113)
FOOT LAMP (DRIVER SIDE) (M27)
OPTION CONNECTOR (1) (M129)
19
To ignition power supply
102
151
BCM (BODY CONTROL MODULE) (M118), (M119), (M120), (M121), (M122), (M123)
20
25
17
18
REAR TURN SIGNAL LAMP RH (B261)
REAR TURN SIGNAL LAMP LH (B260)
FRONT COMBINATION LAMP RH (TURN SIGNAL) (E28)
FRONT COMBINATION LAMP LH (TURN SIGNAL) (E58)
JRMWE9533GB



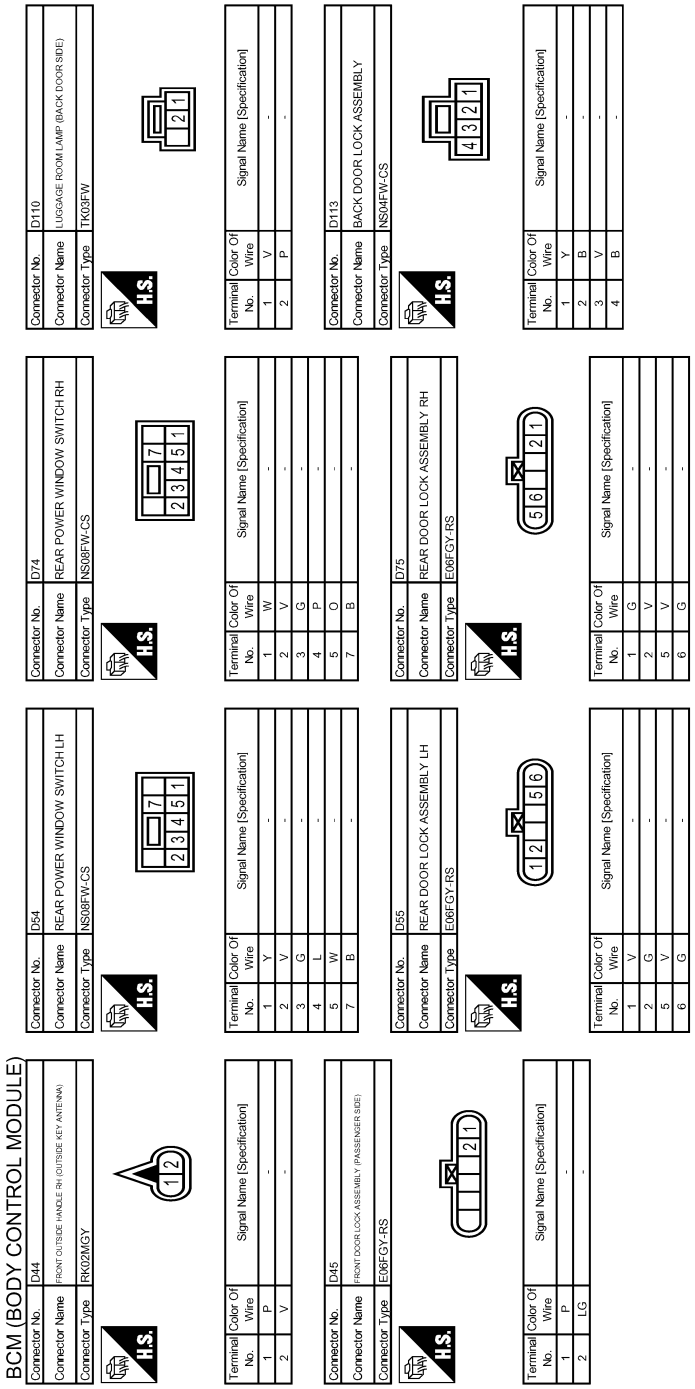

JRMWE9716GB



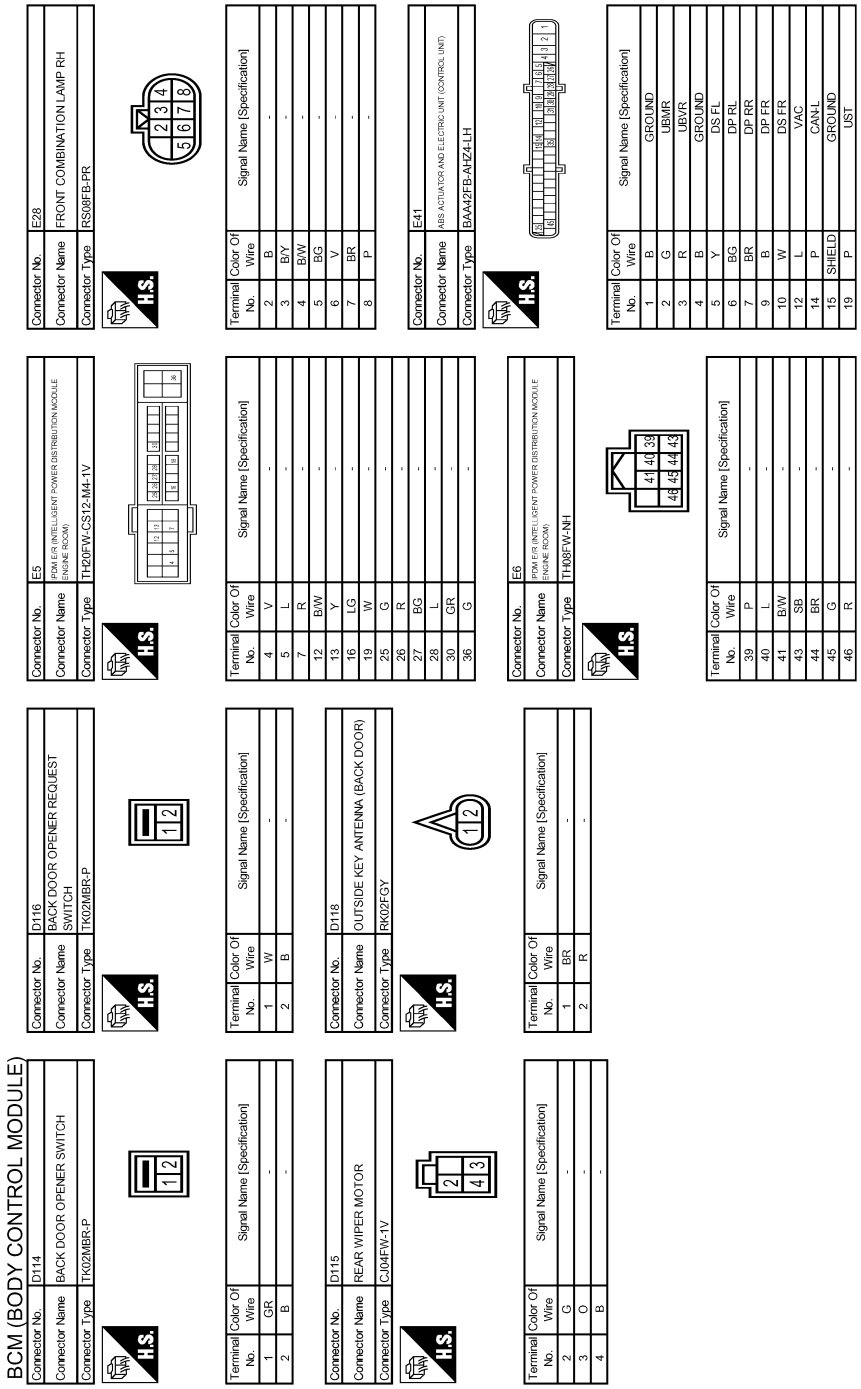

JRMWE9717GB



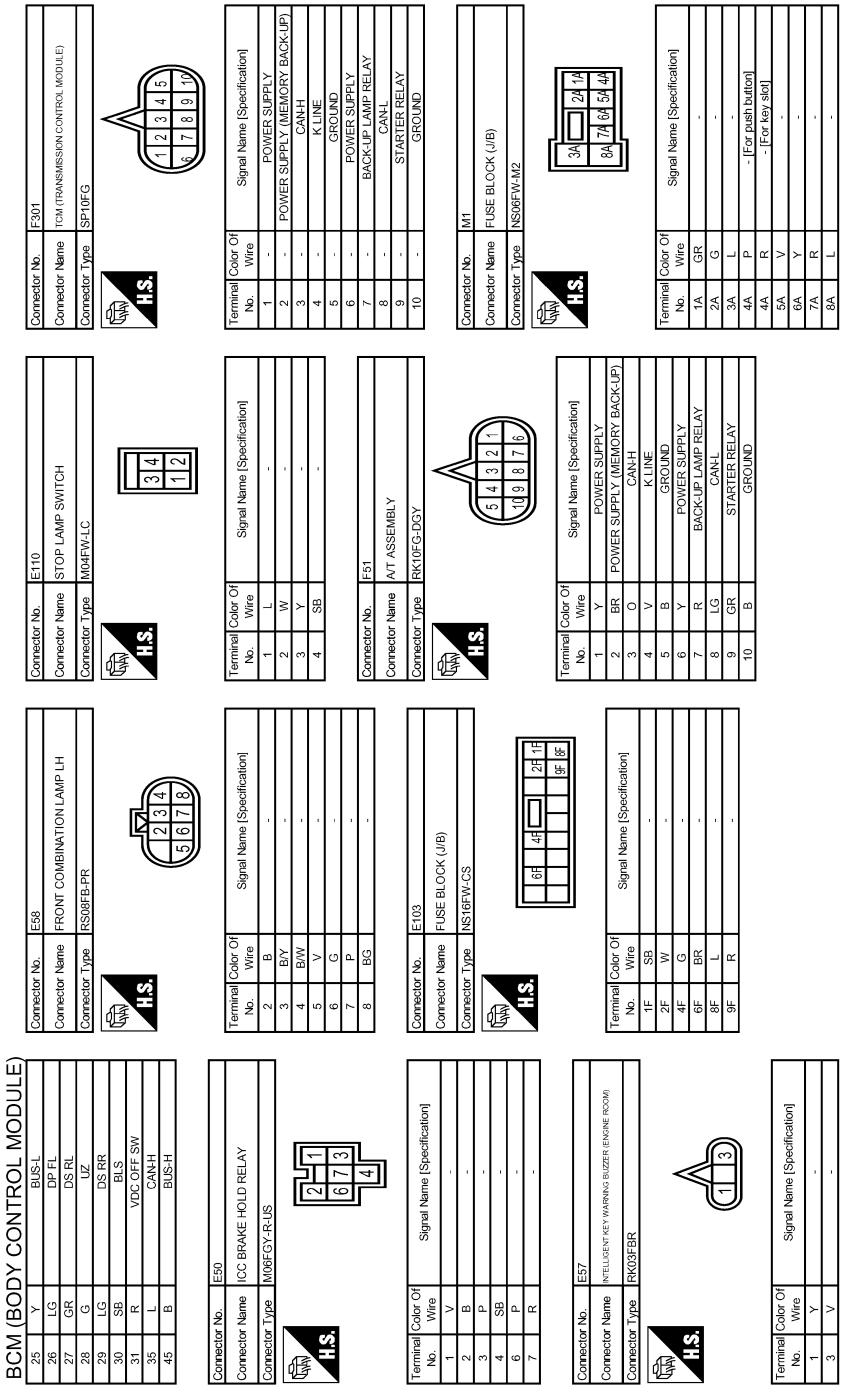

JRMWE9718GB



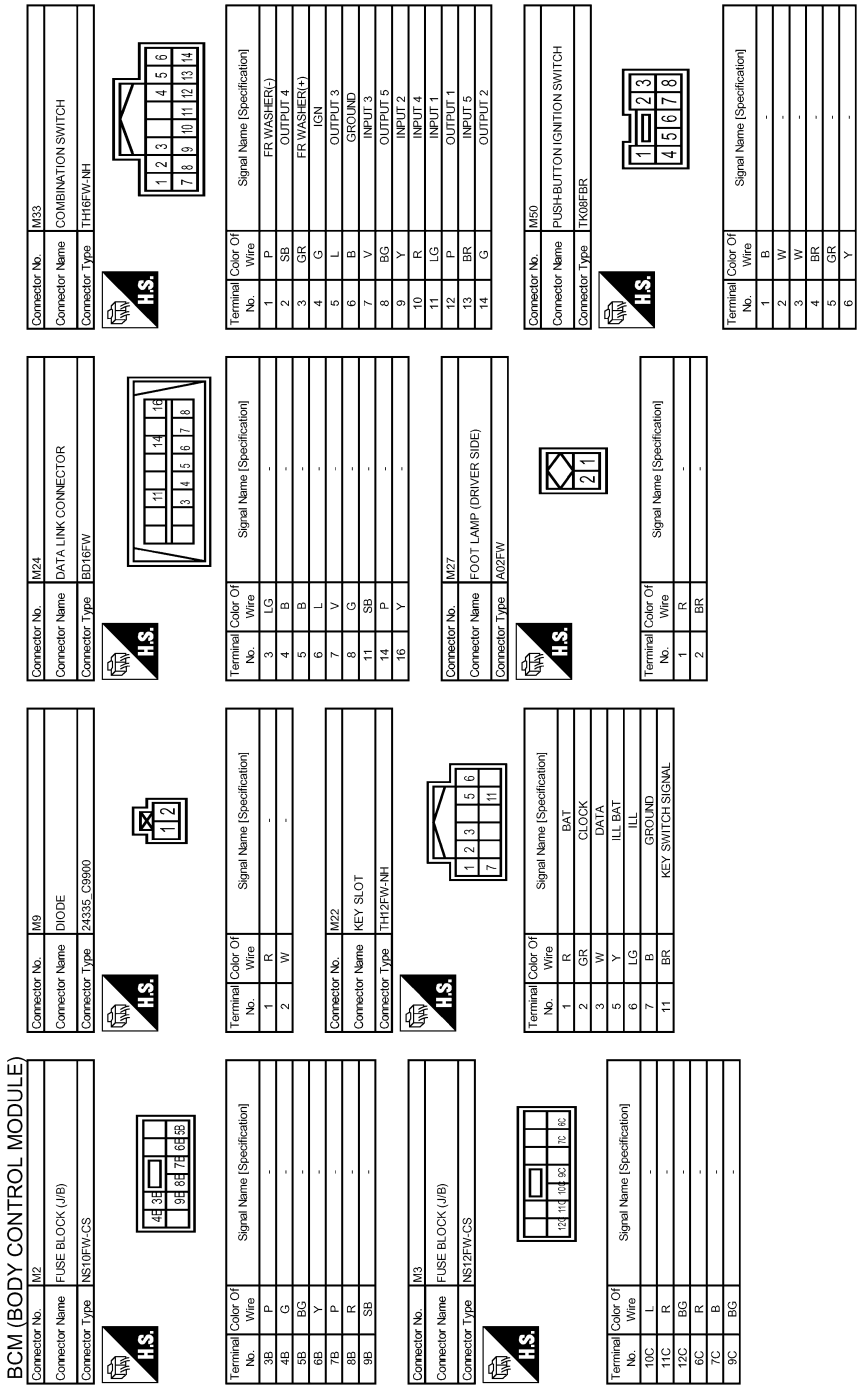

JRMWE9719GB



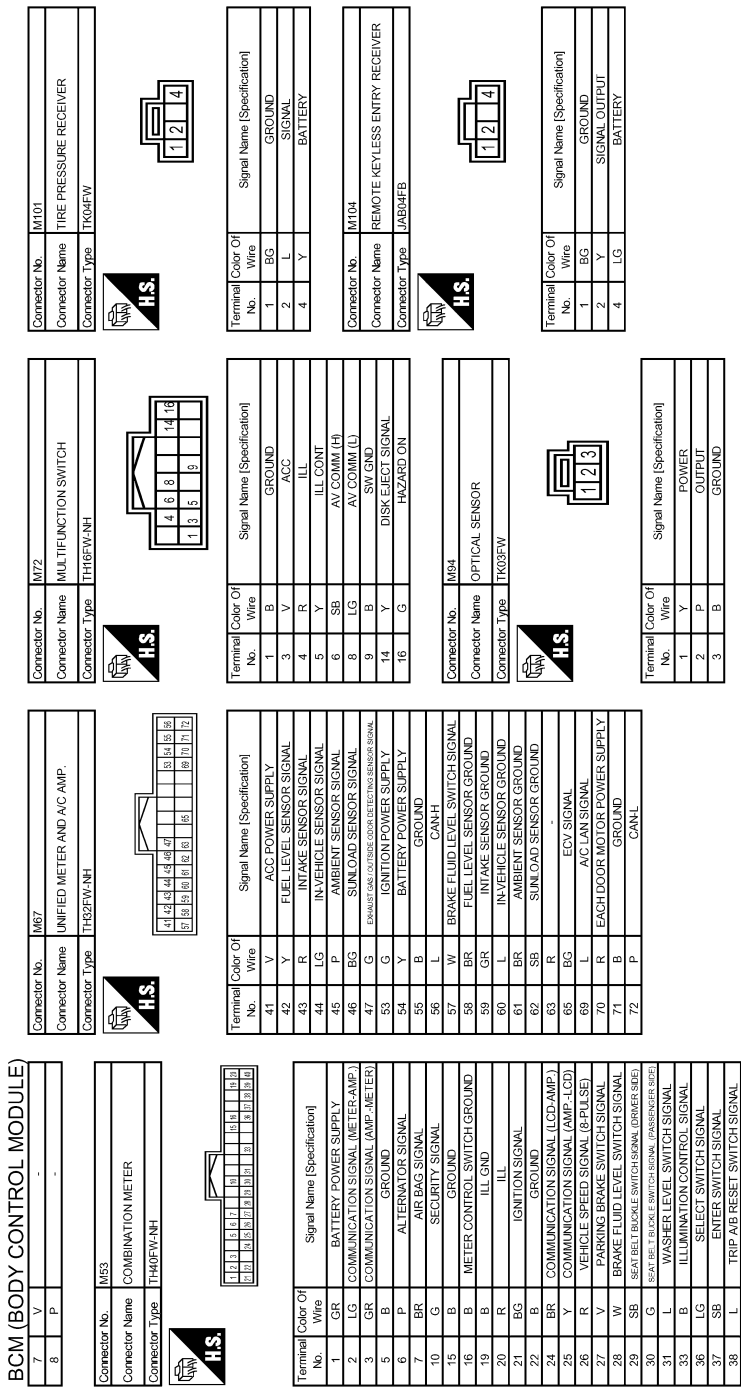

JRMWE9720GB



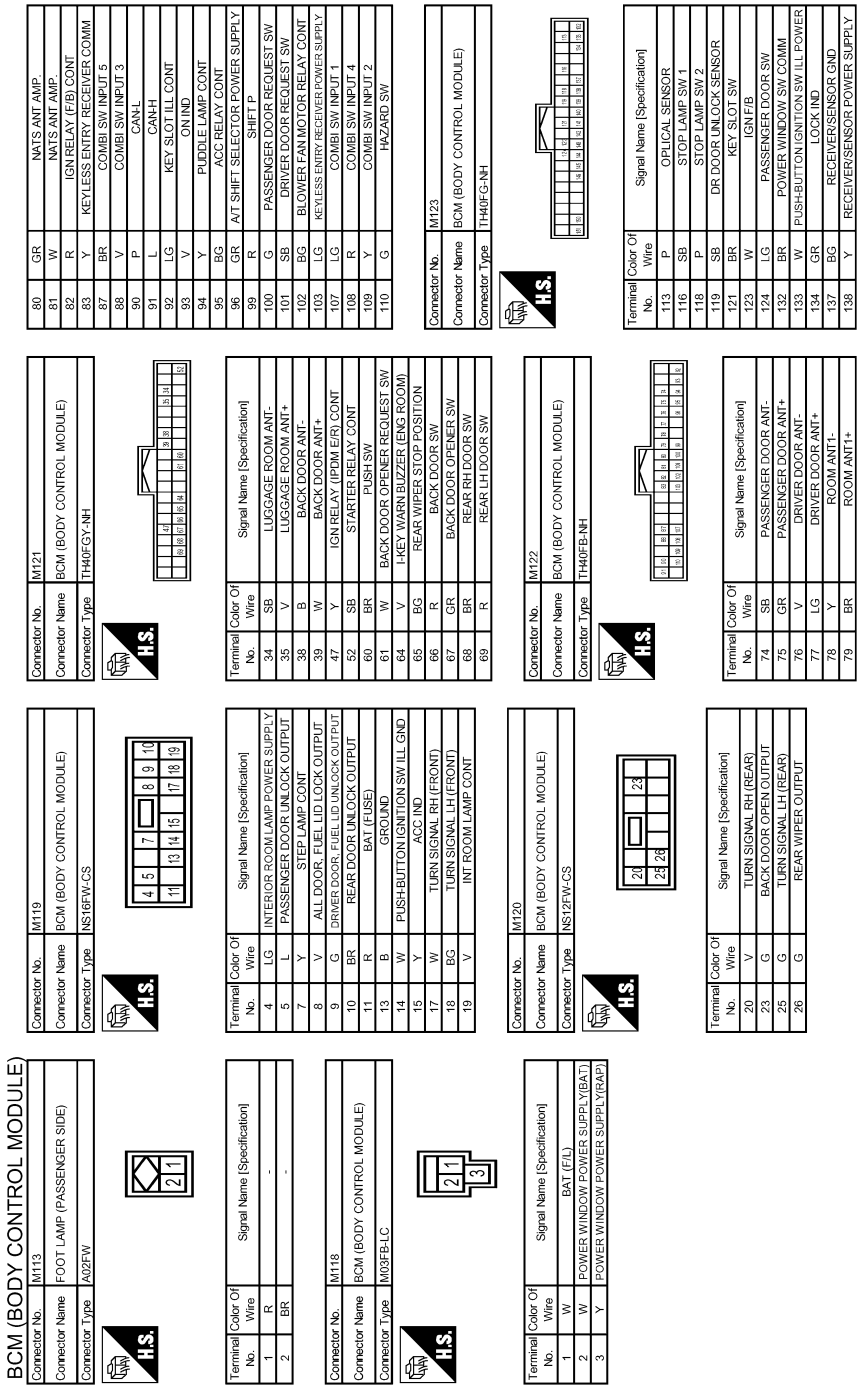

JRMWE9721GB



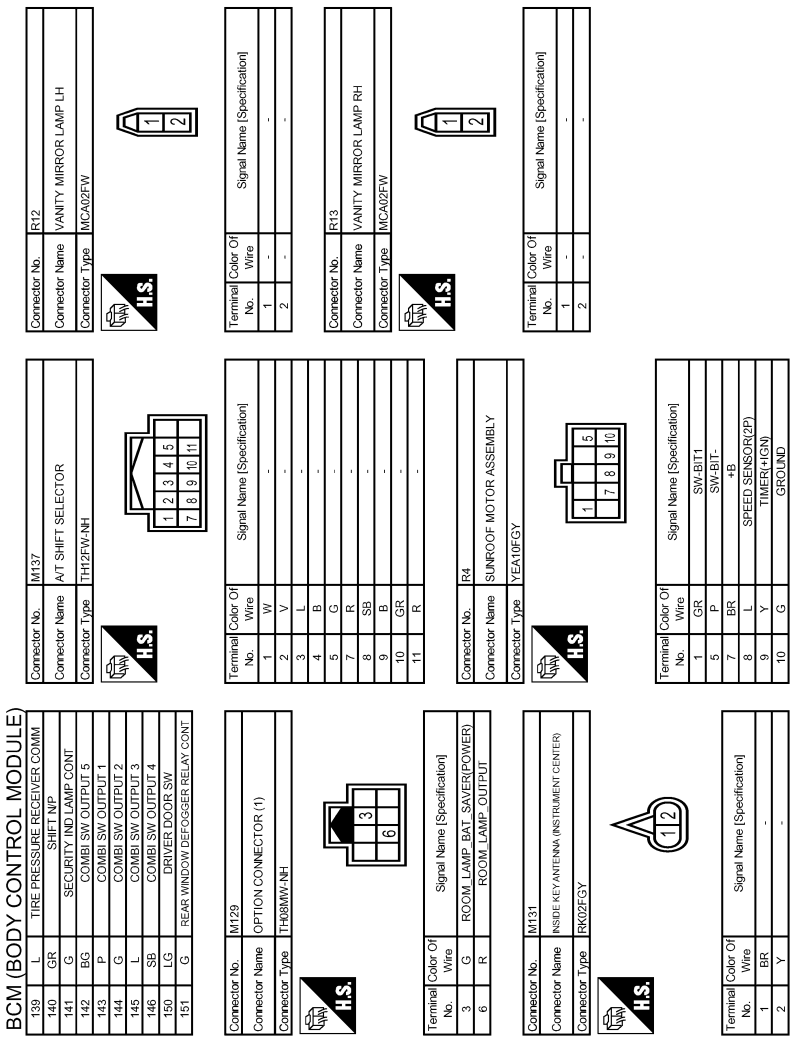

JRMWE9722GB




JRMWE9723GB




JRMWE9724GB




JRMWE9725GB

## Fail-safe

*INFOID:0000000008776158*

FAIL-SAFE CONTROL BY DTC

BCM performs fail-safe control when any DTC are detected.

| Display contents of CONSULT | Fail-safe | Cancellation |
|---|---|---|
| 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 |
| B2195: ANTI SCANNING | Inhibit engine cranking | Ignition switch ON → OFF |
| B2560: STARTER CONT RELAY | Inhibit engine cranking | 500 ms after the following CAN signal communication status becomes consistent<br>• Starter control relay signal<br>• Starter relay status signal |
| B2608: STARTER RELAY | Inhibit engine cranking | 500 ms after the following signal communication status becomes consistent<br>• Starter motor relay control signal<br>• Starter relay status signal (CAN) |
| B260A: IGNITION RELAY | Inhibit engine cranking | 500 ms after the following conditions are fulfilled<br>• IGN relay (IPDM E/R) control signal: OFF (Battery voltage)<br>• Ignition ON signal (CAN to IPDM E/R): OFF (Request signal)<br>• 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 are fulfilled<br>• Power position changes to ACC<br>• Receives engine status signal (CAN) |
| 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 |
| B261E: VEHICLE TYPE | Inhibit engine cranking | BCM initialization |

### REAR WIPER MOTOR PROTECTION

BCM detects the rear wiper stopping position according to the rear wiper stop position signal.
When the rear wiper stop position signal does not change for more than 5 seconds while driving the rear wiper, BCM stops power supply to protect the rear wiper motor.

Condition of cancellation
1. More than 1 minute is passed after the rear wiper stops.
2. Turn rear wiper switch OFF.
3. Operate the rear wiper switch or rear washer switch.

## DTC Inspection Priority Chart

*INFOID:0000000008776159*

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<br>• U1010: CONTROL UNIT (CAN) |
| 3 | • B2190: NATS ANTENNA AMP<br>• B2191: DIFFERENCE OF KEY<br>• B2192: ID DISCORD BCM-ECM<br>• B2193: CHAIN OF BCM-ECM<br>• B2195: ANTI SCANNING |

| Priority | DTC |
|---|---|
| 4 | • B2553: IGNITION RELAY<br>• B2555: STOP LAMP<br>• B2556: PUSH-BTN IGN SW<br>• B2557: VEHICLE SPEED<br>• B2560: STARTER CONT RELAY<br>• B2601: SHIFT POSITION<br>• B2602: SHIFT POSITION<br>• B2603: SHIFT POSI STATUS<br>• B2604: PNP SW<br>• B2605: PNP SW<br>• B2608: STARTER RELAY<br>• B260A: IGNITION RELAY<br>• B260F: ENG STATE SIG LOST<br>• B2614: ACC RELAY CIRC<br>• B2615: BLOWER RELAY CIRC<br>• B2616: IGN RELAY CIRC<br>• B2617: STARTER RELAY CIRC<br>• B2618: BCM<br>• B261A: PUSH-BTN IGN SW<br>• B261E: VEHICLE TYPE<br>• B26EA: KEY REGISTRATION<br>• C1729: VHCL SPEED SIG ERR<br>• U0415: VEHICLE SPEED SIG |
| 5 | • C1704: LOW PRESSURE FL<br>• C1705: LOW PRESSURE FR<br>• C1706: LOW PRESSURE RR<br>• C1707: LOW PRESSURE RL<br>• C1708: [NO DATA] FL<br>• C1709: [NO DATA] FR<br>• C1710: [NO DATA] RR<br>• C1711: [NO DATA] RL<br>• C1716: [PRESSDATA ERR] FL<br>• C1717: [PRESSDATA ERR] FR<br>• C1718: [PRESSDATA ERR] RR<br>• C1719: [PRESSDATA ERR] RL<br>• C1734: CONTROL UNIT |
| 6 | • B2621: INSIDE ANTENNA<br>• B2623: INSIDE ANTENNA |

## DTC Index

INFOID:0000000008776160

**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, refer to SEC-23, "COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)".

| CONSULT display | Fail-safe | Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition | Intelligent Key warning lamp ON | Tire pressure monitor warning lamp ON | Reference page |
|---|---|---|---|---|---|
| No DTC is detected. further testing may be required. | — | — | — | — | — |
| U1000: CAN COMM CIRCUIT | — | — | — | — | BCS-41 |
| U1010: CONTROL UNIT (CAN) | — | — | — | — | BCS-42 |
| U0415: VEHICLE SPEED SIG | — | — | — | — | BCS-43 |
| B2190: NATS ANTENNA AMP | × | — | — | — | SEC-40 |

| CONSULT display | Fail-safe | Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition | Intelligent Key warning lamp ON | Tire pressure monitor warning lamp ON | Reference page |
|---|---|---|---|---|---|
| B2191: DIFFERENCE OF KEY | × | — | — | — | SEC-43 |
| B2192: ID DISCORD BCM-ECM | × | — | — | — | SEC-44 |
| B2193: CHAIN OF BCM-ECM | × | — | — | — | SEC-45 |
| B2195: ANTI SCANNING | × | — | — | — | SEC-46 |
| B2553: IGNITION RELAY | — | × | — | — | PCS-50 |
| B2555: STOP LAMP | — | × | — | — | SEC-47 |
| B2556: PUSH-BTN IGN SW | — | × | × | — | SEC-49 |
| B2557: VEHICLE SPEED | × | × | × | — | SEC-51 |
| B2560: STARTER CONT RELAY | × | × | × | — | SEC-52 |
| B2562: LOW VOLTAGE | — | × | — | — | BCS-44 |
| B2601: SHIFT POSITION | × | × | × | — | SEC-53 |
| B2602: SHIFT POSITION | × | × | × | — | SEC-56 |
| B2603: SHIFT POSI STATUS | × | × | × | — | SEC-59 |
| B2604: PNP SW | × | × | × | — | SEC-62 |
| B2605: PNP SW | × | × | × | — | SEC-64 |
| B2608: STARTER RELAY | × | × | × | — | SEC-66 |
| B260A: IGNITION RELAY | × | × | × | — | PCS-52 |
| B260F: ENG STATE SIG LOST | × | × | × | — | SEC-68 |
| B2614: ACC RELAY CIRC | — | × | × | — | PCS-54 |
| B2615: BLOWER RELAY CIRC | — | × | × | — | PCS-57 |
| B2616: IGN RELAY CIRC | — | × | × | — | PCS-60 |
| B2617: STARTER RELAY CIRC | × | × | × | — | SEC-71 |
| B2618: BCM | × | × | × | — | PCS-63 |
| B261A: PUSH-BTN IGN SW | — | × | × | — | SEC-73 |
| B261E: VEHICLE TYPE | × | × | × (Turn ON for 15 seconds) | — | SEC-76 |
| B2621: INSIDE ANTENNA | — | × | — | — | DLK-58 |
| B2623: INSIDE ANTENNA | — | × | — | — | DLK-60 |
| B26E1: ENG STATE NO RES | × | × | × | — | SEC-69 |
| B26EA: KEY REGISTRATION | — | × | × (Turn ON for 15 seconds) | — | SEC-70 |
| C1704: LOW PRESSURE FL | — | — | — | × | WT-23 |
| C1705: LOW PRESSURE FR | — | — | — | × | |
| C1706: LOW PRESSURE RR | — | — | — | × | |
| C1707: LOW PRESSURE RL | — | — | — | × | |
| C1708: [NO DATA] FL | — | — | — | × | WT-25 |
| C1709: [NO DATA] FR | — | — | — | × | |
| C1710: [NO DATA] RR | — | — | — | × | |
| C1711: [NO DATA] RL | — | — | — | × | |

| CONSULT display | Fail-safe | Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition | Intelligent Key warning lamp ON | Tire pressure monitor warning lamp ON | Reference page |
|---|---|---|---|---|---|
| C1716: [PRESSDATA ERR] FL | — | — | — | × | WT-28 |
| C1717: [PRESSDATA ERR] FR | — | — | — | × | |
| C1718: [PRESSDATA ERR] RR | — | — | — | × | |
| C1719: [PRESSDATA ERR] RL | — | — | — | × | |
| C1729: VHCL SPEED SIG ERR | — | — | — | × | WT-30 |
| C1734: CONTROL UNIT | — | — | — | × | WT-32 |

# IPDM E/R

## Reference Value

INFOID:0000000008776161

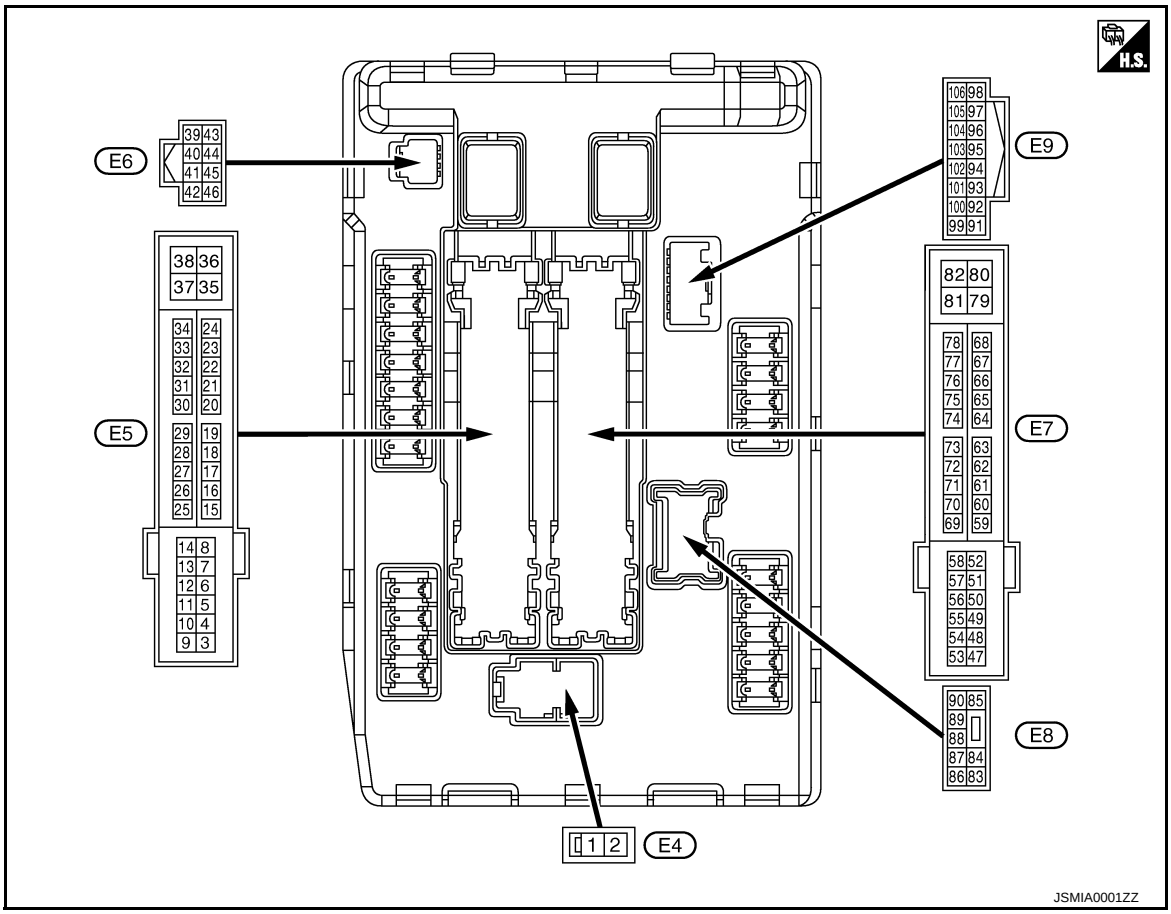
### VALUES ON THE DIAGNOSIS TOOL

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

| Monitor Item | Condition | | Value/Status |
|---|---|---|---|
| RAD FAN REQ | Engine idle speed | Changes depending on engine coolant temperature, air conditioner operation status, vehicle speed, etc. | 0 – 100 % |
| AC COMP REQ | Engine running | A/C switch OFF | Off |
| | | A/C switch ON (Compressor is operating) | On |
| TAIL&CLR REQ | Lighting switch OFF | | Off |
| | Lighting switch 1ST, 2ND, HI or AUTO (Light is illuminated) | | On |
| HL LO REQ | Lighting switch OFF | | Off |
| | Lighting switch 2ND HI or AUTO (Light is illuminated) | | On |
| HL HI REQ | Lighting switch OFF | | Off |
| | Lighting switch HI | | On |
| FR FOG REQ | Lighting switch 2ND or AUTO (Light is illuminated) | Front fog lamp switch OFF | Off |
| | | • Front fog lamp switch ON<br>• Daytime running light activated (Only for Canada) | On |
| FR WIP REQ | Ignition switch ON | Front wiper switch OFF | Stop |
| | | Front wiper switch INT | 1LOW |
| | | Front wiper switch LO | Low |
| | | Front wiper switch HI | Hi |
| WIP AUTO STOP | Ignition switch ON | Front wiper stop position | STOP P |
| | | Any position other than front wiper stop position | ACT P |
| WIP PROT | Ignition switch ON | Front wiper operates normally | Off |
| | | Front wiper stops at fail-safe operation | BLOCK |
| IGN RLY1 -REQ | Ignition switch OFF or ACC | | Off |
| | Ignition switch ON | | On |
| IGN RLY | Ignition switch OFF or ACC | | Off |
| | Ignition switch ON | | On |
| PUSH SW | Release the push-button ignition switch | | Off |
| | Press the push-button ignition switch | | On |
| INTER/NP SW | Ignition switch ON | 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 |

| Monitor Item | Condition | | Value/Status |
|---|---|---|---|
| ST/INHI RLY | Ignition switch ON | | Off |
| | At engine cranking | | INHI ON → ST ON |
| | 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<br>• Selector lever in any position other than P | Off |
| | Release the selector button with selector lever in P position | | On |
| S/L RLY -REQ | **NOTE:**<br>The item is indicated, but not monitored. | | Off |
| S/L STATE | **NOTE:**<br>The item is indicated, but not monitored. | | UNLOCK |
| DTRL REQ | **NOTE:**<br>The item is indicated, but not monitored. | | Off |
| OIL P SW | Ignition switch OFF, ACC or engine running | | Open |
| | Ignition switch ON | | Close |
| HOOD SW | Close the hood | | Off |
| | Open the hood | | On |
| HL WASHER REQ | **NOTE:**<br>The item is indicated, but not monitored. | | Off |
| THFT HRN REQ | Not operation | | Off |
| | • Panic alarm is activated<br>• Horn is activated with VEHICLE SECURITY (THEFT WARNING) SYSTEM | | On |
| HORN CHIRP | Not operating | | Off |
| | Door locking with Intelligent Key (horn chirp mode) | | On |
| CRNRNG LMP REQ | **NOTE:**<br>The item is indicated, but not monitored. | | Off |

TERMINAL LAYOUT

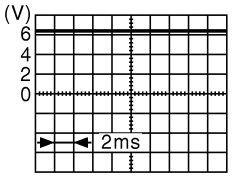
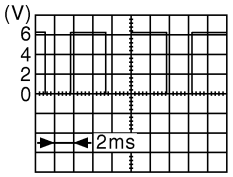
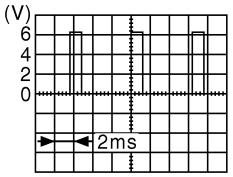



PHYSICAL VALUES

| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|---|---|---|---|---|---|---|
| | | Signal name | Input/ Output | | | |
| + | – | | | | | |
| 1 (W) | Ground | Battery power supply | Input | Ignition switch OFF | | Battery voltage |
| 2 (L) | Ground | Battery power supply | Input | Ignition switch OFF | | Battery voltage |
| 4 (V) | Ground | Front wiper LO | Output | Ignition switch ON | Front wiper switch OFF | 0 V |
| | | | | | Front wiper switch LO | Battery voltage |
| 5 (L) | Ground | Front wiper HI | Output | Ignition switch ON | Front wiper switch OFF | 0 V |
| | | | | | Front wiper switch HI | Battery voltage |
| 7 (R) | Ground | Tail, license plate lamps & interior lamps | Output | Ignition switch ON | Lighting switch OFF | 0 V |
| | | | | | Lighting switch 1ST | Battery voltage |
| 12 (B/W) | Ground | Ground | — | Ignition switch ON | | 0 V |
| 13 (Y) | 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<br>• Engine running | | Battery voltage |
| 16 (LG) | Ground | Front wiper auto stop | Input | Ignition switch ON | Front wiper stop position | 0 V |
| | | | | | Any position other than front wiper stop position | Battery voltage |

| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|---|---|---|---|---|---|---|
| + | – | Signal name | Input/ Output | | | |
| 19 (W) | Ground | Ignition relay power supply | Output | Ignition switch OFF | | 0 V |
| | | | | Ignition switch ON | | Battery voltage |
| 25 (G) | Ground | Ignition relay power supply | Output | Ignition switch OFF | | 0 V |
| | | | | Ignition switch ON | | Battery voltage |
| 26* (R) | Ground | Ignition relay power supply | Output | Ignition switch OFF | | 0 V |
| | | | | Ignition switch ON | | Battery voltage |
| 27 (BG) | Ground | Ignition relay monitor | Input | Ignition switch OFF or ACC | | Battery voltage |
| | | | | Ignition switch ON | | 0 V |
| 28 (L) | Ground | Push-button ignition switch | Input | Press the push-button ignition switch | | 0 V |
| | | | | Release the push-button ignition switch | | Battery voltage |
| 30 (GR) | Ground | Starter relay control | Input | Ignition switch ON | Selector lever in any position other than P or N | 0 V |
| | | | | | Selector lever P or N | Battery voltage |
| 36 (G) | Ground | Battery power supply | Input | Ignition switch OFF | | Battery voltage |
| 39 (P) | — | CAN-L | Input/ Output | — | | — |
| 40 (L) | — | CAN-H | Input/ Output | — | | — |
| 41 (B/W) | Ground | Ground | — | Ignition switch ON | | 0 V |
| 42 (Y) | Ground | Cooling fan relay control | Input | Ignition switch OFF or ACC | | 0 V |
| | | | | Ignition switch ON | | 0.7 V |
| 43 (SB) | Ground | A/T shift selector (Detention switch) | Input | Ignition switch ON | • Press the selector button (Selector lever P)<br>• Selector lever in any position other than P | Battery voltage |
| | | | | | Release the selector button (selector lever P) | 0 V |
| 44 (BR) | Ground | Horn relay control | Input | The horn is deactivated | | Battery voltage |
| | | | | The horn is activated | | 0 V |
| 45 (G) | Ground | Anti theft horn relay control | Input | The horn is deactivated | | Battery voltage |
| | | | | The horn is activated | | 0 V |
| 46 (R) | 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 (L) | Ground | A/C relay power supply | Output | Engine running | A/C switch OFF | 0 V |
| | | | | | A/C switch ON (A/C compressor is operating) | Battery voltage |
| 49 (BG) | Ground | ECM relay power supply | Output | Ignition switch OFF (More than a few seconds after turning ignition switch OFF) | | 0 V |
| | | | | • Ignition switch ON<br>• Ignition switch OFF (For a few seconds after turning ignition switch OFF) | | Battery voltage |

| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|---|---|---|---|---|---|---|
| + | – | Signal name | Input/ Output | | | |
| 51 (Y) | Ground | Ignition relay power supply | Output | Ignition switch OFF | | 0 V |
| | | | | Ignition switch ON | | Battery voltage |
| 53 (W) | Ground | ECM relay power supply | Output | Ignition switch OFF (More than a few seconds after turning ignition switch OFF) | | 0 V |
| | | | | • Ignition switch ON<br>• Ignition switch OFF (For a few seconds after turning ignition switch OFF) | | Battery voltage |
| 54 (P) | Ground | Throttle control motor relay power supply | Output | Ignition switch OFF (More than a few seconds after turning ignition switch OFF) | | 0 V |
| | | | | • Ignition switch ON<br>• Ignition switch OFF (For a few seconds after turning ignition switch OFF) | | Battery voltage |
| 55 (SB) | Ground | ECM power supply | Output | Ignition switch OFF | | Battery voltage |
| 56 (LG) | Ground | Ignition relay power supply | Output | Ignition switch OFF | | 0 V |
| | | | | Ignition switch ON | | Battery voltage |
| 57 (G) | Ground | Ignition relay power supply | Output | Ignition switch OFF | | 0 V |
| | | | | Ignition switch ON | | Battery voltage |
| 58 (V) | Ground | Ignition relay power supply | Output | Ignition switch OFF | | 0 V |
| | | | | Ignition switch ON | | Battery voltage |
| 69 (BR) | Ground | ECM relay control | Output | Ignition switch OFF (More than a few seconds after turning ignition switch OFF) | | Battery voltage |
| | | | | • Ignition switch ON<br>• Ignition switch OFF (For a few seconds after turning ignition switch OFF) | | 0 – 1.5 V |
| 70 (BG) | Ground | Throttle control motor relay control | Output | Ignition switch ON → OFF | | 0 – 1.0 V<br>↓<br>Battery voltage<br>↓<br>0 V |
| | | | | Ignition switch ON | | 0 – 1.0 V |
| 74 (P) | Ground | Ignition relay power supply | Output | Ignition switch OFF | | 0 V |
| | | | | Ignition switch ON | | Battery voltage |
| 75 (SB) | Ground | Oil pressure switch | Input | Ignition switch ON | Engine stopped | 0 V |
| | | | | | Engine running | Battery voltage |

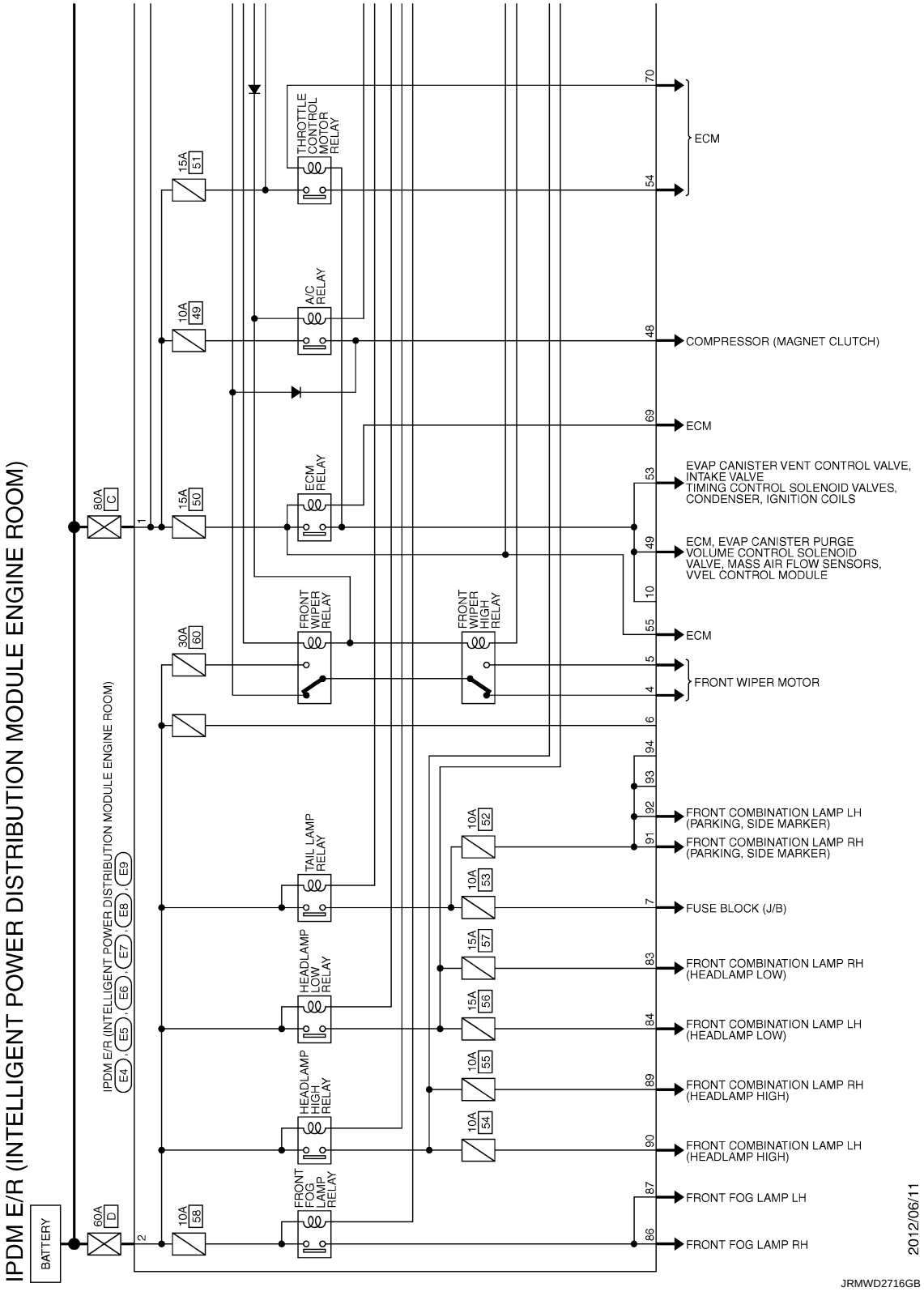
| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|---|---|---|---|---|---|---|
| | | Signal name | Input/ Output | | | |
| + | – | | | | | |
| 76 (Y) | Ground | Power generation command signal | Output | Ignition switch ON | |  JPMIA0001GB 6.3 V |
| | | | | 40% is set on “ACTIVE TEST”, “ALTERNATOR DUTY” of “ENGINE” | |  JPMIA0002GB 3.8 V |
| | | | | 80% is set on “ACTIVE TEST”, “ALTERNATOR DUTY” of “ENGINE” | |  JPMIA0003GB 1.4 V |
| 77 (R) | Ground | Fuel pump relay control | Output | • Approximately 1 second after turning the ignition switch ON<br>• Engine running | | 0 – 1.0 V |
| | | | | Approximately 1 second or more after turning the ignition switch ON | | Battery voltage |
| 80 (W) | Ground | Starter motor | Output | At engine cranking | | Battery voltage |
| 83 (BG) | Ground | Headlamp LO (RH) | Output | Ignition switch ON | Lighting switch OFF | 0 V |
| | | | | | Lighting switch 2ND | Battery voltage |
| 84 (V) | Ground | Headlamp LO (LH) | Output | Ignition switch ON | Lighting switch OFF | 0 V |
| | | | | | Lighting switch 2ND | Battery voltage |
| 86 (W) | Ground | Front fog lamp (RH) | Output | Lighting switch 2ND | Front fog lamp switch OFF | 0 V |
| | | | | | • Front fog lamp switch ON<br>• Daytime running light activated (Only for Canada) | Battery voltage |
| 87 (L) | Ground | Front fog lamp (LH) | Output | Lighting switch 2ND | Front fog lamp switch OFF | 0 V |
| | | | | | • Front fog lamp switch ON<br>• Daytime running light activated (Only for Canada) | Battery voltage |
| 88 (GR) | Ground | Washer pump power supply | Output | Ignition switch ON | | Battery voltage |

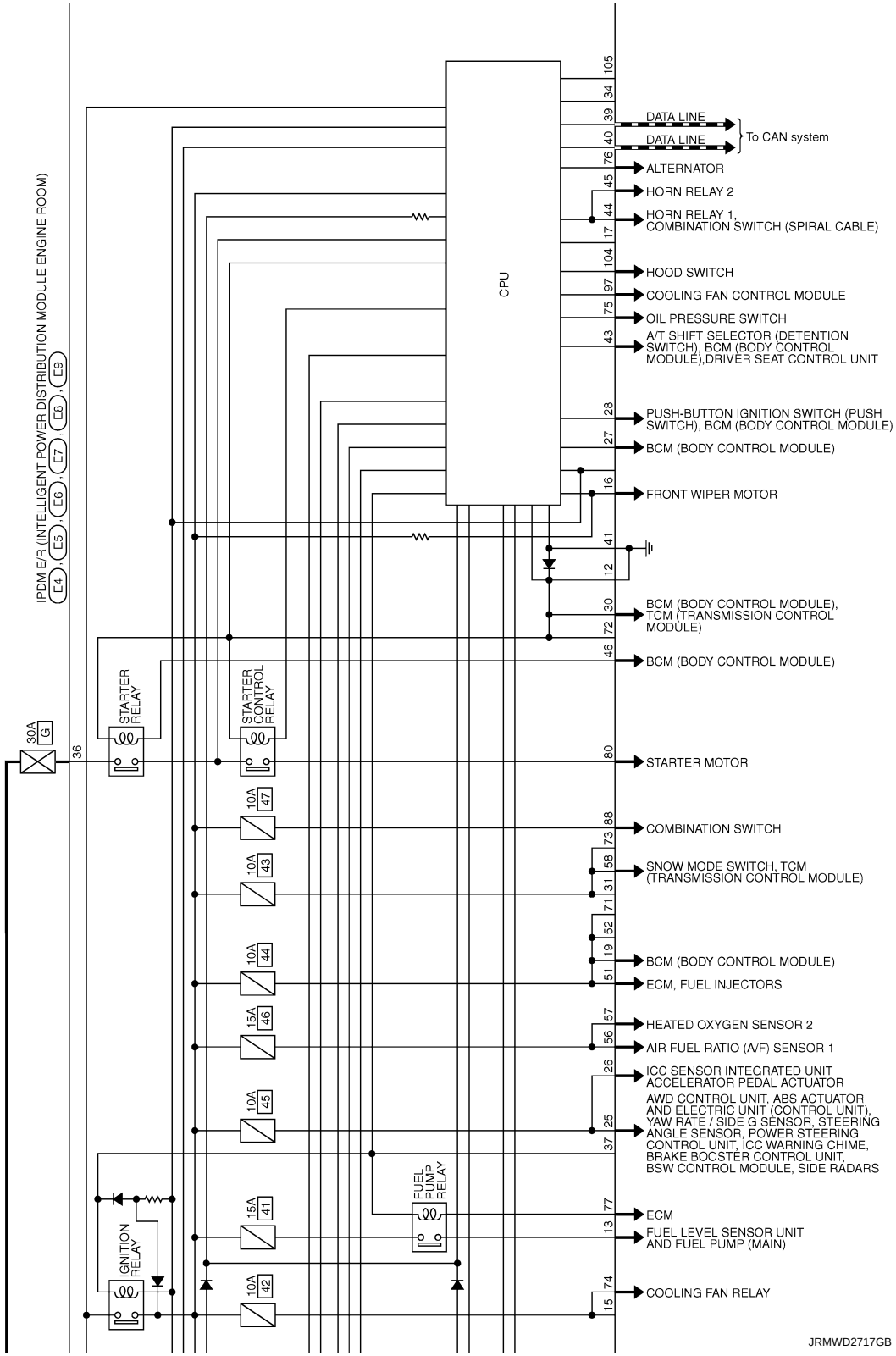
| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|---|---|---|---|---|---|---|
| + | – | Signal name | Input/ Output | | | |
| 89 (BR) | Ground | Headlamp HI (RH) | Output | Ignition switch ON | Lighting switch OFF | 0 V |
| | | | | | • Lighting switch HI<br>• Lighting switch PASS | Battery voltage |
| 90 (P) | Ground | Headlamp HI (LH) | Output | Ignition switch ON | Lighting switch OFF | 0 V |
| | | | | | • Lighting switch HI<br>• Lighting switch PASS | Battery voltage |
| 91 (P) | Ground | Parking lamp (RH) | Output | Ignition switch ON | Lighting switch OFF | 0 V |
| | | | | | Lighting switch 1ST | Battery voltage |
| 92 (BG) | Ground | Parking lamp (LH) | Output | Ignition switch ON | Lighting switch OFF | 0 V |
| | | | | | Lighting switch 1ST | Battery voltage |
| 97 (V) | Ground | Cooling fan control | Output | Engine idling | | 0 – 5 V |
| 104 (LG) | Ground | Hood switch | Input | Close the hood | | Battery voltage |
| | | | | Open the hood | | 0 V |

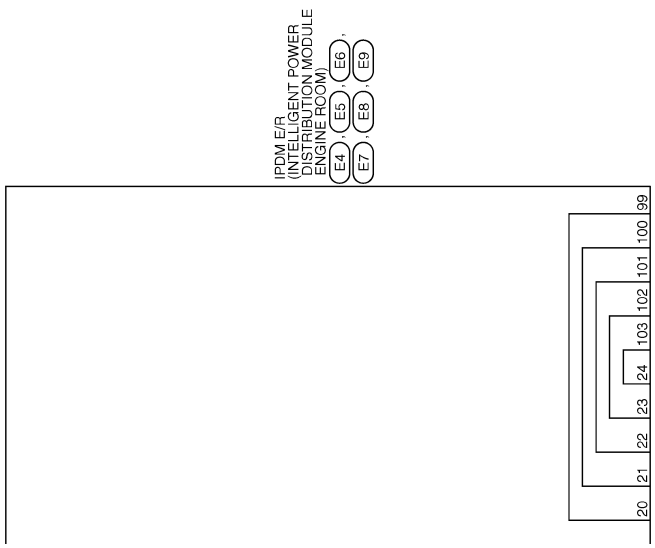
*: Only for the models with ICC system

## Wiring Diagram - IPDM E/R -

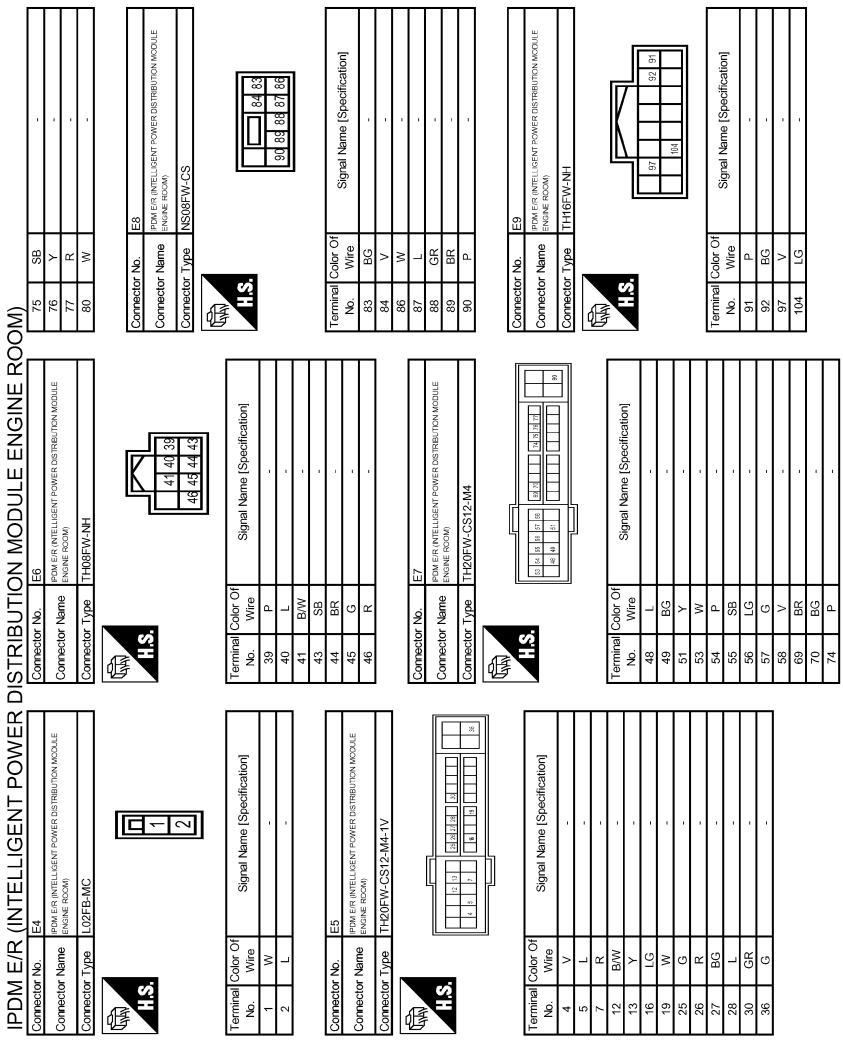
INFOID:0000000008776162




IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E4, E5, E6, E7, E8, E9
CPU
105
34
39
40
76
45
44
17
104
97
75
43
28
27
16
41
12
30
72
46
36
80
88
73
58
31
71
52
19
51
57
56
26
25
37
77
13
74
15
DATA LINE
DATA LINE
To CAN system
ALTERNATOR
HORN RELAY 2
HORN RELAY 1,
COMBINATION SWITCH (SPIRAL CABLE)
HOOD SWITCH
COOLING FAN CONTROL MODULE
OIL PRESSURE SWITCH
A/T SHIFT SELECTOR (DETENTION SWITCH), BCM (BODY CONTROL MODULE),DRIVER SEAT CONTROL UNIT
PUSH-BUTTON IGNITION SWITCH (PUSH SWITCH), BCM (BODY CONTROL MODULE)
BCM (BODY CONTROL MODULE)
FRONT WIPER MOTOR
BCM (BODY CONTROL MODULE),
TCM (TRANSMISSION CONTROL MODULE)
BCM (BODY CONTROL MODULE)
STARTER MOTOR
COMBINATION SWITCH
SNOW MODE SWITCH, TCM (TRANSMISSION CONTROL MODULE)
BCM (BODY CONTROL MODULE)
ECM, FUEL INJECTORS
HEATED OXYGEN SENSOR 2
AIR FUEL RATIO (A/F) SENSOR 1
ICC SENSOR INTEGRATED UNIT
ACCELERATOR PEDAL ACTUATOR
AWD CONTROL UNIT, ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT), YAW RATE / SIDE G SENSOR, STEERING ANGLE SENSOR, POWER STEERING CONTROL UNIT, ICC WARNING CHIME, BRAKE BOOSTER CONTROL UNIT, BSW CONTROL MODULE, SIDE RADARS
ECM
FUEL LEVEL SENSOR UNIT AND FUEL PUMP (MAIN)
COOLING FAN RELAY
30A G
STARTER RELAY
STARTER CONTROL RELAY
IGNITION RELAY
FUEL PUMP RELAY
10A 47
10A 43
10A 44
15A 46
10A 45
15A 41
10A 42
JRMWD2717GB




JRMWD2718GB




JRMWE9734GB

## Fail-safe

*INFOID:0000000008776163*

### 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

| Control part | Fail-safe operation |
|---|---|
| Cooling fan | • Outputs the pulse duty signal (PWM signal) 100% when the ignition switch is turned ON<br>• Outputs the pulse duty signal (PWM signal) 0% when the ignition switch is turned OFF |
| A/C compressor | A/C relay OFF |
| Alternator | Outputs the power generation command signal (PWM signal) 0% |

If No CAN Communication Is Available With BCM

| Control part | Fail-safe operation |
|---|---|
| Headlamp | • Turns ON the headlamp low relay when the ignition switch is turned ON<br>• Turns OFF the headlamp low relay when the ignition switch is turned OFF<br>• Headlamp high relay OFF |
| • Parking lamps<br>• License plate lamps<br>• Side maker lamps<br>• Illuminations<br>• Tail lamps | • Turns ON the tail lamp relay when the ignition switch is turned ON<br>• 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.<br>• 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 relay OFF |
| Ignition relay | The status just before activation of fail-safe is maintained. |
| Starter motor | Starter control 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”<br>• 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 stop position signal.
When a front wiper stop position 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.

| Ignition switch | Front wiper switch | Front wiper stop position signal |
|---|---|---|
| ON | OFF | The front wiper stop position signal (stop position) cannot be input for 10 seconds. |
| | ON | The front wiper stop position 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

INFOID:0000000008776164

**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.

×: Applicable

| CONSULT display | Fail-safe | Reference |
|---|---|---|
| No DTC is detected. further testing may be required. | — | — |
| U1000: CAN COMM CIRCUIT | × | PCS-14 |
| B2098: IGN RELAY ON CIRC | × | PCS-15 |
| B2099: IGN RELAY OFF CIRC | — | PCS-17 |
| B210B: STR CONT RLY ON CIRC | — | SEC-77 |
| B210C: STR CONT RLY OFF CIRC | — | SEC-78 |
| B210D: STARTER RLY ON CIRC | — | SEC-80 |
| B210E: STARTER RLY OFF CIRC | — | SEC-82 |
| B210F: INTRLCK/PNP SW ON | — | SEC-84 |
| B2110: INTRLCK/PNP SW OFF | — | SEC-86 |

# SYMPTOM DIAGNOSIS

## ENGINE DOES NOT START WITH INTELLIGENT KEY

### Description

INFOID:0000000008284547

- 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.
- 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:0000000008284548

#### 1.PERFORM WORK SUPPORT

Perform “INSIDE ANT DIAGNOSIS” on Work Support of “INTELLIGENT KEY”.
Refer to SEC-24, "INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY)".

>> GO TO 2.

#### 2.PERFORM SELF DIAGNOSTIC RESULT

Perform “BCM” Self Diagnostic Result.

Is DTC detected?

YES >> Refer to DLK-58, "DTC Logic" (instrument center), or DLK-60, "DTC Logic" (luggage room).
NO >> GO TO 3.

#### 3.CHECK PUSH-BUTTON IGNITION SWITCH

Check push-button ignition switch.
Refer to PCS-67, "Component Function Check".

Is the inspection normal?

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

#### 4.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".
NO >> GO TO 1.

# ENGINE DOES NOT START WHEN INTELLIGENT KEY IS INSERTED INTO KEY SLOT

## Description

INFOID:0000000008284549

- 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.

## Diagnosis Procedure

INFOID:0000000008284550

### 1.PERFORM INITIALIZATION

Perform initialization with CONSULT. Register all Intelligent Keys.
For initialization and registration of Intelligent Key, follow the instruction of CONSULT display.

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

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

### 2.CHECK KEY SLOT

Check key slot.
Refer to DLK-96, "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-42, "Intermittent Incident".
NO >> GO TO 1.

# SECURITY INDICATOR LAMP DOES NOT TURN ON OR BLINK

## Description

INFOID:0000000008284551

- 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)

- Intelligent Key is not inserted in key slot.
- Ignition switch position is not in the ON position.

## Diagnosis Procedure

INFOID:0000000008284552

### 1.CHECK SECURITY INDICATOR LAMP

Check security indicator lamp.
Refer to SEC-93, "Component Function Check".

Is the inspection result normal?

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

### 2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".
NO >> GO TO 1.

# VEHICLE SECURITY SYSTEM CAN NOT BE SET

## INTELLIGENT KEY

### INTELLIGENT KEY : Description

INFOID:0000000008284553

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

**NOTE:**

Check that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.

CONDITION OF VEHICLE (OPERATING CONDITION)

Confirm the setting of “SECURITY ALARM SET” in “WORK SUPPORT” in “THEFT ALM” using CONSULT.

### INTELLIGENT KEY : Diagnosis Procedure

INFOID:0000000008284554

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

Lock/unlock door with Intelligent Key.

Refer to DLK-28, "REMOTE KEYLESS ENTRY FUNCTION : System Description".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check Intelligent Key system (remote keyless entry function). Refer to DLK-186, "Diagnosis Procedure".

#### 2.CHECK HOOD SWITCH

Check hood switch.

Refer to SEC-90, "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-42, "Intermittent Incident".

NO >> GO TO 1.

## DOOR REQUEST SWITCH

### DOOR REQUEST SWITCH : Description

INFOID:0000000008284555

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

**NOTE:**

Check that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.

CONDITION OF VEHICLE (OPERATING CONDITION)

Confirm the setting of “SECURITY ALARM SET” in “WORK SUPPORT” in “THEFT ALM” using CONSULT.

### DOOR REQUEST SWITCH : Diagnosis Procedure

INFOID:0000000008284556

#### 1.CHECK INTELLIGENT KEY SYSTEM (DOOR LOCK FUNCTION)

Lock/unlock door with door request switch.

Refer to DLK-19, "DOOR LOCK FUNCTION : System Description".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check Intelligent Key system (door lock function). Refer to DLK-183, "ALL DOOR : Diagnosis Procedure".

#### 2.CHECK HOOD SWITCH

Check hood switch.
Refer to SEC-90, "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-42, "Intermittent Incident".
NO >> GO TO 1.

## DOOR KEY CYLINDER

### DOOR KEY CYLINDER : Description

INFOID:0000000008284557

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

**NOTE:**
Check that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.

CONDITION OF VEHICLE (OPERATING CONDITION)
Confirm the setting of “SECURITY ALARM SET” in “WORK SUPPORT” in “THEFT ALM” using CONSULT.

### DOOR KEY CYLINDER : Diagnosis Procedure

INFOID:0000000008284558

### 1. CHECK POWER DOOR LOCK SYSTEM

Lock/unlock door with mechanical key.
Refer to DLK-11, "System Description".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Check power door lock system. Refer to DLK-182, "Diagnosis Procedure".

### 2. CHECK HOOD SWITCH

Check hood switch.
Refer to SEC-90, "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-42, "Intermittent Incident".
NO >> GO TO 1.

# VEHICLE SECURITY ALARM DOES NOT ACTIVATE

## Description

INFOID:0000000008284559

Before performing the diagnosis in the following table, check “Work Flow”. Refer to SEC-5, "Work Flow".

## Diagnosis Procedure

INFOID:0000000008284560

### 1.CHECK DOOR SWITCH

Check door switch.
Refer to DLK-63, "Component_Function_Check".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace the malfunctioning door switch

### 2.CHECK HOOD SWITCH

Check hood switch.
Refer to SEC-90, "Component_Function_Check".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace the malfunctioning door switch

### 3.CHECK HEADLAMP ALARM

Check headlamp operation.
Refer to SEC-92, "Component_Function_Check".

Is the inspection result normal?

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

### 4.CHECK HORN

Check horn.
Refer to DLK-100, "Component_Function_Check".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace malfunctioning parts.

### 5.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".
NO >> GO TO 1.

# VEHICLE SECURITY SYSTEM CAN NOT CANCELED

## INTELLIGENT KEY

### INTELLIGENT KEY : Description

INFOID:0000000008284561

Before performing the diagnosis in the following table, check “Work Flow”. Refer to SEC-5, "Work Flow".

### INTELLIGENT KEY : Diagnosis Procedure

INFOID:0000000008284562

**1.** CHECK INTELLIGENT KEY

Check Intelligent Key.
Refer to DLK-94, "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-42, "Intermittent Incident".
NO >> GO TO 1.

## DOOR REQUEST SWITCH

### DOOR REQUEST SWITCH : Description

INFOID:0000000008284563

Before performing the diagnosis in the following table, check “Work Flow”. Refer to SEC-5, "Work Flow".

### DOOR REQUEST SWITCH : Diagnosis Procedure

INFOID:0000000008284564

**1.** CHECK DOOR REQUEST SWITCH

Check door request switch.
Refer to DLK-83, "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-15, "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-42, "Intermittent Incident".
NO >> GO TO 1.

## DOOR KEY CYLINDER

## DOOR KEY CYLINDER : Description

INFOID:0000000008284565

Before performing the diagnosis in the following table, check “Work Flow”. Refer to SEC-5, "Work Flow".

## DOOR KEY CYLINDER : Diagnosis Procedure

INFOID:0000000008284566

### 1.CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch.
Refer to DLK-76, "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 power door lock system.
Refer to DLK-15, "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-42, "Intermittent Incident".
NO >> GO TO 1.

# INTELLIGENT KEY INSERT INFORMATION DOES NOT OPERATE

## Description

INFOID:0000000008284567

Intelligent Key insert information does not operate when push-button ignition switch is operated while Intelligent Key is not inside vehicle.

**NOTE:**

Warning functions operating condition is extremely complicated. During operation confirmation reconfirm the list above twice in order to ensure proper operation. Refer to DLK-38, "WARNING FUNCTION : System Description".

## Diagnosis Procedure

INFOID:0000000008284568

### 1.CHECK POWER POSITION

Check if ignition switch position is changing or not.

Does ignition switch position change?

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

### 2.CHECK PUSH-BUTTON IGNITION SWITCH

Check push-button ignition switch.
Refer to PCS-67, "Component Function Check".

Is the inspection result normal?

YES >> Check BCM for DTC. Refer to SEC-167, "DTC Index".
NO >> Repair or replace the malfunctioning parts.

### 3.CHECK DOOR SWITCH

Check door switch.
Refer to DLK-63, "Component Function Check".

Is the inspection result normal?

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

### 4.CHECK KEY SLOT

Check key slot.
Refer to DLK-96, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace the malfunctioning parts.

### 5.CHECK COMBINATION METER DISPLAY

Check combination meter display.
Refer to DLK-102, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace the malfunctioning parts.

### 6.CHECK KEY SLOT INDICATOR

Check key slot indicator.
Refer to DLK-98, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace the malfunctioning parts.

### 7.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".
NO >> GO TO 1.

# PRECAUTION

## PRECAUTIONS

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

INFOID:0000000008284569

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

**WARNING:**

**Always observe the following items for preventing accidental activation.**

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

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

**WARNING:**

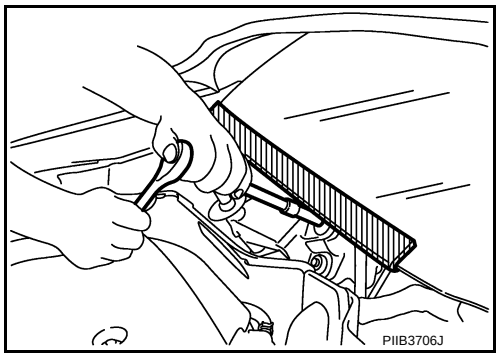
**Always observe the following items for preventing accidental activation.**

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

### Precaution for Procedure without Cowl Top Cover

INFOID:0000000008284570

When performing the procedure after removing cowl top cover, cover the lower end of windshield with urethane, etc to prevent damage to windshield.

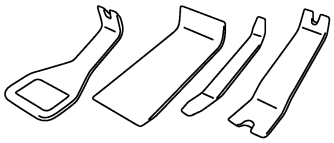


# PREPARATION

## PREPARATION

### Commercial Service Tools

INFOID:0000000008284571

| Tool name | Description |
|---|---|
| Remover tool  PIIB7923J | Removes the clip and pawl and metal clip |

# REMOVAL AND INSTALLATION

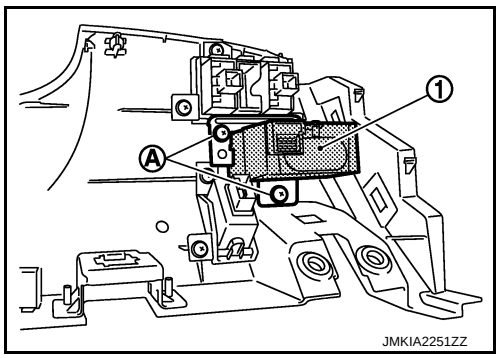
## KEY SLOT

### Removal and Installation

INFOID:0000000008284572

REMOVAL

1. Remove the instrument driver lower panel. Refer to IP-13, "Removal and Installation".
2. Disconnect key slot connector.
3. Remove the key slot mounting screw (A), and then remove key slot (1) from instrument driver lower panel.




INSTALLATION

Install in the reverse order of removal.

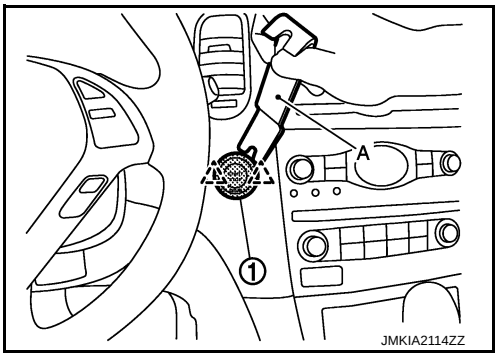
# PUSH-BUTTON IGNITION SWITCH

## Removal and Installation

INFOID:0000000008284573

### 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.