SECTION SEC

SECURITY CONTROL SYSTEM

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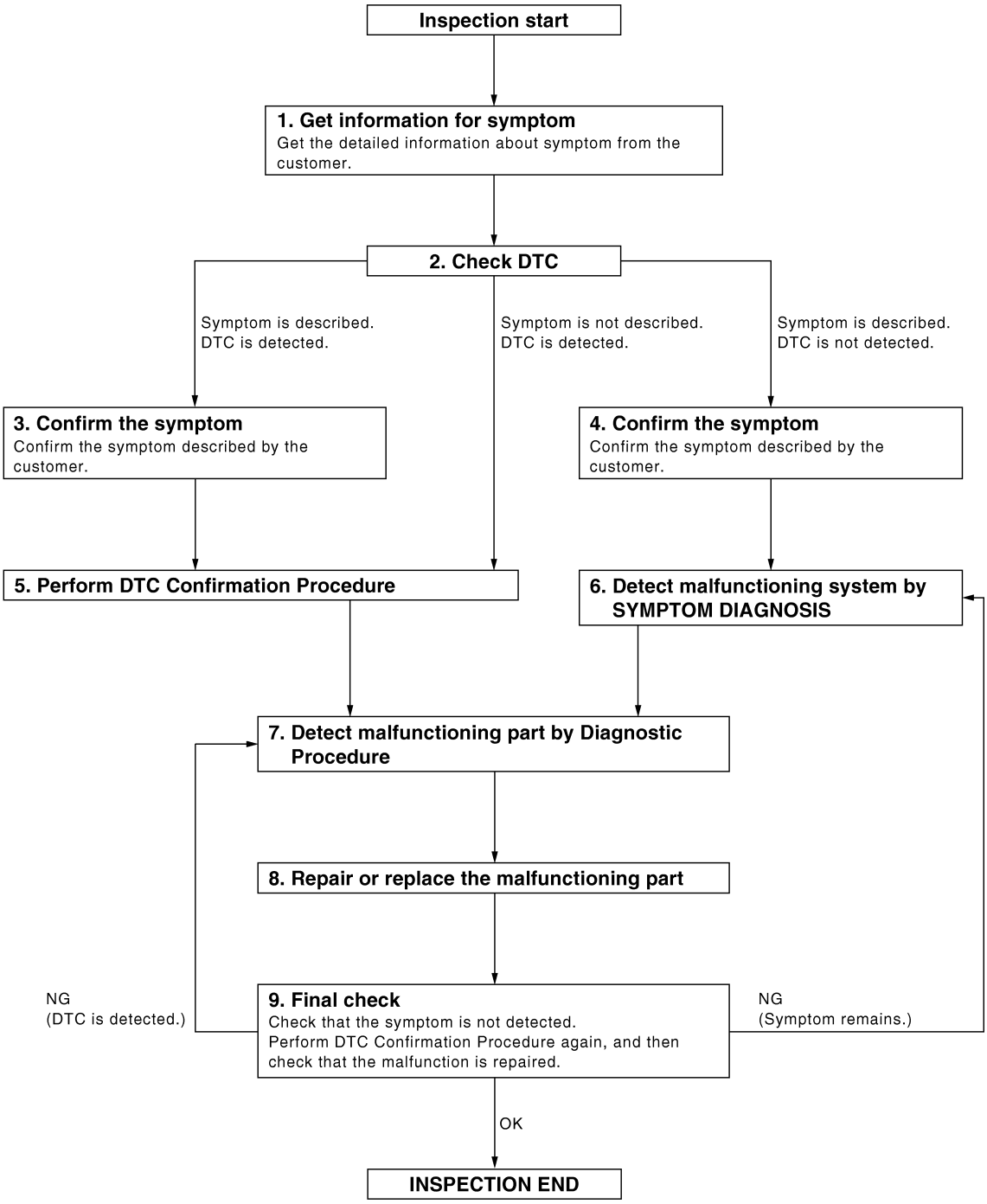
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000003829300

OVERALL SEQUENCE



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DETAILED FLOW

1.GET INFORMATION FOR SYMPTOM

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

>> GO TO 2.

2.CHECK DTC

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

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

3. Check related service bulletins for information.

Is any symptom described and any DTC detected?

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

3.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.
Connect CONSULT-III to the vehicle in “DATA MONITOR” mode and check real time diagnosis results.
Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 5.

4.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.
Connect CONSULT-III to the vehicle in “DATA MONITOR ” mode and check real time diagnosis results.
Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 6.

5.PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC Confirmation Procedure for the detected DTC, and then check that DTC is detected again.
At this time, always connect CONSULT-III to the vehicle, and check diagnostic results in real time.
If two or more DTCs are detected, refer to SEC-180, "DTC Inspection Priority Chart", and determine trouble diagnosis order.

NOTE:
Perform Component Function Check if DTC Confirmation Procedure is not included in Service Manual. This simplified check procedure is an effective alternative though DTC cannot be detected during this check.
If the result of Component Function Check is NG, it is the same as the detection of DTC by DTC Confirmation Procedure.

Is DTC detected?

YES >> GO TO 7.
NO >> Refer to GI-35, "Intermittent Incident".

6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM 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.

>> GO TO 7.

7.DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

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

Is malfunctioning part detected?

YES >> GO TO 8.
NO >> Check voltage of related BCM terminals using CONSULT-III.

8. REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 9.

9. FINAL CHECK

When DTC is detected in step 2, perform DTC Confirmation Procedure or Component Function Check again, and then check that the malfunction has been repaired securely.
When symptom was described from the customer, refer to confirmed symptom in step 3 or 4, and check that the symptom is not detected.

Does the symptom reappear?

YES (DTC is detected)>>GO TO 7.
YES (Symptom remains)>>GO TO 6.
NO >> INSPECTION END

INSPECTION AND ADJUSTMENT
ECM RE-COMMUNICATING FUNCTION

ECM RE-COMMUNICATING FUNCTION : Description

INFOID:0000000003829301

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

ECM RE-COMMUNICATING FUNCTION : Special Repair Requirement

INFOID:0000000003829302

1.PERFORM ECM RE-COMMUNICATING FUNCTION

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

Can engine be started?

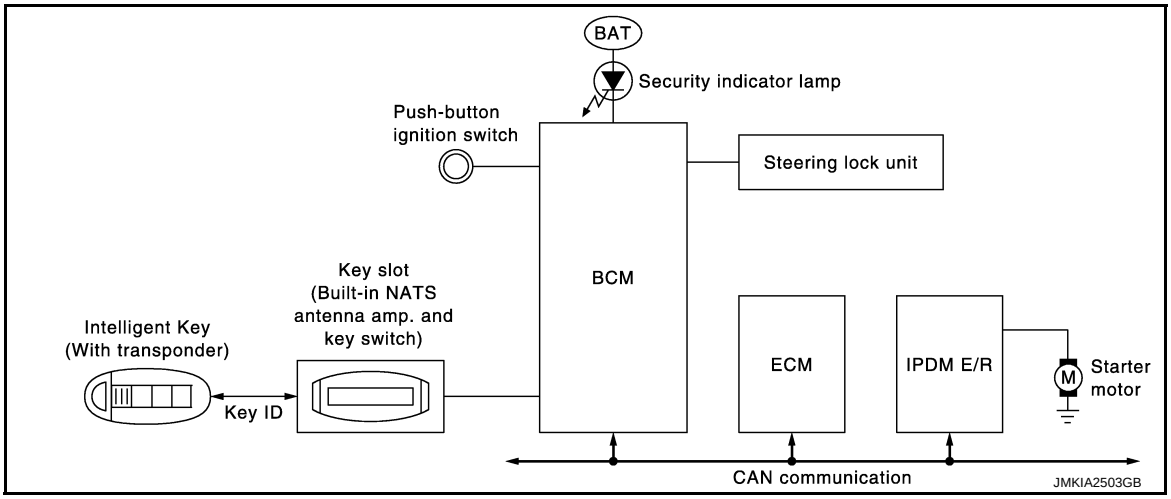
YES >> Procedure is completed.
NO >> Initialize control unit. Refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

SYSTEM DESCRIPTION

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

System Diagram

INFOID:0000000003829303



System Description

INFOID:0000000003829304

- The engine start function of Intelligent Key system is a system that makes it possible to start and stop the engine without removing the key. It verifies the electronic ID using two-way communication when pressing the push-button ignition switch while carrying the Intelligent Key, which operates based on the results of electronic ID verification for Intelligent Key using two-way communication between the Intelligent Key and the vehicle.
  NOTE:
  The driver should carry the Intelligent Key at all times.
- Intelligent Key has 2 IDs [for Intelligent Key and for 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 in the key slot. At that time, perform the IVIS (NATS) ID verification. If it is used when the Intelligent Key is carried, perform the Intelligent Key ID verification.
- If the ID is successfully verified, and when push-button ignition switch is pressed, steering lock will be released and initiating the engine will be possible.
- If the door lock/unlock operation is performed when the Intelligent Key battery is discharged, all doors lock/unlock can be performed by operating the driver door key cylinder using the mechanical key set in the Intelligent Key.
- Up to 4 Intelligent Keys can be registered (Including the standard Intelligent Key) on request from the owner.
  NOTE:
  Refer to DLK-16, "INTELLIGENT KEY SYSTEM : System Description" for any functions other than engine start function of Intelligent Key system.

PRECAUTIONS FOR INTELLIGENT KEY SYSTEM

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

OPERATION WHEN INTELLIGENT KEY IS CARRIED

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

4. BCM transmits the steering lock unlock signal to steering lock unit and IPDM E/R if the verification results are OK.
5. IPDM E/R turns the steering lock relay ON and supplies power to the steering lock unit.
6. Release of the steering lock.
7. BCM transmits the power supply stop signal to IPDM E/R when it confirms that the steering lock is in the unlock condition.
8. IPDM E/R turns the steering lock relay OFF and stops power supply to the steering lock unit.
9. BCM turns ACC relay ON and transmits the ignition power supply ON signal to IPDM E/R.
10. IPDM E/R turns the ignition relay ON and starts the ignition power supply.
11. BCM confirms that the shift position is P or N.
12. BCM transmits the starter request signal via CAN communication to IPDM E/R and turns the starter relay in IPDM E/R ON if BCM judges that the engine start condition is satisfied.
13. IPDM E/R turns the starter control relay ON when receiving the starter request signal.
14. Battery power is supplied through the starter relay and the starter control relay to operate the starter motor and to start the cranking.
    CAUTION:
    If a malfunction is detected in the Intelligent Key system, the "KEY" warning lamp in the combination meter illuminates. At that time, the engine cannot be started.
15. When BCM receives feedback signal from ECM acknowledging the engine has been initiated, the BCM transmits a stop signal to IPDM E/R and stops the cranking by turning OFF the starter motor relay. (If the engine initiating has failed, the cranking will stop automatically within 5 seconds.)
    CAUTION:
    When the Intelligent Key is carried outside of the vehicle (inside key antenna detection area) with the power supply in the ACC or ON position, even if the engine start condition* is satisfied, the engine cannot be started.

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

OPERATION RANGE

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

OPERATION WHEN KEY SLOT IS USED

When the Intelligent Key battery is discharged, it performs the 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-15, "System Description".

BATTERY SAVER SYSTEM

When all the following conditions are met for 60 minutes, the battery saver system will cut off the power supply to prevent battery discharge.
- The ignition switch is in the ACC position
- All doors are closed
- Selector lever is in the P position

Reset Condition of Battery Saver System

If any of the following conditions are met the battery saver system is released and the steering will change automatically to the lock position from the OFF position.
- Opening any door
- Operating with request switch on door lock
- Operating with Intelligent Key on door lock

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

STEERING LOCK OPERATION

Steering is locked by steering lock unit when ignition switch is in the OFF position, selector lever is in the P position and any of the following conditions are met.
- Opening door
- Closing door
- Door is locked with request switch
- Door is locked with Intelligent Key

PUSH-BUTTON IGNITION SWITCH OPERATION PROCEDURE

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

Operation Enable Condition

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

Operation Condition

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

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

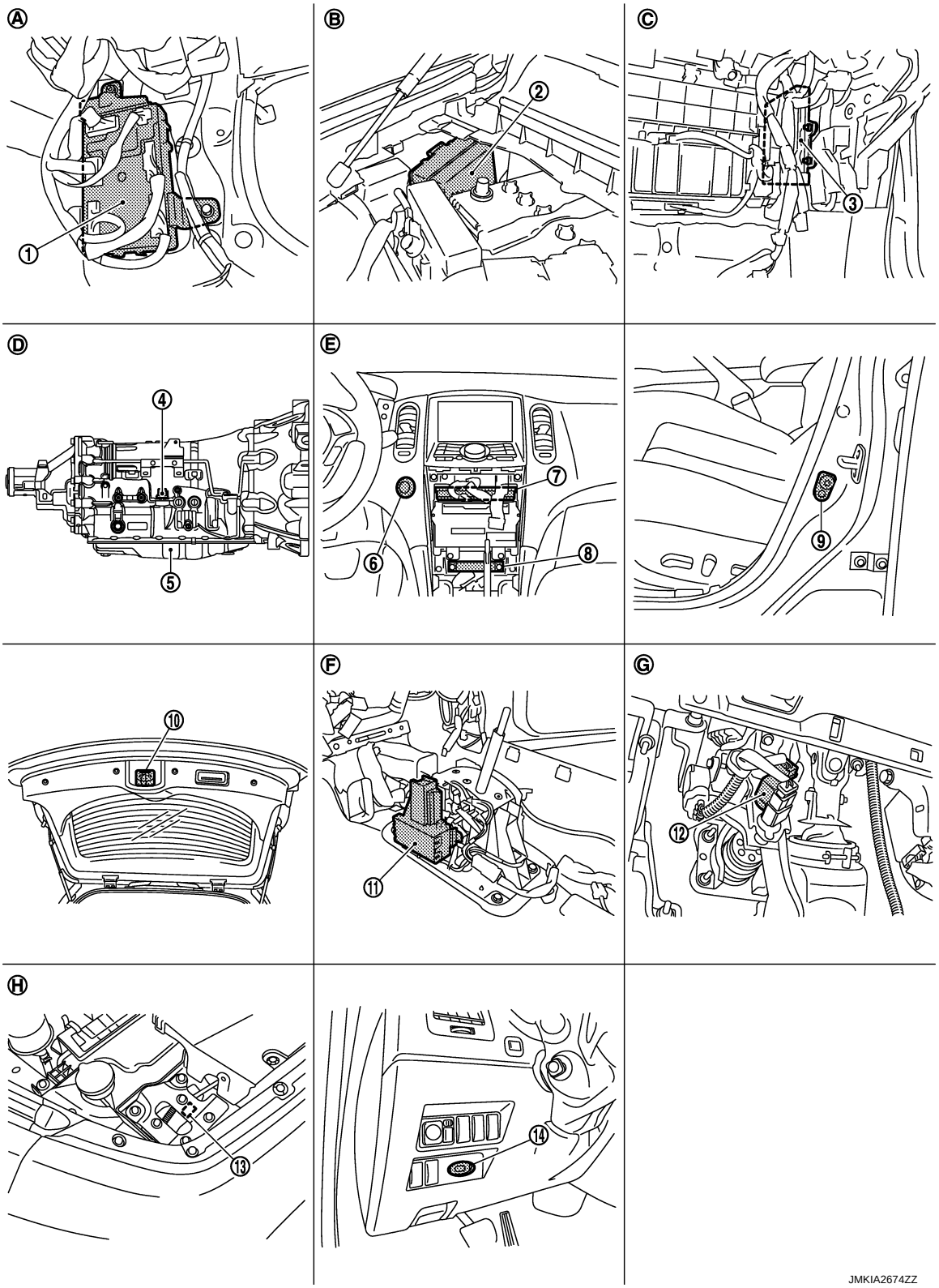
- At a vehicle speed of less than 4 km/h (2.5 MPH), the engine can start only when the brake pedal is depressed.
- At a vehicle speed of 4 km/h (2.5 MPH) or more, the engine can start even if the brake pedal is not depressed. (It is the same as “Engine stall return operation while driving”.)

*2: When the selector lever position is in any position other than the P position and when the vehicle speed is 5 km/h (3.1 MPH) or more, the engine stop condition is different.

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

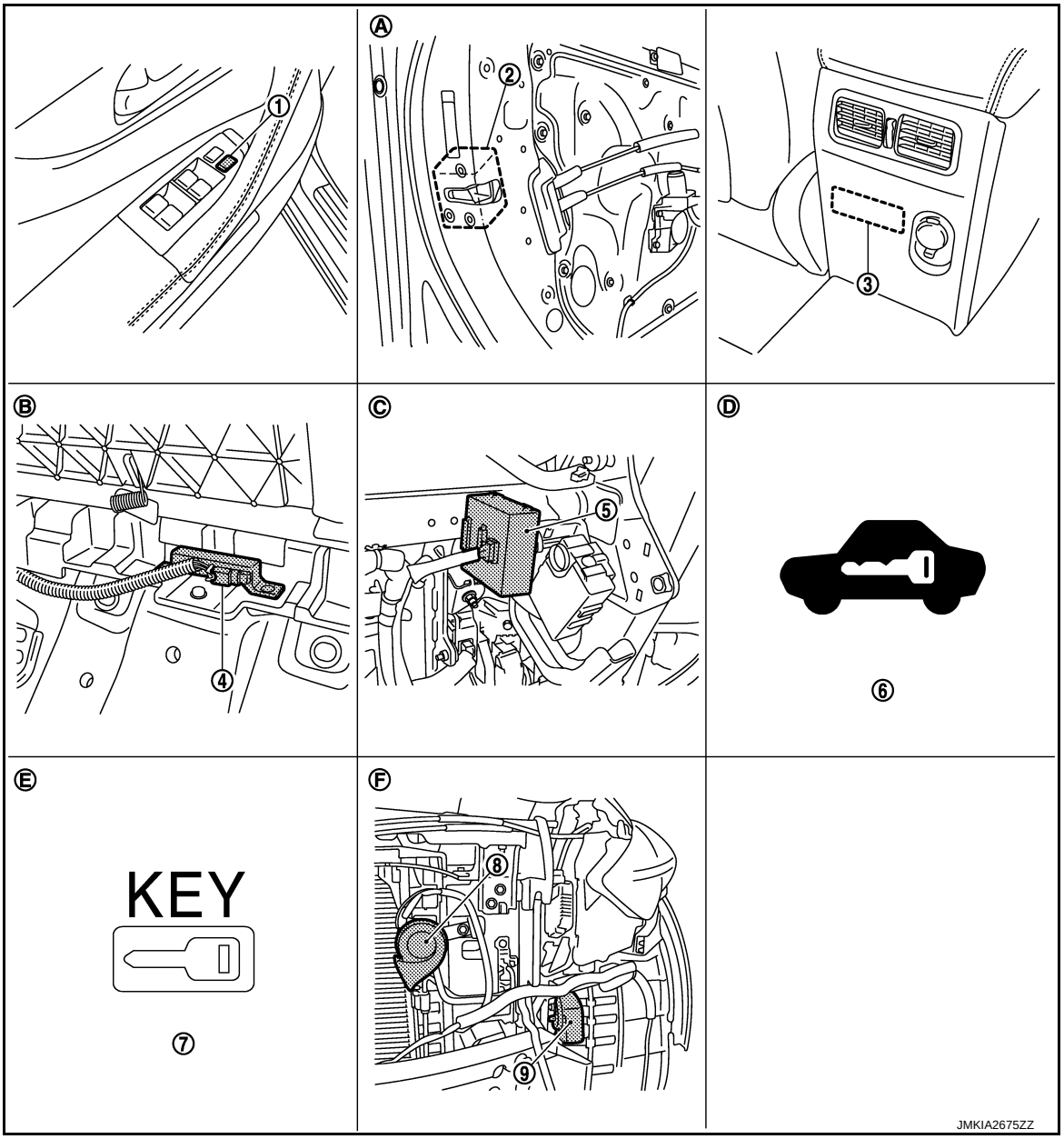
Component Parts Location

INFOID:0000000003829305



1. BCM M118, M119, M121, M122, M123
2. IPDM E/R E5, E6, E7
3. ECM
   VQ engine: M107
   VK engine: M160
4. A/T assembly connector F51
5. TCM (built in A/T assembly) F151
6. Push-button ignition switch M50

7. Unified meter and A/C amp. M66, M67
8. Inside key antenna (instrument center) M131
9. Front door switch (driver side) B16
10. Back door lock assembly (door switch) D122
11. A/T shift selector (detention switch) M137
12. Stop lamp switch E110
13. Hood switch E30
14. Key slot M22
A. Dash side lower (passenger side)
B. Engine room dash panel (RH)
C. Behind the instrument assist lower panel
D. A/T assembly
E. View with the cluster lid C removed
F. View with the center console assembly removed
G. Behind the instrument assist lower panel
H. View with hood switch incorporated into hood lock (RH)



1. Power window main switch (door lock and unlock switch) D8, D9
2. Front door lock assembly (driver side) (door key cylinder switch) D15
3. Inside key antenna (console) M146
4. Inside key antenna (luggage room) B228
5. Remote keyless entry receiver M104
6. Security indicator lamp (combination meter M53)
7. Key warning lamp (combination meter M53)
8. Horn (high) 2 E69, E70
9. Horn (high) 1 E61, E62

A. View with front door finisher removed
B. Under the rear seat seatback
C. Behind the instrument lower panel RH
D. Built in combination meter
E. Built in combination meter
F. View with front bumper removed

Component Description

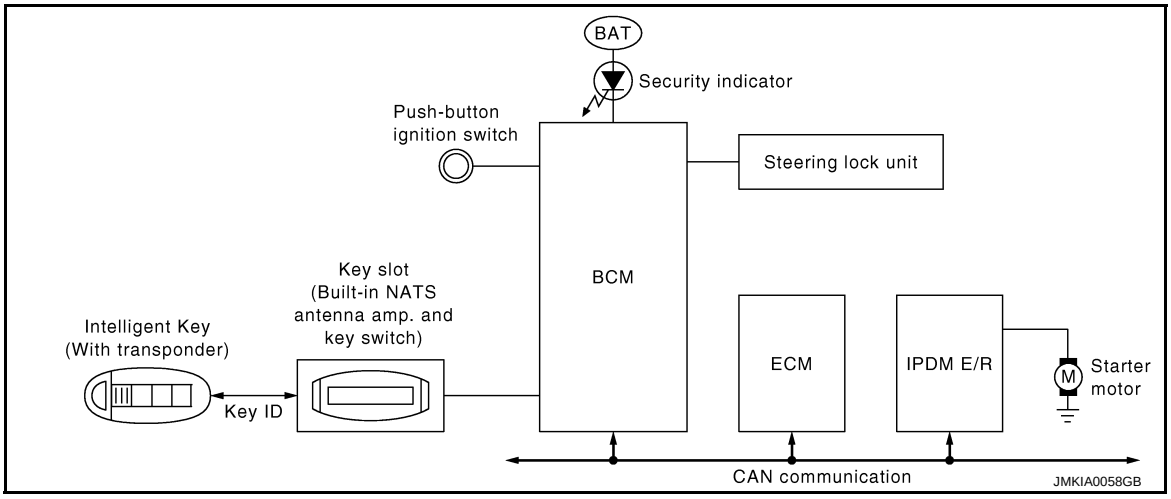
INFOID:0000000003829306

Component	Reference
BCM	SEC-94
Steering lock unit	SEC-81
Push-button ignition switch	SEC-95
Door switch	DLK-69
A/T shift selector (detention switch)	SEC-60
Inside key antenna	DLK-61
Remote keyless entry receiver	DLK-83
Stop lamp switch	SEC-54
Steering lock relay	SEC-72
Starter relay	SEC-75
Starter control relay	SEC-59
Security indicator lamp	SEC-119
Key warning lamp	SEC-121

INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS

System Diagram

INFOID:0000000003829307



System Description

INFOID:0000000003829308

- 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 and apply the anti-theft system equipment sticker, forewarn that the IVIS (NATS) is onboard with the model.
- The security indicator lamp always blinks when the power supply position is in LOCK and ACC.
- Up to 4 Intelligent keys can be registered (Including the standard ignition key) on request from the owner.
- The specified registration is required when replacing ECM, BCM or Intelligent Key. The registration procedure for IVIS (NATS) and registration procedure for Intelligent Key when installing the BCM, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.
- 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 re-registers a new ID operation. Therefore the registered Intelligent Key is necessary for this procedure. Before starting the registration operation collect all registered Intelligent Keys from the customer.
- When registering the Intelligent Key, perform only one procedure to simultaneously register both IDs (IVIS “NATS” ID registration and Intelligent Key ID registration).
  The IVIS (NATS) ID registration is the procedure that registers the ID stored in 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 pressing the push-button ignition switch operation when carrying the Intelligent Key. The registrations of both systems should be performed.

SECURITY INDICATOR LAMP

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

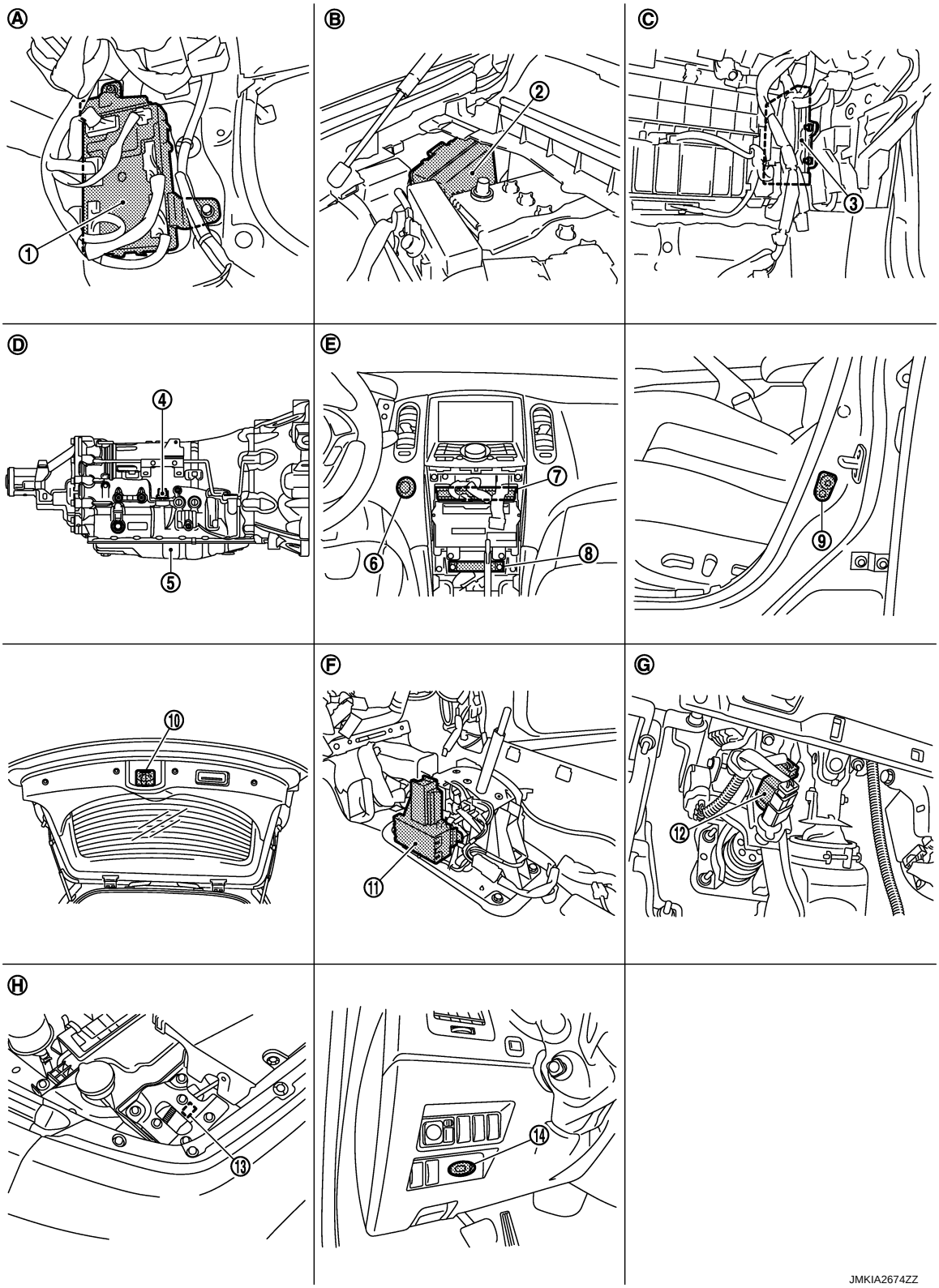
• The security indicator lamp always blinks when the ignition switch is in the LOCK and ACC position.

NOTE:

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

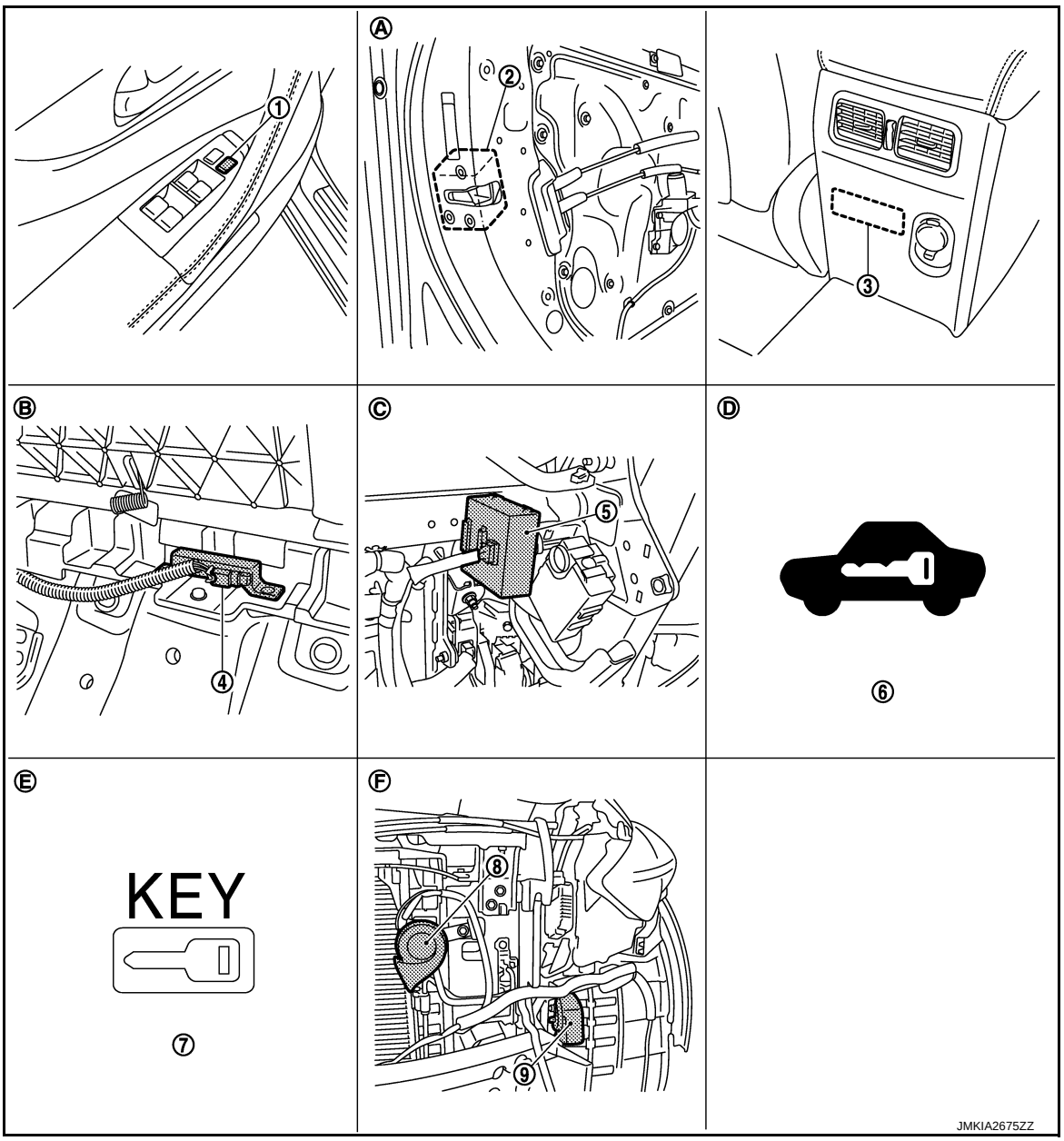
Component Parts Location

INFOID:0000000004066079



JMKIA2674ZZ

1. BCM M118, M119, M121, M122, M123	2. IPDM E/R E5, E6, E7	3. ECM VQ engine: M107 VK engine: M160
4. A/T assembly connector F51	5. TCM (built in A/T assembly) F151	6. Push-button ignition switch M50
7. Unified meter and A/C amp. M66, M67	8. Inside key antenna (instrument center) M131	9. Front door switch (driver side) B16
10. Back door lock assembly (door switch) D122	11. A/T shift selector (detention switch) M137	12. Stop lamp switch E110
13. Hood switch E30	14. Key slot M22	
A. Dash side lower (passenger side)	B. Engine room dash panel (RH)	C. Behind the instrument assist lower panel
D. A/T assembly	E. View with the cluster lid C removed	F. View with the center console assembly removed
G. Behind the instrument assist lower panel	H. View with hood switch incorporated into hood lock (RH)	



1. Power window main switch (door lock and unlock switch) D8, D9
2. Front door lock assembly (driver side) (door key cylinder switch) D15
3. Inside key antenna (console) M146
4. Inside key antenna (luggage room) B228
5. Remote keyless entry receiver M104
6. Security indicator lamp (combination meter M53)
7. Key warning lamp (combination meter M53)
8. Horn (high) 2 E69, E70
9. Horn (high) 1 E61, E62

A. View with front door finisher removed
B. Under the rear seat seatback
C. Behind the instrument lower panel RH
D. Built in combination meter
E. Built in combination meter
F. View with front bumper removed

Component Description

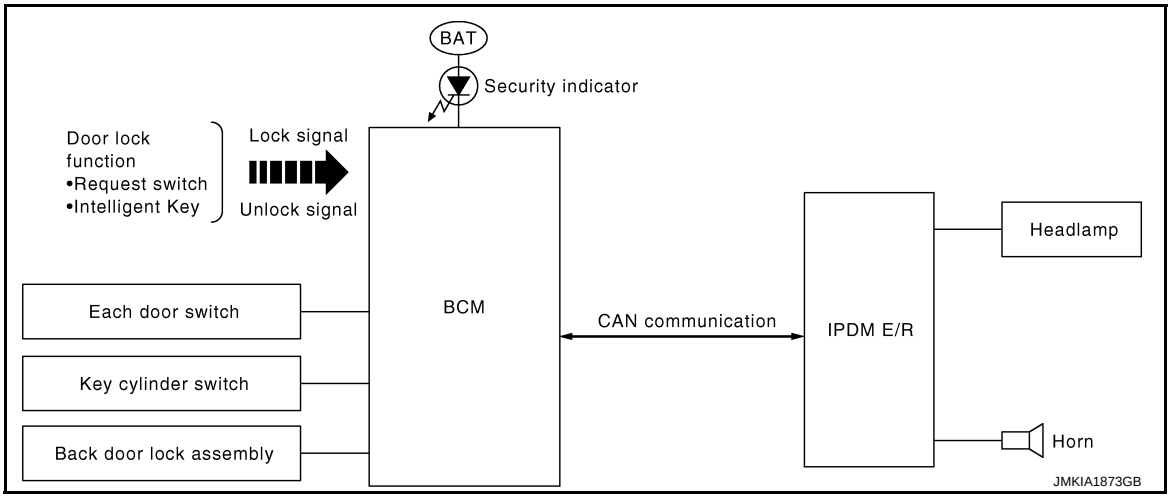
INFOID:0000000004066080

Component	Reference
BCM	SEC-94
Steering lock unit	SEC-81
Push-button ignition switch	SEC-95
Door switch	DLK-69
Key slot	DLK-101
A/T shift selector (detention switch)	SEC-60
Inside key antenna	DLK-61
Remote keyless entry receiver	DLK-83
Stop lamp switch	SEC-54
Transmission range switch	SEC-68
Steering lock relay	SEC-72
Starter relay	SEC-75
Starter control relay	SEC-59
Security indicator lamp	SEC-119
Key warning lamp	SEC-121

VEHICLE SECURITY SYSTEM

System Diagram

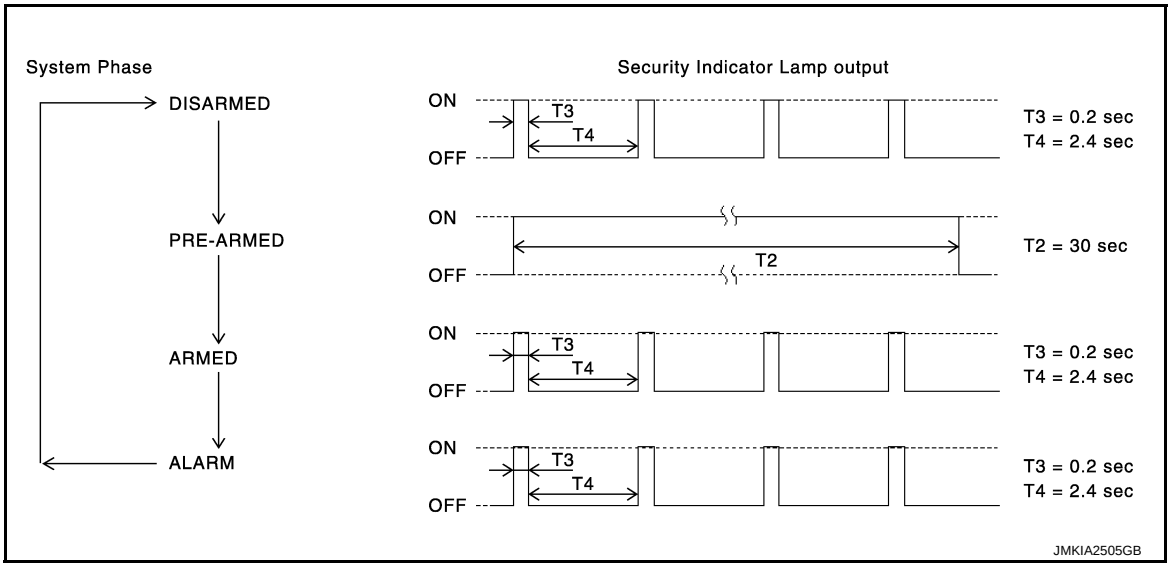
INFOID:0000000003829311



System Description

INFOID:0000000003829312

OPERATION FLOW



SETTING THE VEHICLE SECURITY SYSTEM

Initial Condition

- Ignition switch is in the 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, the security indicator lamp blinks every 2.4 seconds.

Pre-armed Phase and Armed Phase

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

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. The security indicator lamp illuminates for 30 seconds. Then, the system automatically shifts into the “armed” phase.

CANCELING THE SET VEHICLE SECURITY SYSTEM

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

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

CANCELING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM

When unlocking all doors with the door request switch, 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. (The security indicator lamp blinks every 2.4 seconds.)
When the following operation 1 or 2 is performed, the system sounds the horns and blinks the headlamps for about 50 seconds.

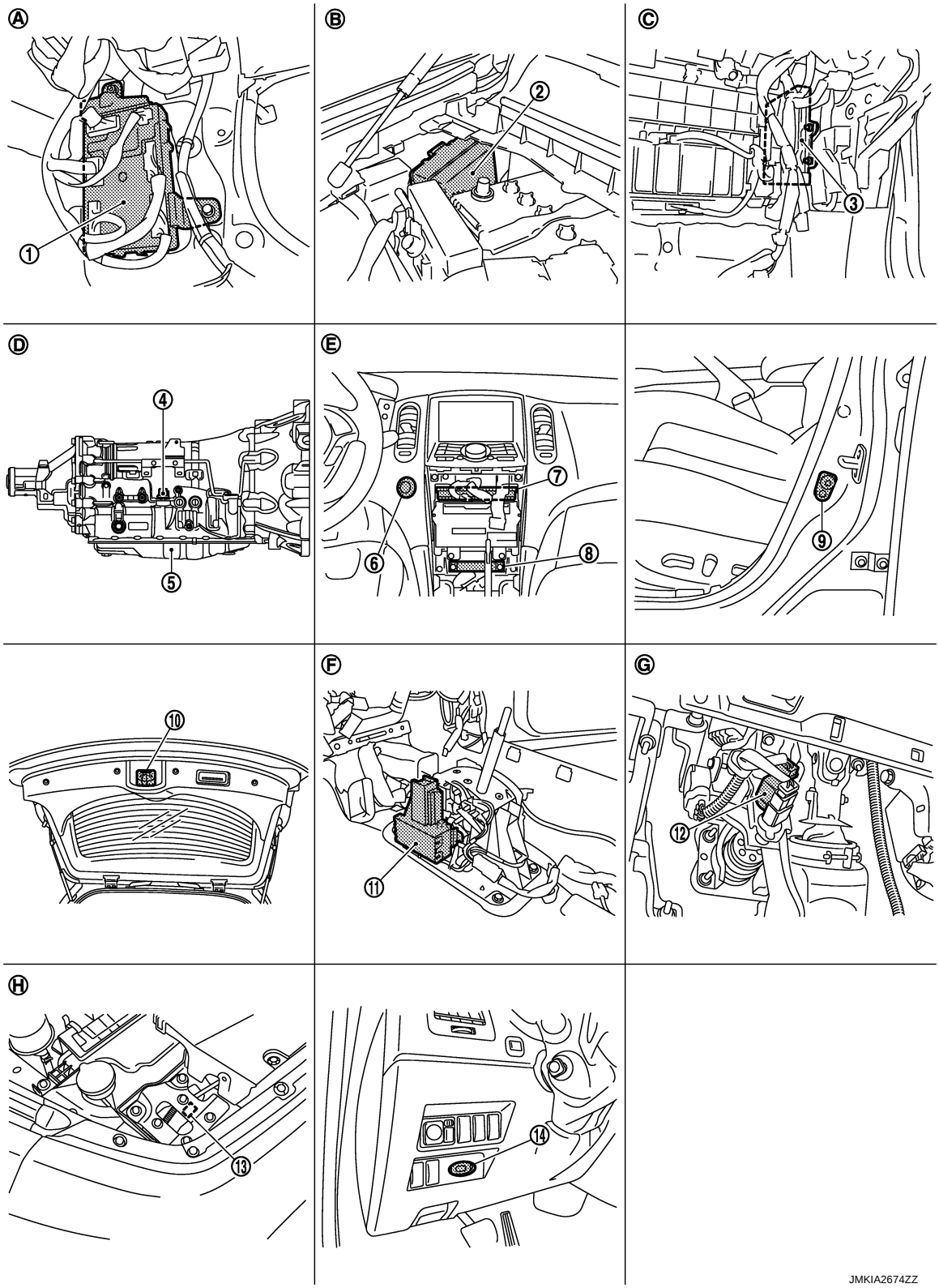
1. Back door or any door is opened during the armed phase.
2. Disconnecting and connecting the battery connector before canceling the armed phase.

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:0000000004066082



1. BCM M118, M119, M121, M122, M123
2. IPDM E/R E5, E6, E7
3. ECM
   VQ engine: M107
   VK engine: M160
4. A/T assembly connector F51
5. TCM (built in A/T assembly) F151
6. Push-button ignition switch M50

7. Unified meter and A/C amp. M66, M67
8. Inside key antenna (instrument center) M131
9. Front door switch (driver side) B16
10. Back door lock assembly (door switch) D122
11. A/T shift selector (detention switch) M137
12. Stop lamp switch E110
13. Hood switch E30
14. Key slot M22

A. Dash side lower (passenger side)
B. Engine room dash panel (RH)
C. Behind the instrument assist lower panel
D. A/T assembly
E. View with the cluster lid C removed
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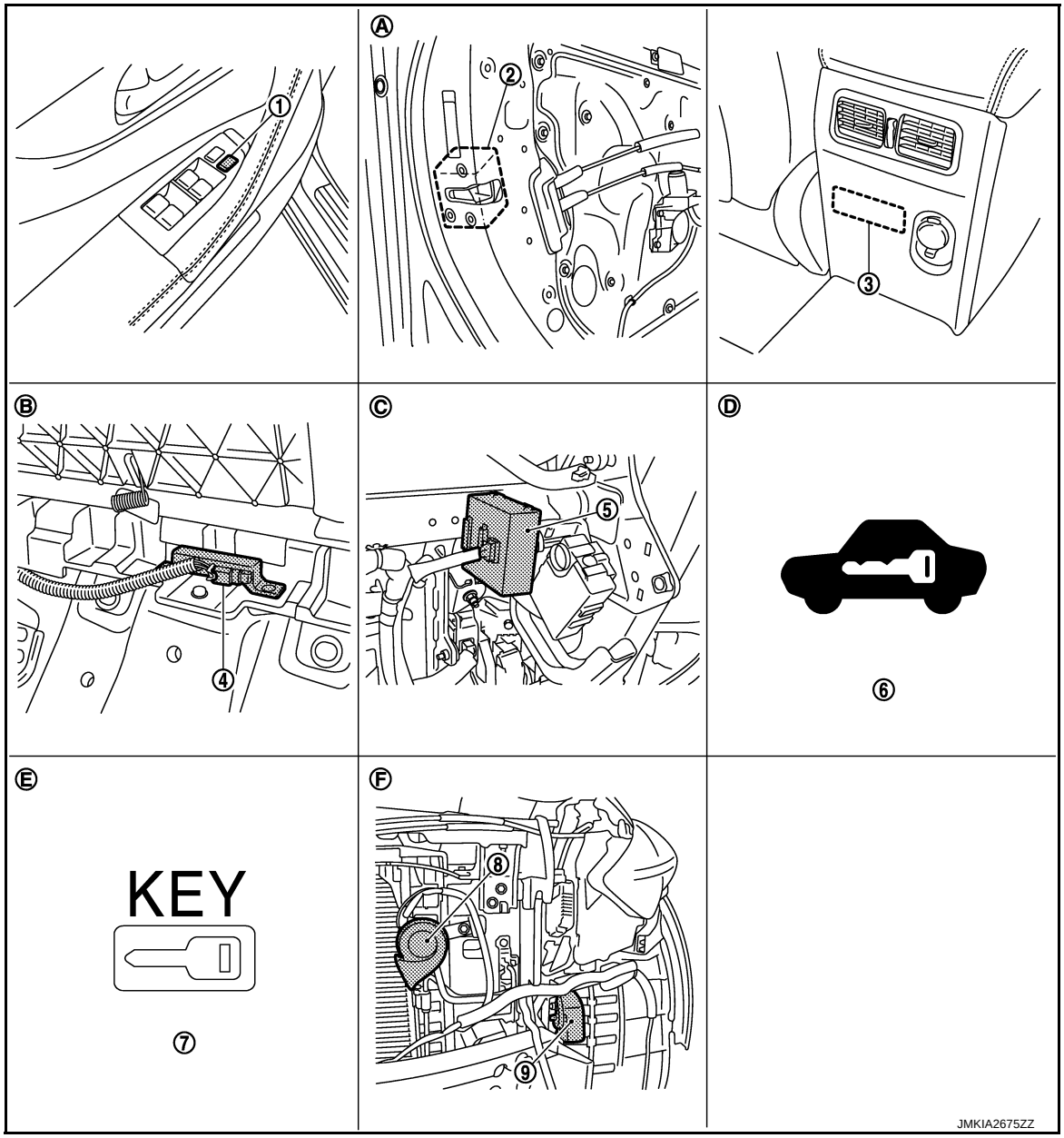

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A. View with front door finisher removed
B. Under the rear seat seatback
C. Behind the instrument lower panel RH
D. Built in combination meter
E. Built in combination meter
F. View with front bumper removed

Component Description

INFOID:0000000004066083

Component	Reference
BCM	SEC-94
Door switch	DLK-69
Horn relay (high) 1/2	DLK-105
Security indicator lamp	SEC-119
Door switch	DLK-69
Back door lock assembly (door switch)	DLK-69
Door key cylinder switch	DLK-81

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

INFOID:0000000003940680

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

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

SYSTEM APPLICATION
BCM can perform the following functions for each system.

NOTE:

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

×: Applicable item

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

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-III.

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

INTELLIGENT KEY

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

INFOID:0000000003940679

WORK SUPPORT

Monitor item	Description
REMO CONT ID CONFIR	It can be checked whether Intelligent Key ID code is registered or not in this mode.
AUTO LOCK SET	Auto door lock time can be changed in this mode. • MODE 1: 1 min. • MODE 2: 5 min. • MODE 3: 30 sec. • MODE 4: 2 min.

Monitor item	Description
WELCOME LIGHT OP SET	Welcome light function mode can be changed to operate (WITH) or not operate (WITHOUT) with this mode.
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 (WITH) or not operate (WITHOUT) in this mode.
ENGINE START BY I-KEY	Engine start function mode can be changed to operate (WITH) or not operate (WITHOUT) in this mode.
TRUNK/GLASS HATCH OPEN	Buzzer reminder function mode by back door request switch can be changed to operate (ON) or not operate (OFF) in this mode.
PANIC ALARM SET	Panic alarm button pressing time on Intelligent Key remote control button can be selected from the following in this mode. • MODE 1: 0.5 sec. • MODE 2: Non-operational • MODE 3: 1.5 sec.
PW DOWN SET	Unlock button pressing time on Intelligent Key button can be selected from the following in this mode. • MODE 1: 3 sec. • MODE 2: Non-operational • MODE 3: 5 sec.
TRUNK OPEN DELAY	**NOTE:** 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 (WITH) or not operate (WITHOUT) with this mode.
ANTI KEY LOCK IN FUNCTI	Key reminder function mode can be changed to operate (WITH) or not operate (WITHOUT) with this mode.
HAZARD ANSWER BACK	Hazard reminder function mode can be selected from the following in this mode. • LOCK ONLY: Door lock operation only • UNLOCK ONLY: Door unlock operation only • LOCK/UNLOCK: Lock/unlock operation • OFF: Non-operational
ANS BACK I-KEY LOCK	Buzzer reminder function (lock operation) mode by door request switch (driver side and passenger side) can be selected from the following in this mode. • Horn chirp: Sound horn • Buzzer: Sound Intelligent Key warning buzzer • OFF: Non-operational
ANS BACK I-KEY UNLOCK	Buzzer reminder function (unlock operation) mode by door request switch can be changed to operate (ON) or not operate (OFF) in this mode.
SHORT CRANKING OUTPUT	Starter motor can operate during the times below. • 70 msec. • 100 msec. • 200 msec.
INSIDE ANT DIAGNOSIS	This function allows inside key antenna self-diagnosis.
HORN WITH KEYLESS LOCK	Horn reminder function mode by Intelligent Key button can be changed to operate (ON) or not operate (OFF) in this mode.
WELCOME LIGHT SELECT	Welcome light function mode can be selected from the following in this mode. • Puddle Lamp (ON/OFF) • Room Lamp (ON/OFF) • Head & Tail Lamps (This item is displayed, but cannot be supported.) • Outside Handle (This item is displayed, but cannot be supported.)

SELF-DIAG RESULT

Refer to SEC-180, "DTC Index".

DATA MONITOR

Monitor Item	Condition
REQ SW -DR	Indicates [ON/OFF] condition of door request switch (driver side).
REQ SW -AS	Indicates [ON/OFF] condition of door request switch (passenger side).

Monitor Item	Condition
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.
DETE/CANCL SW	Indicates [ON/OFF] condition of the P position.
SFT PN/N SW	Indicates [ON/OFF] condition of the P or N position.
S/L -LOCK	Indicates [ON/OFF] condition of steering lock unit (LOCK).
S/L -UNLOCK	Indicates [ON/OFF] condition of steering lock unit (UNLOCK).
S/L RELAY -F/B	Indicates [ON/OFF] condition of ignition switch.
UNLK SEN -DR	Indicates [ON/OFF] condition of driver door UNLOCK status.
PUSH SW -IPDM	Indicates [ON/OFF] condition of push-button ignition switch.
IGN RLY1 -F/B	Indicates [ON/OFF] condition of ignition relay 1.
DETE SW -IPDM	Indicates [ON/OFF] condition of the P position.
SFT PN -IPDM	Indicates [ON/OFF] condition of the P or N position.
SFT P -MET	Indicates [ON/OFF] condition of the P position.
SFT N -MET	Indicates [ON/OFF] condition of the N position.
ENGINE STATE	Indicates [STOP/START/CRANK/RUN] condition of engine states.
S/L LOCK-IPDM	Indicates [ON/OFF] condition of steering lock unit (LOCK).
S/L UNLK-IPDM	Indicates [ON/OFF] condition of steering lock unit (UNLOCK).
S/L RELAY-REQ	Indicates [ON/OFF] condition of steering lock relay.
VEH SPEED 1	Displays the vehicle speed signal received from unified meter and A/C amp. by numerical value [Km/h].
VEH SPEED 2	Displays the vehicle speed signal received from ABS, VDC or CVT by numerical value [Km/h].
DOOR STAT-DR	Indicates [LOCK/READY/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.
PRMT RKE STRT	**NOTE:** This item is displayed, but cannot be monitored.
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.
TRNK/HAT MNTR	**NOTE:** This item is displayed, but cannot be monitored.
RKE-LOCK	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.
RKE-UNLOCK	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.
RKE-TR/BD	**NOTE:** This item is displayed, but cannot be monitored.
RKE-PANIC	Indicates [ON/OFF] condition of PANIC button of Intelligent Key.
RKE-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 values starts changing.
RKE OPE COUN2	**NOTE:** 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. The interior room lamp will be activated when “ON” on CONSULT-III screen is touched.
PW REMOTO DOWN SET	This test is able to check power window down operation. The power window down will be activated when “ON” on CONSULT-III screen is touched.
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation. The Intelligent Key warning buzzer will be activated when “ON” on CONSULT-III screen is touched.
INSIDE BUZZER	This test is able to check warning chime in combination meter operation. • Take away warning chime sounds when “TAKE OUT” on CONSULT-III screen is touched. • Key warning chime sounds when “KEY” on CONSULT-III screen is touched. • The P position warning chime sounds when “KNOB” on CONSULT-III screen is touched.
INDICATOR	This test is able to check warning lamp operation. • “KEY” Warning lamp illuminates when “RED ON” on CONSULT-III screen is touched. • The “KEY” Warning lamp blinks when “RED IND” on CONSULT-III screen is touched.
INT LAMP	This test is able to check interior room lamp operation. The interior room lamp will be activated when “ON” on CONSULT-III screen is touched.
LCD	This test is able to check meter display information • Engine start information displays when “BP N” on CONSULT-III screen is touched. • Engine start information displays when “BP I” on CONSULT-III screen is touched. • Key ID warning displays when “ID NG” on CONSULT-III screen is touched. • Steering lock information displays when “ROTAT” on CONSULT-III screen is touched. • The P position warning displays when “SFT P” on CONSULT-III screen is touched. • Intelligent Key insert information displays when “INSRT” on CONSULT-III screen is touched. • Intelligent Key low battery warning displays when “BATT” on CONSULT-III screen is touched. • Take away warning displays when “NO KY” on CONSULT-III screen is touched. • Key warning displays when “OUTKY” on CONSULT-III screen is touched. • The OFF position warning displays when “LK WN” on CONSULT-III screen is touched.
TRUNK/GLASS HATCH	This test is able to check back door opener actuator open operation. This actuator opens when “ON” on CONSULT-III screen is touched.
FLASHER	This test is able to check security hazard lamp operation. The hazard lamps will be activated when “LH” or “RH” on CONSULT-III screen is touched.
HORN	This test is able to check horn operation. The horn will be activated when “ON” on CONSULT-III screen is touched.
P RANGE	This test is able to check A/T shift selector power supply A/T shift selector power is supplied when “ON” on CONSULT-III screen is touched.
ENGINE SW ILLUMI	This test is able to check push-ignition switch illumination operation. Push-ignition switch illumination illuminates when “ON” on CONSULT-III screen is touched.
LOCK INDICATOR	This test is able to check indicator in push-ignition switch operation. Indicator in push-ignition switch (LOCK) illuminates when “ON” on CONSULT-III screen is touched.
ACC INDICATOR	This test is able to check indicator in push-ignition switch operation. Indicator in push-ignition switch (ACC) illuminates when “ON” on CONSULT-III screen is touched.
IGNITION ON IND	This test is able to check indicator in push-ignition switch operation. Indicator in push-ignition switch (ON) illuminates when “ON” on CONSULT-III screen is touched.
KEY SLOT ILLUMI	This test is able to check key slot illumination operation. Key slot illumination blinks when “ON” on CONSULT-III screen is touched.
TRUNK/BACK DOOR	This test is able to check back door opener actuator open operation. This actuator opens when “ON” on CONSULT-III screen is touched.

THEFT ALM

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

INFOID:0000000003829317

DATA MONITOR

Monitored Item	Description
REQ SW -DR	Indicates [ON/OFF] condition of door request switch (driver side).
REQ SW -AS	Indicates [ON/OFF] condition of door request switch (passenger side).
REQ SW -RR	**NOTE:** This is displayed even when it is not equipped.
REQ SW -RL	**NOTE:** This is displayed even when it is not equipped.
REQ SW -BD/TR	Indicates [ON/OFF] condition of 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:** 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:** This is displayed even when it is not equipped.
RKE-LOCK	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.
RKE-UNLOCK	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.
RKE-TR/BD	**NOTE:** This is displayed even when it is not equipped.

WORK SUPPORT

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

ACTIVE TEST

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

IMMU

IMMU : CONSULT-III Function (BCM - IMMU)

INFOID:0000000003829318

DATA MONITOR

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

ACTIVE TEST

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

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

BCM

BCM : Description

INFOID:0000000003940703

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-32, "CAN Communication Signal Chart".

BCM : DTC Logic

INFOID:0000000003940704

DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC Detection Condition	Possible cause
U1000	CAN COMM	When BCM cannot communicate CAN communication signal continuously for 2 seconds or more.	CAN communication system

BCM : Diagnosis Procedure

INFOID:0000000003940705

1.PERFORM SELF DIAGNOSTIC

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

Is DTC “U1000” displayed?

YES >> Refer to LAN-22, "Trouble Diagnosis Flow Chart".
NO >> Refer to GI-35, "Intermittent Incident".

IPDM E/R

IPDM E/R : Description

INFOID:0000000003940708

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-32, "CAN Communication Signal Chart".

IPDM E/R : DTC Logic

INFOID:0000000003940709

DTC DETECTION LOGIC

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

IPDM E/R : Diagnosis Procedure

INFOID:0000000003940710

1.PERFORM SELF DIAGNOSTIC

1. Turn the 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-22, "Trouble Diagnosis Flow Chart".
NO >> Refer to GI-35, "Intermittent Incident".

U1010 CONTROL UNIT (CAN)

BCM

BCM : DTC Logic

INFOID:0000000003940706

DTC DETECTION LOGIC

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

BCM : Diagnosis Procedure

INFOID:0000000003940707

1.REPLACE BCM

When DTC “U1010” is detected, replace BCM.

>> Replace BCM. Refer to BCS-82, "Exploded View".

P1610 LOCK MODE

Description

INFOID:0000000003829328

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:0000000003829329

DTC DETECTION LOGIC

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000003829330

1.CHECK ENGINE START FUNCTION

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

>> INSPECTION END

P1611 ID DISCORD, IMMU-ECM

Description

INFOID:0000000003829331

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:0000000003829332

DTC DETECTION LOGIC

NOTE:

- If DTC B1611 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "BCM : DTC Logic".
- If DTC B1611 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-33, "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 • ECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000003829333

1.PERFORM INITIALIZATION

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

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

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

2.REPLACE BCM

1. Replace BCM. Refer to BCS-82, "Removal and Installation".
2. Perform initialization with CONSULT-III.
   For initialization, refer to “CONSULT-III Operation Manual NATS-IVIS/NVIS”.

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

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

3.REPLACE ECM

1. Replace ECM. Refer to EC-20, "BASIC INSPECTION : Special Repair Requirement" (VQ35HR), EC-577, "BASIC INSPECTION : Special Repair Requirement"(VK50VE).
2. Perform initialization.
   For initialization, refer to “CONSULT-III Operation Manual NATS-IVIS/NVIS”.

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

YES >> INSPECTION END

NO >> GO TO 4.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

P1612 CHAIN OF ECM-IMMU

Description

INFOID:0000000003829334

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:0000000003829335

DTC DETECTION LOGIC

NOTE:

- If DTC P1612 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "BCM : DTC Logic".
- If DTC P1612 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-33, "BCM : DTC Logic".

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-37, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829336

1.REPLACE BCM

1. Replace BCM. Refer to BCS-82, "Removal and Installation".
2. Perform initialization with CONSULT-III.
   For initialization, refer to “CONSULT-III Operation Manual NATS-IVIS/NVIS”.

Does the engine start?

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

2.REPLACE ECM

Replace ECM. Refer to EC-20, "BASIC INSPECTION : Special Repair Requirement" (VQ35HR), EC-577, "BASIC INSPECTION : Special Repair Requirement"(VK50VE).

>> INSPECTION END

P1614 CHAIN OF IMMU-KEY

Description

INFOID:0000000003829337

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

DTC Logic

INFOID:0000000003829338

DTC DETECTION LOGIC

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

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

Is DTC detected?

YES >> Go to SEC-38, "Diagnosis Procedure".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE 2

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

Is DTC detected?

YES >> Go to SEC-38, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829339

1. INSPECTION START

Check the case in which DTC is detected.
- Case1: It is detected when Intelligent Key is inserted into key slot.
- Case2: It is detected after Intelligent Key is inserted into key slot and push-button ignition switch is pressed.

In which case is DTC detected?

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

2.CHECK KEY SLOT INPUT SIGNAL

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

(+)		(–)	Voltage (V) (Approx.)
Key slot			
Connector	Terminal		
M22	2	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace key slot. Refer to SEC-205, "Removal and Installation".
NO >> GO TO 3.

3. CHECK KEY SLOT CIRCUIT

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

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

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

Key slot		Ground	Continuity
Connector	Terminal		
M22	2		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-82, "Removal and Installation".
NO >> Repair or replace harness.

4. CHECK PUSH-BUTTON IGNITION SWITCH OPERATION

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

Does ignition switch turn to ON?

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

5. CHECK KEY SLOT COMMUNICATION SIGNAL

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

(+)		(–)	Voltage (V) (Approx.)
Key slot			
Connector	Terminal		
M22	3	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace key slot. Refer to SEC-205, "Removal and Installation".
NO >> GO TO 6.

6. CHECK KEY SLOT COMMUNICATION SIGNAL CIRCUIT

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

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

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

Key slot		Ground	Continuity
Connector	Terminal		
M22	3		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-82, "Removal and Installation".
NO >> Repair or replace harness.

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.

8. CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

P1615 DIFFRENCE OF KEY

Description

INFOID:0000000003829340

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

DTC Logic

INFOID:0000000003829341

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-III.

Is DTC detected?

YES >> Go to SEC-41, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829342

1.PERFORM INITIALIZATION

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

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

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

2.REPLACE INTELLIGENT KEY

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

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

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

3.CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

B2190 NATS ANTENNA AMP.

Description

INFOID:0000000003829343

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

DTC Logic

INFOID:0000000003829344

DTC DETECTION LOGIC

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-42, "Diagnosis Procedure".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-42, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829345

1. INSPECTION START

Check the case in which DTC is detected.
- Case1: It is detected when Intelligent Key is inserted into key slot.
- Case2: It is detected after Intelligent Key is inserted into key slot and push-button ignition switch is pressed.

In which case is DTC detected?

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

2.CHECK KEY SLOT INPUT SIGNAL

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

(+)		(–)	Voltage (V) (Approx.)
Key slot			
Connector	Terminal		
M22	2	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace key slot. Refer to SEC-205, "Removal and Installation".
NO >> GO TO 3.

3.CHECK KEY SLOT CIRCUIT

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

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

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

Key slot		Ground	Continuity
Connector	Terminal		
M22	2		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-82, "Removal and Installation".
NO >> Repair or replace harness.

4.CHECK PUSH-BUTTON IGNITION SWITCH OPERATION

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

Does ignition switch turn to ON?

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

5.CHECK KEY SLOT COMMUNICATION SIGNAL

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

(+)		(–)	Voltage (V) (Approx.)
Key slot			
Connector	Terminal		
M22	3	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace key slot. Refer to SEC-205, "Removal and Installation".
NO >> GO TO 6.

6.CHECK KEY SLOT COMMUNICATION SIGNAL CIRCUIT

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

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

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

Key slot		Ground	Continuity
Connector	Terminal		
M22	3		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-82, "Removal and Installation".
NO >> Repair or replace harness.

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.

8. CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

B2191 DIFFERENCE OF KEY

Description

INFOID:0000000003829346

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

DTC Logic

INFOID:0000000003829347

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-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000003829348

1.PERFORM INITIALIZATION

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

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

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

2.REPLACE INTELLIGENT KEY

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

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

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

3.CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

B2192 ID DISCORD, IMMU-ECM

Description

INFOID:0000000003829349

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:0000000003829350

DTC DETECTION LOGIC

NOTE:

- If DTC B2192 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "BCM : DTC Logic".
- If DTC B2192 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-33, "BCM : DTC Logic".

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000003829351

1.PERFORM INITIALIZATION

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

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

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

2.REPLACE BCM

1. Replace BCM. Refer to BCS-82, "Removal and Installation".
2. Perform initialization with CONSULT-III.
   For initialization, refer to “CONSULT-III Operation Manual NATS-IVIS/NVIS”.

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

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

3.REPLACE ECM

1. Replace ECM. Refer to EC-20, "BASIC INSPECTION : Special Repair Requirement" (VQ35HR), EC-577, "BASIC INSPECTION : Special Repair Requirement"(VK50VE).
2. Perform initialization with CONSULT-III.
   For initialization, refer to “CONSULT-III Operation Manual NATS-IVIS/NVIS”.

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

YES >> INSPECTION END

NO >> GO TO 4.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

B2193 CHAIN OF ECM-IMMU

Description

INFOID:0000000003829352

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:0000000003829353

DTC DETECTION LOGIC

NOTE:

- If DTC B2193 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "BCM : DTC Logic".
- If DTC B2193 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-33, "BCM : Diagnosis Procedure".

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-48, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829354

1.REPLACE BCM

1. Replace BCM. Refer to BCS-82, "Removal and Installation".
2. Perform initialization with CONSULT-III.
   For initialization, refer to “CONSULT-III Operation Manual NATS-IVIS/NVIS”.

Does the engine start?

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

2.REPLACE ECM

Replace ECM. Refer to EC-20, "BASIC INSPECTION : Special Repair Requirement" (VQ35HR), EC-577, "BASIC INSPECTION : Special Repair Requirement"(VK50VE).

>> INSPECTION END

B2195 ANTI-SCANNING

Description

INFOID:0000000005158064

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:0000000005158065

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-diagnosis result” using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000005158066

1.CHECK SELF-DIAGNOSIS RESULT-1

1. Perform “Self-diagnosis result” of BCM using CONSULT-III.
2. Erase DTC.
3. Perform DTC Confirmation Procedure. Refer to SEC-49, "DTC Logic".

Is DTC detected?

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

2.CHECK EQUIPMENT OF THE VEHICLE

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

Is unspecified accessory part related to engine start installed?

YES >> GO TO 3.
NO >> Replace BCM. Refer to BCS-82, "Removal and Installation".

3.CHECK SELF-DIAGNOSIS RESULT-2

1. Obtain the customers approval to remove unspecified accessory part related to engine start, and then remove it.
2. Perform “Self-diagnosis result” of BCM using CONSULT-III.
3. Erase DTC.
4. Perform DTC Confirmation Procedure. Refer to SEC-49, "DTC Logic".

Is DTC detected?

YES >> Replace BCM. Refer to BCS-82, "Removal and Installation".
NO >> INSPECTION END

B2013 ID DISCORD, IMMU-STRG

Description

INFOID:0000000003829355

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

DTC Logic

INFOID:0000000003829356

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2013	ID DISCORD, BCM-S/L	The ID verification results between BCM and steering lock unit are NG. The registration is necessary.	Steering lock unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-50, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829357

1.PERFORM INITIALIZATION

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

Does steering lock operate?

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

2.REPLACE STEERING LOCK UNIT

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

Does steering lock operate?

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

3.CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

B2014 CHAIN OF STRG-IMMU

Description

INFOID:0000000003829358

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

DTC Logic

INFOID:0000000003829359

DTC DETECTION LOGIC

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000003829360

1.CHECK STEERING LOCK UNIT POWER SUPPLY

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

(+)		(–)	Condition		Voltage (V) (Approx.)
Steering lock unit					
Connector	Terminal				
M40	7	Ground	Ignition switch	OFF or ACC	Battery voltage
				ON	0

Is the inspection result normal?

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

2.CHECK STEERING LOCK UNIT POWER SUPPLY CIRCUIT

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

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

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	7		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-82, "Removal and Installation".
NO >> Repair or replace harness.

3. CHECK STEERING LOCK UNIT GROUND CIRCUIT

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

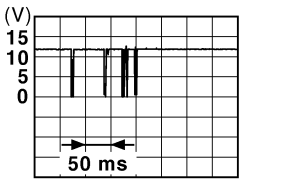
Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	5		Existed
	6		

Is the inspection result normal?

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

4. CHECK STEERING LOCK UNIT COMMUNICATION SIGNAL

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

(+) Steering lock unit		(–)	Condition		Voltage (V) (Approx.)
Connector	Terminal				
M40	2	Ground	Steering lock unit	Lock status	Battery voltage
				Lock or unlock	 JMKIA0066GB
				For 15 seconds after unlock	Battery voltage
				15 seconds or later after unlock.	0

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

Is the inspection result normal?

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

5. CHECK STEERING LOCK UNIT COMMUNICATION CIRCUIT

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

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

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	2		Not existed

Is the inspection result normal?

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

6. CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

B2555 STOP LAMP

Description

INFOID:0000000003829361

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:0000000003829362

DTC DETECTION LOGIC

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-54, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829363

1.CHECK STOP LAMP SWITCH POWER SUPPLY 1

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

(+)		(–)	Voltage (V) (Approx.)
BCM			
Connector	Terminal		
M123	116	Ground	Battery voltage

Is the inspection normal?

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

2.CHECK STOP LAMP SWITCH POWER SUPPLY 2

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	3	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. If NG, repair or replace harness.

3.CHECK STOP LAMP SWITCH CIRCUIT

1. Check continuity between stop lamp switch harness connector and BCM harness connector M123.

Stop lamp switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E110	4	M123	118	Existed

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

Stop lamp switch		Ground	Continuity
Connector	Terminal		
E110	4		Not existed

Is the inspection result normal?

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

4.CHECK STOP LAMP SWITCH

Refer to SEC-55, "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-35, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000003829364

1.CHECK STOP LAMP SWITCH

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

Stop lamp switch		Condition		Continuity
Terminal				
3	4	Brake pedal	Not depressed	Not existed
			Depressed	Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace stop lamp switch. Refer to BR-18, "Exploded View".

B2556 PUSH-BUTTON IGNITION SWITCH

Description

INFOID:0000000003829365

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:0000000003829366

DTC DETECTION LOGIC

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000003829367

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 M122 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	89	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-82, "Removal and Installation".
NO >> Repair or replace harness.

3.CHECK PUSH-BUTTON IGNITION SWITCH GROUND CIRCUIT

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

Push-button ignition switch		Ground	Continuity
Connector	Terminal		
M50	1		Existed

Is the inspection result normal?

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

4.CHECK PUSH-BUTTON IGNITION SWITCH

Refer to SEC-57, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace push-button ignition switch. Refer to SEC-206, "Removal and Installation".

5.CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000003829368

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-206, "Removal and Installation".

B2557 VEHICLE SPEED

Description

INFOID:0000000003829369

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:0000000003829370

DTC DETECTION LOGIC

NOTE:

- If DTC B2557 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "BCM : DTC Logic".
- If DTC B2557 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-33, "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. • One is 10 km/h (6.2 MPH) or more and the other is 4 km/h (2.5 MPH) or less.	• Wheel sensor • Unified meter and A/C amp. • ABS actuator and electric unit (control unit)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Drive the vehicle at the vehicle speed of 10 km/h (6.2 MPH) or more and wait for at least 10 seconds.
2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-58, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829371

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

Check “Self diagnostic result” with CONSULT-III. Refer to BRC-121, "DTC 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-III. Refer to MWI-112, "DTC Index".

Is the inspection result normal?

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

3.CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

B2560 STARTER CONTROL RELAY

Description

INFOID:0000000003829372

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

DTC Logic

INFOID:0000000003829373

DTC DETECTION LOGIC

NOTE:

- If DTC B2560 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "BCM : DTC Logic"
- If DTC B2560 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-33, "BCM : DTC Logic".

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000003829374

1.CHECK DTC WITH IPDM E/R

Check “Self diagnostic result” with CONSULT-III. Refer to SEC-195, "DTC Index".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace IPDM E/R. Refer to PCS-34, "Exploded View".

2.CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident"

>> INSPECTION END

B2601 SHIFT POSITION

Description

INFOID:0000000003829375

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

DTC Logic

INFOID:0000000003829376

DTC DETECTION LOGIC

NOTE:
- If DTC B2601 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "BCM : DTC Logic".
- If DTC B2601 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-33, "BCM : DTC Logic".
- If DTC B2601 is displayed with DTC B2603, first perform the trouble diagnosis for DTC B2603. Refer to SEC-65, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2601	SHIFT POSITION	BCM detects when a difference between the shift P input signal and the shift position signal received from IPDM E/R via CAN communication continues for 2 seconds or more	• Harness or connectors (Control device circuit is open or shorted.) • Control device (detention switch) • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions, and wait for at least 2 seconds.
- Selector lever is in the P position.
- Do not depress the brake pedal.
2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-60, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829377

1.CHECK CONTROL DEVICE POWER SUPPLY

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

(+)		(–)	Voltage (V) (Approx.)
Control device (detention switch)			
Connector	Terminal		
M137	10	Ground	Battery voltage

Is the inspection result normal?

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

2.CHECK CONTROL DEVICE POWER SUPPLY CIRCUIT

1. Disconnect BCM connector M122.

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

Control device (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M137	10	M122	96	Existed

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

Control device (detention switch)		Ground	Continuity
Connector	Terminal		
M137	10		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-82, "Removal and Installation".
NO >> Repair or replace harness.

3.CHECK CONTROL DEVICE CIRCUIT (BCM)

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

Control device (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M137	11	M122	99	Existed

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

Control device (detention switch)		Ground	Continuity
Connector	Terminal		
M137	11		Not existed

Is the inspection result normal?

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

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

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

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

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

Control device (detention switch)		Ground	Continuity
Connector	Terminal		
M137	11		Not existed

Is the inspection result normal?

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

5.CHECK CONTROL DEVICE (DETENTION SWITCH)

Refer to SEC-62, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace control device. Refer to TM-185, "Removal and Installation" (VQ35HR) or TM-372, "Removal and Installation" (VK50VE).

6.CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000003829378

1.CHECK CONTROL DEVICE (DETENTION SWITCH)

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

Control device (detention switch)		Condition		Continuity
Terminal				
10	11	Selector lever	P position	Not existed
			Other than above	Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace control device. Refer to TM-185, "Removal and Installation" (VQ35HR) or TM-372, "Removal and Installation" (VK50VE).

B2602 SHIFT POSITION

Description

INFOID:0000000003829379

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

DTC Logic

INFOID:0000000003829380

DTC DETECTION LOGIC

NOTE:
- If DTC B2602 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "BCM : DTC Logic".
- If DTC B2602 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-31, "IPDM E/R : DTC Logic".

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-63, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829381

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

Check “Self diagnostic result” with CONSULT-III. Refer to BRC-121, "DTC Index".

Is the inspection result normal?

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

2.CHECK CONTROL DEVICE POWER SUPPLY

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

(+)		(–)	Voltage (V) (Approx.)
Control device (detention switch)			
Connector	Terminal		
M137	10	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

3. CHECK CONTROL DEVICE POWER SUPPLY CIRCUIT

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

Control device (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M137	10	M122	96	Existed

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

Control device (detention switch)		Ground	Continuity
Connector	Terminal		
M137	10		No existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-82, "Removal and Installation".
NO >> Repair or replace harness.

4. CHECK CONTROL DEVICE CIRCUIT

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

Control device (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M137	11	M122	99	Existed

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

Control device (detention switch)		Ground	Continuity
Connector	Terminal		
M137	11		No existed

Is the inspection result normal?

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

5. CHECK CONTROL DEVICE (DETENTION SWITCH)

Refer to SEC-62, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Replace control device. Refer to TM-185, "Removal and Installation" (VQ35HR) or TM-372, "Removal and Installation" (VK50VE).

6. CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

B2603 SHIFT POSITION STATUS

Description

INFOID:0000000003829382

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

DTC Logic

INFOID:0000000003829383

DTC DETECTION LOGIC

NOTE:
- If DTC B2603 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "BCM : DTC Logic".
- If DTC B2603 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-33, "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 the P position, and ignition switch is in the ON position. • Transmission range switch: approx. 0 V • A/T shift selector (detention switch): approx. 0 V	• Harness or connector (A/T shift selector circuit is open or shorted) • Harness or connectors [Transmission range switch circuit is open or shorted] • A/T shift selector (detention switch) • Transmission range switch • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-65, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829384

1.CHECK DTC WITH TCM

Check “Self diagnostic result” with CONSULT-III. Refer to TM-166, "DTC Index" (VQ35HR) or refer to TM-353, "DTC Index" (VK50VE).

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 A/T assembly connector and BCM connector M123.
3. Check continuity between TCM harness connector and BCM harness connector.

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

4. Check continuity between TCM harness connector and ground.

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

Is the inspection result normal?

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

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 M122.
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-82, "Removal and Installation".
NO >> Repair or replace harness.

5. CHECK A/T SHIFT SELECTOR CIRCUIT

1. Disconnect BCM connector M122 and IPDM E/R connector E6.
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.

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

Refer to SEC-62, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 7.
NO >> Replace A/T shift selector. Refer to TM-185, "Removal and Installation" (VQ35HR) or TM-372, "Removal and Installation" (VK50VE).

7. CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

B2604 PNP SWITCH

Description

INFOID:0000000003829385

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

DTC Logic

INFOID:0000000003829386

DTC DETECTION LOGIC

NOTE:
- If DTC B2604 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "BCM : DTC Logic".
- If DTC B2604 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-33, "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 ON position. • N position input signal exists. Shift position signal from TCM does not exist. • N position input signal does not exist. Shift position signal from TCM exists.	• Harness or connectors [Transmission range switch circuit is open or shorted] • Transmission range switch • TCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000003829387

1.CHECK DTC WITH TCM

Check “Self diagnostic result” with CONSULT-III. Refer to TM-166, "DTC Index" (VQ35HR) or refer to TM-353, "DTC Index" (VK50VE).

Is the inspection result normal?

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

2.CHECK TRANSMISSION RANGE SWITCH SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect A/T assembly connector and BCM connector M123.
3. Check continuity between A/T assembly harness connector and BCM harness connector.

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

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

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

Is the inspection result normal?

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

3. CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

B2605 PNP SWITCH

Description

INFOID:0000000003829388

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

DTC Logic

INFOID:0000000003829389

DTC DETECTION LOGIC

NOTE:
- If DTC B2605 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "BCM : DTC Logic".
- If DTC B2605 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-33, "BCM : DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2605	PNP SWITCH	BCM detects the following status for 500 ms or more when the ignition switch is in ON position • N position input signal exists. Shift position signal from IPDM E/R does not exist. • N position input signal does not exist. Shift position signal from IPDM E/R exists.	• Harness or connectors [Transmission range switch circuit is open or shorted] • Transmission range switch • IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000003829390

1.CHECK DTC WITH IPDM E/R

Check “Self diagnostic result” with CONSULT-III. Refer to SEC-195, "DTC Index".

Is the inspection result normal?

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

2.CHECK TRANSMISSION RANGE SWITCH SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect A/T assembly connector and IPDM E/R connector E5.
3. Check continuity between A/T assembly harness connector and IPDM E/R harness connector.

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

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

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

Is the inspection result normal?

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

3. CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

B2606 STEERING LOCK RELAY

Description

INFOID:0000000003829391

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

DTC Logic

INFOID:0000000003829392

DTC DETECTION LOGIC

NOTE:

- If DTC B2606 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "BCM : DTC Logic".
- If DTC B2606 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-33, "BCM : DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2606	S/L RELAY	BCM detects that there is a mismatch between the following statuses. • Steering lock unit ON signal transmitted by IPDM E/R • The steering lock unit status feedback	Steering lock relay (In 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. Steering is locked.
3. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-72, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829393

1.CHECK DTC WITH IPDM E/R

Check “Self diagnostic result” with CONSULT-III. Refer to SEC-195, "DTC Index".

Is the inspection result normal?

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

2.CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

B2607 STEERING LOCK RELAY

Description

INFOID:0000000003829394

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

DTC Logic

INFOID:0000000003829395

DTC DETECTION LOGIC

NOTE:

- If DTC B2607 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "BCM : DTC Logic".
- If DTC B2607 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-33, "BCM : DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2607	S/L RELAY	BCM detects that there is a difference between the following statuses. • Steering lock unit ON signal transmitted by IPDM E/R • The steering lock unit status feedback	• Harness or connectors (Steering lock unit power supply circuit is open or shorted) • Steering lock relay (In 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. Steering lock is locked.
3. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000003829396

1.CHECK DTC WITH IPDM E/R

Check “Self diagnostic result” with CONSULT-III. Refer to SEC-195, "DTC Index".

Is the inspection result normal?

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

2.CHECK STEERING LOCK UNIT POWER SUPPLY CIRCUIT

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

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

Is the inspection result normal?

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

3.CHECK STEERING LOCK UNIT CIRCUIT

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

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

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	1		Not existed

Is the inspection result normal?

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

4.CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

B2608 STARTER RELAY

Description

INFOID:0000000003829397

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

DTC Logic

INFOID:0000000003829398

DTC DETECTION LOGIC

NOTE:

- If DTC B2608 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "BCM : DTC Logic".
- If DTC B2608 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-33, "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-107, "DTC Logic".

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. 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-III.

Is DTC detected?

YES >> Go to SEC-75, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829399

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 M121 and IPDM E/R connector E6.
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.

3.CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

B2609 STEERING STATUS

Description

INFOID:0000000003829400

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

DTC Logic

INFOID:0000000003829401

DTC DETECTION LOGIC

NOTE:

- If DTC B2609 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "BCM : DTC Logic".
- If DTC B2609 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-33, "BCM : DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2609	S/L STATUS	BCM detects the malfunction of steering lock unit switches for 1 second.	• Harness or connectors [Steering lock unit circuit (BCM side) is open or shorted] • Harness or connectors [Steering lock unit circuit (IPDM E/R side) is open or shorted] • Steering lock unit • IPDM E/R • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

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

Is DTC detected?

YES >> Go to SEC-77, "Diagnosis Procedure".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE 2

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000003829402

1.INSPECTION START

Check the case in which DTC is detected.

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

In which case is DTC detected?

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

2.CHECK BCM OUTPUT SIGNAL

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

(+)		(–)	Voltage (V) (Approx.)
Steering lock unit			
Connector	Terminal		
M40	8	Ground	Battery voltage

Is the inspection result normal?

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

3. CHECK STEERING LOCK UNIT CIRCUIT-1

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

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

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	8		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-82, "Removal and Installation".
NO >> Repair or replace harness.

4. CHECK IPDM E/R OUTPUT SIGNAL

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

(+)		(–)	Voltage (V) (Approx.)
Steering lock unit			
Connector	Terminal		
M40	8	Ground	Battery voltage

Is the inspection result normal?

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

5. CHECK STEERING LOCK UNIT CIRCUIT-2

1. Disconnect IPDM E/R connector E5.
2. Check continuity between steering lock unit harness connector and IPDM E/R harness connector.

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

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	8		Not existed

Is the inspection result normal?

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

6. CHECK BCM OUTPUT SIGNAL

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

(+)		(–)	Voltage (V) (Approx.)
Steering lock unit			
Connector	Terminal		
M40	3	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 8.
NO >> GO TO 7.

7. CHECK STEERING LOCK UNIT CIRCUIT-3

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

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

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	3		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-82, "Removal and Installation".
NO >> Repair or replace harness.

8. CHECK IPDM E/R OUTPUT SIGNAL

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

(+)		(–)	Voltage (V) (Approx.)
Steering lock unit			
Connector	Terminal		
M40	3	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace steering lock unit.
NO >> GO TO 9.

9. CHECK STEERING LOCK UNIT CIRCUIT-4

1. Disconnect IPDM E/R connector E5.
2. Check continuity between steering lock unit harness connector and IPDM E/R harness connector.

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

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	3		Not existed

Is the inspection result normal?

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

B260B STEERING LOCK UNIT

Description

INFOID:0000000003829403

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

DTC Logic

INFOID:0000000003829404

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260B	STEERING LOCK UNIT	BCM detects malfunctioning of steering lock unit before steering unlocking.	Steering lock unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-81, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829405

1.INSPECTION START

1. Turn ignition switch ON.
2. Check “Self diagnostic result” with CONSULT-III.
3. Touch “ERASE”.
4. **Perform DTC Confirmation Procedure.**
   See SEC-81, "DTC Logic".

Is the DTC B260B displayed again?

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

B260C STEERING LOCK UNIT

Description

INFOID:0000000003829406

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

DTC Logic

INFOID:0000000003829407

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260C	STEERING LOCK UNIT	BCM detects malfunctioning of steering lock unit before steering locking.	Steering lock unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000003829408

1.INSPECTION START

1. Turn ignition switch ON.
2. Check “Self diagnostic result” with CONSULT-III.
3. Touch “ERASE”.
4. **Perform DTC Confirmation Procedure.**
   See SEC-82, "DTC Logic".

Is the DTC B260C displayed again?

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

B260D STEERING LOCK UNIT

Description

INFOID:0000000003829409

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

DTC Logic

INFOID:0000000003829410

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260D	STEERING LOCK UNIT	BCM detects malfunctioning of steering lock unit after steering locking.	Steering lock unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-83, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829411

1.INSPECTION START

1. Turn ignition switch ON.
2. Check “Self diagnostic result” with CONSULT-III.
3. Touch “ERASE”.
4. **Perform DTC Confirmation Procedure.**
   See SEC-83, "DTC Logic".

Is the DTC B260D displayed again?

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

B260F ENGINE STATUS

Description

INFOID:0000000003829412

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

DTC Logic

INFOID:0000000003829413

DTC DETECTION LOGIC

NOTE:

- If DTC B260F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "BCM : DTC Logic".
- If DTC B260F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-33, "BCM : DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260F	ENG STATE SIG LOST	BCM has not yet received the engine status signal from ECM when ignition switch is in the ON position	ECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000003829414

1.INSPECTION START

1. Turn ignition switch ON.
2. Check “Self diagnostic result” with CONSULT-III.
3. Touch “ERASE”.
4. **Perform DTC Confirmation Procedure.**
   See SEC-84, "DTC Logic".

Is the DTC B260F displayed again?

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

2.REPLACE ECM

Replace ECM. Refer to EC-23, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description".

>> INSPECTION END

3.CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

B26E1 NO RECEPTION OF ENGINE STATUS SIGNAL

Description

INFOID:0000000003829415

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

DTC Logic

INFOID:0000000003829416

DTC DETECTION LOGIC

NOTE:

- If DTC B26E1 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "BCM : DTC Logic".
- If DTC B26E1 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-33, "BCM : DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26E1	ENG STATE NO REC/V	BCM does not receive the engine status signal from ECM when ignition switch is in the ON position	ECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-85, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829417

1.INSPECTION START

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

Is the DTC B26E1 displayed again?

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

2.REPLACE ECM

Replace ECM. Refer to EC-23, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description".

>> INSPECTION END

3.CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

B26E9 STEERING STATUS

Description

INFOID:0000000003829418

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

DTC Logic

INFOID:0000000003829419

DTC DETECTION LOGIC

NOTE:

- If DTC B26E9 is displayed with DTC B2609, first perform the trouble diagnosis for DTC B2609. Refer to SEC-77, "DTC Logic".

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000003829420

1.INSPECTION START

1. Turn ignition switch ON.
2. Check “Self diagnostic result” with CONSULT-III.
3. Touch “ERASE”.
4. Perform DTC Confirmation Procedure.
   Refer to SEC-85, "DTC Logic".

Is the DTC B26E9 displayed again?

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

2.REPLACE STEERING LOCK UNIT

1. Replace steering lock unit.
2. Perform DTC confirmation procedure. Refer to SEC-86, "DTC Logic".

Is the DTC B26E9 displayed again?

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

3.CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

B26EA KEY REGISTRATION

Description

INFOID:0000000003829421

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

DTC Logic

INFOID:0000000003829422

DTC DETECTION LOGIC

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-87, "Diagnosis Procedure"
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829423

1.PERFORM INITIALIZATION

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

Is DTC detected?

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

2.REPLACE INTELLIGENT KEY

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

Is DTC detected?

YES >> Replace BCM. Refer to BCS-82, "Removal and Installation".
NO >> INSPECTION END

B2612 STEERING STATUS

Description

INFOID:0000000003829424

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

DTC Logic

INFOID:0000000003829425

DTC DETECTION LOGIC

NOTE:

- If DTC B2612 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "BCM : DTC Logic".
- If DTC B2612 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-31, "IPDM E/R : DTC Logic".

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B2612	S/L STATUS	BCM detects the difference between the following status for 1 second • Steering lock or unlock • Feedback of steering lock status from IPDM E/R (CAN)	• Harness or connectors [steering lock unit circuit (BCM side) is open or shorted] • Harness or connectors [steering lock unit circuit (IPDM E/R side) is open or shorted] • Steering lock unit • IPDM E/R • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

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

Is DTC detected?

YES >> Go to SEC-88, "Diagnosis Procedure".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE 2

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

Is DTC detected?

YES >> Go to SEC-88, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829426

1.INSPECTION START

Check the case in which DTC is detected.

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

In which case is DTC detected?

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

2.CHECK BCM OUTPUT SIGNAL

1. Turn ignition switch OFF.

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

(+)		(–)	Voltage (V) (Approx.)
Steering lock unit			
Connector	Terminal		
M40	8	Ground	Battery voltage

Is the inspection result normal?

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

3. CHECK STEERING LOCK UNIT CIRCUIT-1

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

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

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	8		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-82, "Removal and Installation".
NO >> Repair or replace harness.

4. CHECK IPDM E/R OUTPUT SIGNAL

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

(+)		(–)	Voltage (V) (Approx.)
Steering lock unit			
Connector	Terminal		
M40	8	Ground	Battery voltage

Is the inspection result normal?

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

5. CHECK STEERING LOCK UNIT CIRCUIT-2

1. Disconnect IPDM E/R connector E5.
2. Check continuity between steering lock unit harness connector and IPDM E/R harness connector.

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

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	8		Not existed

Is the inspection result normal?

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

6.CHECK BCM OUTPUT SIGNAL

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

(+)		(–)	Voltage (V) (Approx.)
Steering lock unit			
Connector	Terminal		
M40	3	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 8.
NO >> GO TO 7.

7.CHECK STEERING LOCK UNIT CIRCUIT-3

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

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

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	3		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-82, "Removal and Installation".
NO >> Repair or replace harness.

8.CHECK IPDM E/R OUTPUT SIGNAL

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

(+)		(–)	Voltage (V) (Approx.)
Steering lock unit			
Connector	Terminal		
M40	3	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace steering lock unit.
NO >> GO TO 9.

9.CHECK STEERING LOCK UNIT CIRCUIT-4

1. Disconnect IPDM E/R connector E5.
2. Check continuity between steering lock unit harness connector and IPDM E/R harness connector.

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

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	3		Not existed

Is the inspection result normal?

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

B2617 STARTER RELAY CIRCUIT

Description

INFOID:0000000003829427

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

DTC Logic

INFOID:0000000003829428

DTC DETECTION LOGIC

NOTE:

- If DTC B2617 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "BCM : DTC Logic".
- If DTC B2617 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-33, "BCM : Diagnosis Procedure".
- If DTC B2617 is displayed with DTC B210E for IPDM E/R, first perform the trouble diagnosis for DTC B210E. Refer to SEC-108, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2617	STARTER RELAY CIRC	An immediate operation of starter relay is requested by BCM, but there is no response for more than 1 second	• Harness or connectors (Starter relay circuit is open or shorted) • IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-92, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829429

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 M121 and IPDM E/R connector E6.
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.

3.CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

B2619 BCM

Description

INFOID:0000000003829430

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

DTC Logic

INFOID:0000000003829431

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2619	BCM	BCM detects a mismatch between the power supplied to the steering lock unit and the feedback for one second or more.	BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-94, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829432

1.INSPECTION START

1. Turn ignition switch ON.
2. Check “Self diagnostic result” with CONSULT-III.
3. Touch “ERASE”.
4. **Perform DTC Confirmation Procedure.**
   See SEC-94, "DTC Logic".

Is the DTC B2619 displayed again?

YES >> Replace BCM. Refer to BCS-82, "Removal and Installation".
NO >> INSPECTION END

B261A PUSH-BUTTON IGNITION SWITCH

Description

INFOID:0000000003829433

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

DTC Logic

INFOID:0000000003829434

DTC DETECTION LOGIC

NOTE:

- If DTC B261A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "BCM : DTC Logic".
- If DTC B261A is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-33, "BCM : DTC Logic".

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

1. Press push-button ignition switch for 1 second under the following condition.
- Selector lever is in the P or N position.
- Do not depress brake pedal.
2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-95, "Diagnosis Procedure"
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE 2

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

Is DTC detected?

YES >> Go to SEC-95, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829435

1.INSPECTION START

Check the case in which DTC is detected.

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

In which case is DTC detected?

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

2.CHECK PUSH-BUTTON IGNITION SWITCH OUTPUT SIGNAL 1

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

Push-button ignition switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M50	4	M122	89	Existed

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

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

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-82, "Removal and Installation".
NO >> Repair or replace harness.

4.CHECK PUSH-BUTTON IGNITION SWITCH OUTPUT SIGNAL 2

1. Turn ignition switch OFF.
2. Disconnect push-button ignition switch connector and BCM connector M122.
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 E5.
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 >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".
NO >> Repair or replace harness.

6. CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

B261E VEHICLE TYPE

Description

INFOID:0000000003829436

There are two types of vehicles.
- HEV
- Conventional

DTC Logic

INFOID:0000000003829437

DTC DETECTION LOGIC

NOTE:
- If DTC B261E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "BCM : DTC Logic".
- If DTC B261E is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-33, "BCM : DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B261E	VEHICLE TYPE	Difference of BCM configuration	BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-98, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829438

1.INSPECTION START

1. Turn ignition switch ON.
2. Check “Self diagnostic result” with CONSULT-III.
3. Touch “ERASE”.
4. **Perform DTC Confirmation Procedure.**
   See SEC-98, "DTC Logic".

Is the 1st trip DTC B261E displayed again?

YES >> Replace BCM. Refer to BCS-82, "Removal and Installation".
NO >> INSPECTION END

B2108 STEERING LOCK RELAY

Description

INFOID:0000000003829439

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

DTC Logic

INFOID:0000000003829440

DTC DETECTION LOGIC

NOTE:
If DTC B2108 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "IPDM E/R : DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2108	STRG LCK RELAY ON	IPDM E/R detects that the relay is stuck in the ON position for about 1 second even if the IPDM E/R receives steering lock relay ON/OFF signal from BCM.	IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-99, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829441

1.CHECK STEERING LOCK RELAY

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

(+)		(–)	Condition		Voltage (V) (Approx.)
IPDM E/R					
Connector	Terminal				
E5	11	Ground	Ignition switch OFF	A few seconds after opening the driver door	Battery voltage
			Ignition switch LOCK	Press the push-button ignition switch	Battery voltage
			Ignition switch ACC or ON		0

Is the inspection normal?

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

2.CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

B2109 STEERING LOCK RELAY

Description

INFOID:0000000003829442

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

DTC Logic

INFOID:0000000003829443

DTC DETECTION LOGIC

NOTE:

- If DTC B2109 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "IPDM E/R : DTC Logic".
- When IPDM E/R power supply voltage is low (Approx. 7 - 8 V for about 1 second), the DTC B2109 may be detected.

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-100, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829444

1.CHECK POWER SUPPLY CIRCUIT

Check IPDM E/R power supply circuit. Refer to SEC-114, "IPDM E/R : Diagnosis Procedure".

Is the circuit normal?

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

2.CHECK FUSE

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

Is the inspection normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".
NO >> Check the following.
- Harness for open or short between IPDM E/R and battery
- Fuse

B210A STEERING LOCK CONDITION SWITCH

Description

INFOID:0000000003829445

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

DTC Logic

INFOID:0000000003829446

DTC DETECTION LOGIC

NOTE:
If DTC B210A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "IPDM E/R : DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210A	STRG LCK STATE SW	IPDM E/R detects the difference between steering condition switches 1 and 2 for 1 second	• Harness or connectors [Steering lock unit circuit (BCM side) is open or shorted] • Harness or connectors [Steering lock unit circuit (IPDM E/R side) is open or shorted] • Steering lock unit • IPDM E/R • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

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

Is DTC detected?

YES >> Go to SEC-101, "Diagnosis Procedure".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE 2

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

Is DTC detected?

YES >> Go to SEC-101, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829447

1.INSPECTION START

Check the case in which DTC is detected.
- Case1: It is detected after ignition switch is changed from OFF to ON
- Case2: It is detected after ignition switch is changed from ON to OFF and door switch is pressed

In which case is DTC detected?

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

2.CHECK BCM OUTPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect steering lock unit connector and IPDM E/R connector E5.

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

(+)		(–)	Voltage (V) (Approx.)
Steering lock unit			
Connector	Terminal		
M40	8	Ground	Battery voltage

Is the inspection result normal?

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

3.CHECK STEERING LOCK UNIT CIRCUIT-1

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

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

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	8		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-82, "Removal and Installation".
NO >> Repair or replace harness.

4.CHECK IPDM E/R OUTPUT SIGNAL

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

(+)		(–)	Voltage (V) (Approx.)
Steering lock unit			
Connector	Terminal		
M40	8	Ground	Battery voltage

Is the inspection result normal?

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

5.CHECK STEERING LOCK UNIT CIRCUIT-2

1. Disconnect IPDM E/R connector E5.
2. Check continuity between steering lock unit harness connector and IPDM E/R harness connector.

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

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	8		Not existed

Is the inspection result normal?

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

6. CHECK BCM OUTPUT SIGNAL

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

(+)		(–)	Voltage (V) (Approx.)
Steering lock unit			
Connector	Terminal		
M40	3	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 8.
NO >> GO TO 7.

7. CHECK STEERING LOCK UNIT CIRCUIT-3

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

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

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	3		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-82, "Removal and Installation".
NO >> Repair or replace harness.

8. CHECK IPDM E/R OUTPUT SIGNAL

1. Connect IPDM E/R connector.
2. Disconnect BCM connector 122.
3. Check voltage between steering lock unit harness connector and ground.

(+)		(–)	Voltage (V) (Approx.)
Steering lock unit			
Connector	Terminal		
M40	3	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace steering lock unit.
NO >> GO TO 9.

9. CHECK STEERING LOCK UNIT CIRCUIT-4

1. Disconnect IPDM E/R connector E5.
2. Check continuity between steering lock unit harness connector and IPDM E/R harness connector.

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

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	3		Not existed

Is the inspection result normal?

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

B210B STARTER CONTROL RELAY

Description

INFOID:0000000003829448

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

DTC Logic

INFOID:0000000003829449

DTC DETECTION LOGIC

NOTE:
If DTC B210B is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "IPDM E/R : DTC Logic".

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

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn the power supply position to start under the following conditions and wait for at least 1 second.
- Selector lever is in the P or N position.
- Do not depress brake pedal.
2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-105, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829450

1. INSPECTION START

1. Turn ignition switch ON.
2. Check “Self diagnostic result” for IPDM E/R with CONSULT-III.
3. Touch “ERASE”.
4. **Perform DTC Confirmation Procedure.**
   See SEC-105, "DTC Logic".

Is the DTC B210B displayed again?

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

B210C STARTER CONTROL RELAY

Description

INFOID:0000000003829451

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

DTC Logic

INFOID:0000000003829452

DTC DETECTION LOGIC

NOTE:

- If DTC B210C is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "IPDM E/R : DTC Logic".
- When IPDM E/R power supply voltage is low (Approx. 7 - 8 V for about 1 second), the DTC B210C may be detected.

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn the power supply position to start under the following conditions and wait for at least 1 second.
- Selector lever is in the P or N position.
- Do not depress brake pedal.
2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-106, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829453

1.INSPECTION START

1. Turn ignition switch ON.
2. Check “Self diagnostic result” for IPDM E/R with CONSULT-III.
3. Touch “ERASE”.
4. **Perform DTC Confirmation Procedure.**
   See SEC-106, "DTC Logic".

Is the DTC B210C displayed again?

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

B210D STARTER RELAY

Description

INFOID:0000000003829454

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

DTC Logic

INFOID:0000000003829455

DTC DETECTION LOGIC

NOTE:

- If DTC B210D is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "IPDM E/R : DTC Logic".
- If DTC B210D is displayed with DTC B2617, first perform the trouble diagnosis for DTC B2617. Refer to SEC-92, "DTC Logic".

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

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-107, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829456

1. INSPECTION START

1. Turn ignition switch ON.
2. Check “Self diagnostic result” for IPDM E/R with CONSULT-III.
3. Touch “ERASE”.
4. **Perform DTC Confirmation Procedure.**
   See SEC-107, "DTC Logic".

Is the DTC B210D displayed again?

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

B210E STARTER RELAY

Description

INFOID:0000000003829457

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

DTC Logic

INFOID:0000000003829458

DTC DETECTION LOGIC

NOTE:

- If DTC B210E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "IPDM E/R : DTC Logic".
- If DTC B210E is displayed with DTC B2110 for IPDM E/R, first perform the trouble diagnosis for DTC B2110. Refer to SEC-112, "DTC Logic".
- If DTC B210E is displayed with DTC B2617 for BCM, first perform the trouble diagnosis for DTC B2617. Refer to SEC-92, "DTC Logic".
- When IPDM E/R power supply voltage is low (Approx. 7 - 8 V for about 1 second), the DTC B210F may be detected.

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-108, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829459

1.CHECK STARTER RELAY OUTPUT SIGNAL

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

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

Is the inspection result normal?

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

2.CHECK STARTER RELAY OUTPUT SIGNAL CIRCUIT

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

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

3. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M121	52		Not existed

Is the inspection result normal?

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

3.CHECK STARTER RELAY CIRCUIT

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

(+)		(–)	Voltage (V) (Approx.)
IPDM E/R			
Connector	Terminal		
E5	36	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".
NO >> Check harness for open or short between IPDM E/R and battery. Refer to SEC-190, "Wiring Diagram - IPDM E/R -".

B210F PNP/CLUTCH INTERLOCK SWITCH

Description

INFOID:0000000003829460

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

DTC Logic

INFOID:0000000003829461

DTC DETECTION LOGIC

NOTE:
If DTC B210F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "IPDM E/R : DTC Logic"

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

Is DTC detected?

YES >> Go to SEC-110, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829462

1.CHECK DTC WITH BCM

Check “Self diagnostic result” with CONSULT-III. Refer to SEC-180, "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 E5.
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 E5.
3. Check continuity between IPDM E/R harness connector and A/T assembly harness connector.

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

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

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

Is the inspection result normal?

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

4. CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

B2110 PNP/CLUTCH INTERLOCK SWITCH

Description

INFOID:0000000003829463

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

DTC Logic

INFOID:0000000003829464

DTC DETECTION LOGIC

NOTE:
If DTC B2110 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-31, "IPDM E/R : DTC Logic".

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-112, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000003829465

1.CHECK DTC WITH TCM

Check “Self diagnostic result” with CONSULT-III. Refer to TM-166, "DTC Index" (VQ35HR) or refer to TM-353, "DTC Index" (VK50VE).

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 E5.
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 A/T assembly harness connector.

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

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

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

Is the inspection result normal?

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

4. CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM : Diagnosis Procedure

INFOID:0000000003940714

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	L
	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:0000000003940715

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	D
	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 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 harness or connector.

3. CHECK GROUND CIRCUIT

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

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

Does continuity exist?

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

HOOD SWITCH

Description

INFOID:0000000003829468

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:0000000003829469

1.CHECK FUNCTION

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

Test item	Condition		Status
HOOD SW	Hood	Open	ON
		Close	OFF

Is the indication normal?

YES >> Hood switch is OK.
NO >> Go to SEC-116, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000003829470

1.CHECK HOOD SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector E9 and hood switch connector.
3. 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

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

2.CHECK IPDM E/R OUTPUT

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

(+)		(–)	Voltage (V) (Approx.)
IPDM E/R			
Connector	Terminal		
E9	104	Ground	Battery voltage

Is the inspection result normal?

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

3.CHECK HOOD SWITCH

Refer to SEC-117, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace hood switch. (Built is hood lock RH.) Refer to DLK-256, "Removal and Installation".

4.CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000003829471

1.CHECK HOOD SWITCH

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

Hood switch		Condition		Continuity
Terminal				
1	2	Hood switch	Press	Not existed
			Release	Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace hood switch. (Built is hood lock RH.) Refer to DLK-256, "Removal and Installation".

HEADLAMP

Description

INFOID:0000000003829472

Headlamp lighting when vehicle security system is alarm phase.

Component Function Check

INFOID:0000000003829473

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-118, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000003829474

1.CHECK HEADLAMP OPERATION

Refer to SEC-118, "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-35, "Intermittent Incident".

>> INSPECTION END

SECURITY INDICATOR LAMP

Description

INFOID:0000000003971015

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

Component Function Check

INFOID:0000000003971016

1.CHECK FUNCTION

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

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

Is the inspection result normal?

YES >> INSPECTION END
NO >> Go to SEC-119, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000003971017

1.CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT

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

(+)		(–)	Voltage (V) (Approx.)
Combination meter			
Connector	Terminal		
M53	1	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 2.
NO >> Check the following.
- 10A fuse [No. 11, located in the fuse block (J/B)]
- Harness for open or short between combination meter and fuse.
- If NG, repair or replace fuse or harness.

2.CHECK COMBINATION METER CIRCUIT

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

Combination meter		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M53	10	M123	141	Existed

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

Combination meter		Ground	Continuity
Connector	Terminal		
M53	10		Not existed

Is the inspection result normal?

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

3.CHECK SECURITY INDICATOR LAMP

Refer to SEC-120, "Component Inspection".

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-82, "Removal and Installation".
NO >> Replace combination meter. Refer to MWI-174, "Removal and Installation".

Component Inspection

INFOID:0000000003971018

1.CHECK SECURITY INDICATOR LAMP

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

Terminal		Continuity
Combination meter		
(+)	(–)	
1	10	Existed
10	1	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace combination meter. Refer to MWI-174, "Removal and Installation".

KEY WARNING LAMP

Description

INFOID:0000000003829478

Performs operation method guide and warning together with buzzer.

Component Function Check

INFOID:0000000003829479

1.CHECK FUNCTION

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

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

Is the inspection result normal?

YES >> Key warning lamp in combination meter is OK.
NO >> Refer to SEC-121, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000003829480

1.CHECK KEY WARNING LAMP

Refer to MWI-43, "Diagnosis Description".

Is the inspection result normal?

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

2.CHECK INTERMITTENT INCIDENT

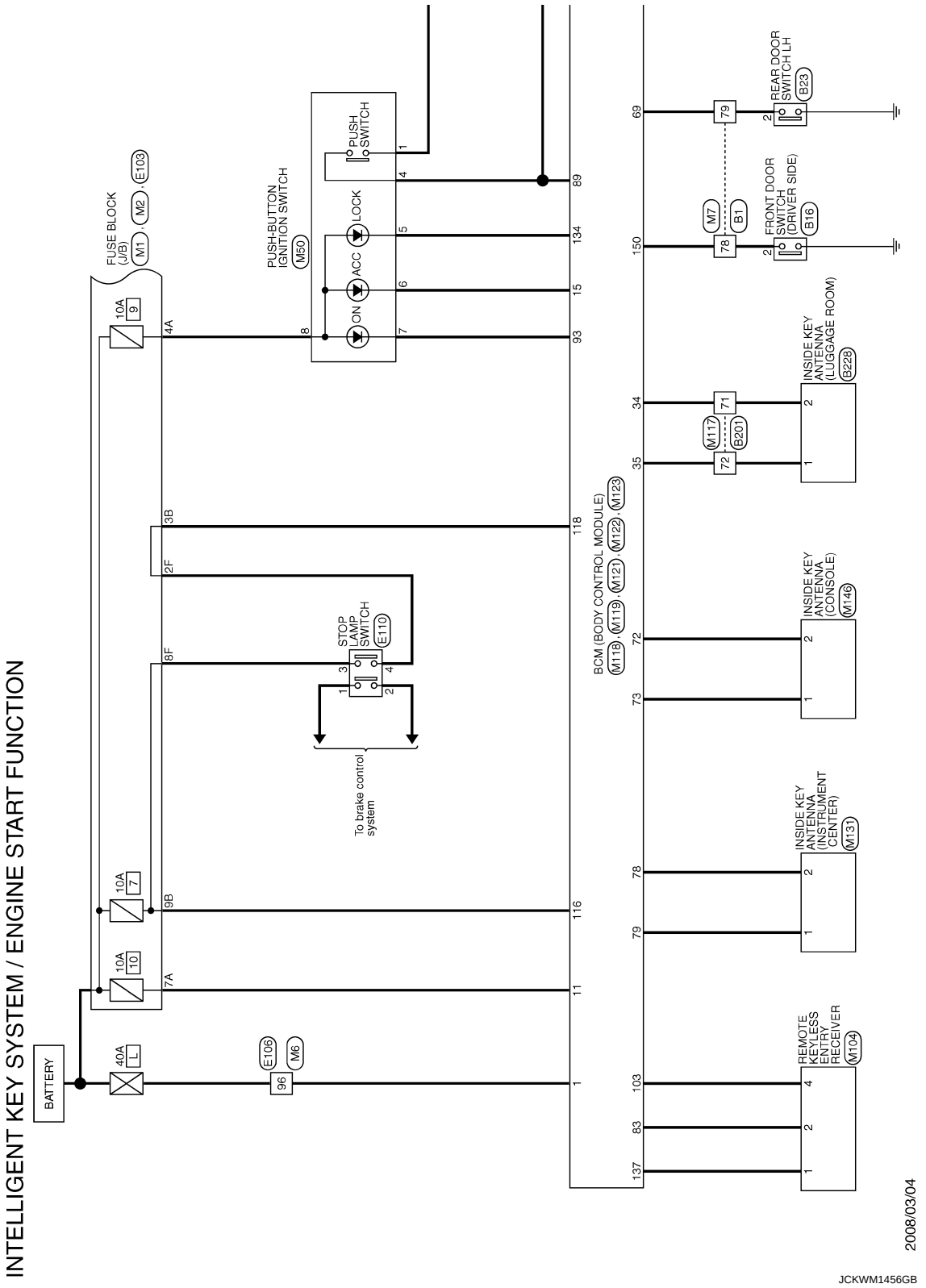
Refer to GI-35, "Intermittent Incident".

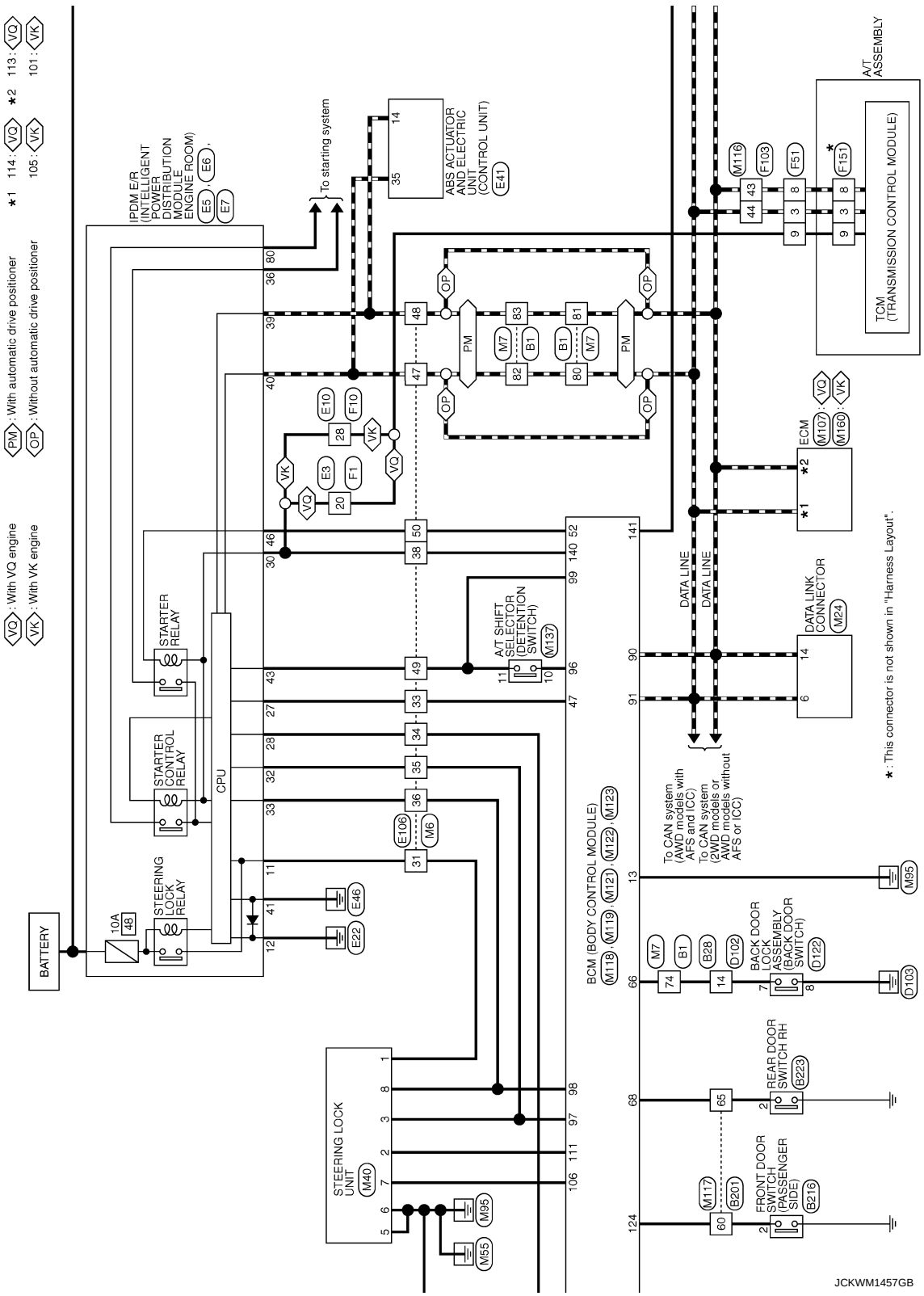
>> INSPECTION END

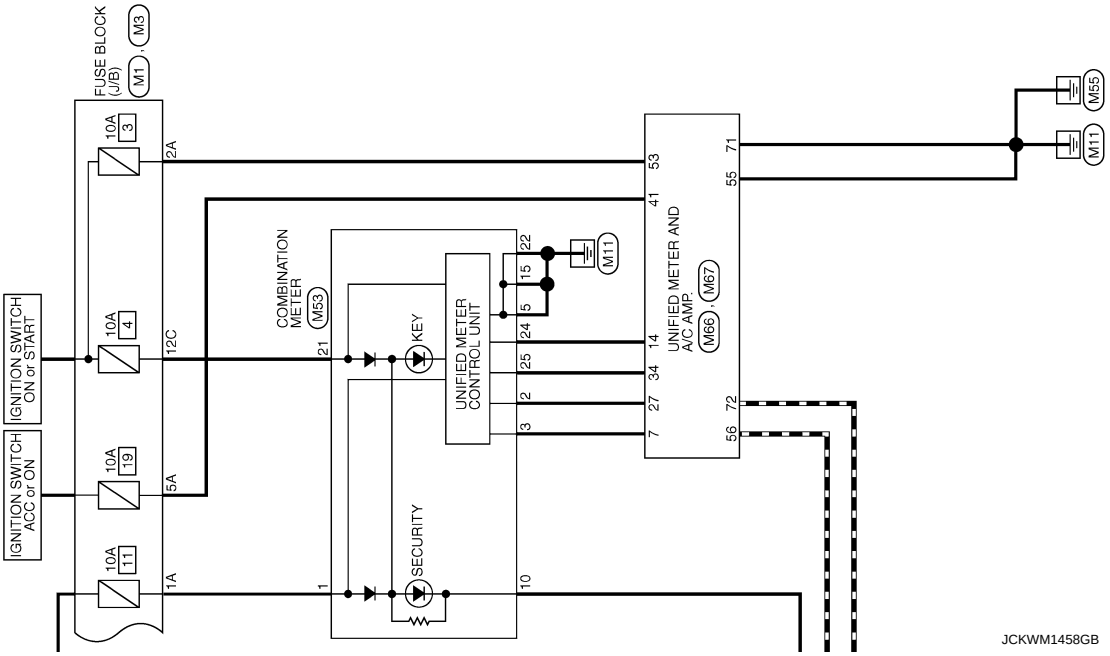
INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

Wiring Diagram - INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION -

INFOID:0000000003829481

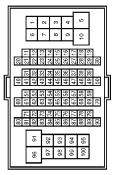



VQ : With VQ engine
VK : With VK engine
PM : With automatic drive positioner
OP : Without automatic drive positioner
*1 114 : VQ 105 : VK
*2 113 : VQ 101 : VK
BATTERY
10A 48
STEERING LOCK RELAY
STARTER RELAY
STARTER CONTROL RELAY
CPU
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) E5, E6, E7
To starting system
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) E41
A/T ASSEMBLY
TCM (TRANSMISSION CONTROL MODULE)
M116 F103 F51 F151
ECM M107 M160
DATA LINK CONNECTOR M24
DATA LINE
A/T SHIFT SELECTOR (DETENTION SWITCH) M137
BCM (BODY CONTROL MODULE) M118, M119, M121, M122, M123
To CAN system (AWD models with AFS and ICC)
To CAN system (2WD models or AWD models without AFS or ICC)
BACK DOOR LOCK ASSEMBLY (BACK DOOR SWITCH) D122
REAR DOOR SWITCH RH B223
FRONT DOOR SWITCH (PASSENGER SIDE) B216
STEERING LOCK UNIT M40
E10 F10 E3 F1 E106 M6 E46 E22 M95 M55 M7 B1 B28 D102 D103 M117 B201
* : This connector is not shown in "Harness Layout".
JCKWM1457GB


FUSE BLOCK (J/B)
M1, M3
10A 3
10A 4
10A 19
10A 11
2A
12C
5A
1A
IGNITION SWITCH ON or START
IGNITION SWITCH ACC or ON
COMBINATION METER
M53
21
1
KEY
SECURITY
UNIFIED METER CONTROL UNIT
22
15
5
24
25
2
3
10
M11
UNIFIED METER AND A/C AMP.
M66, M67
53
41
14
34
27
7
72
56
71
55
M55
M11
JCKWM1458GB

INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

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

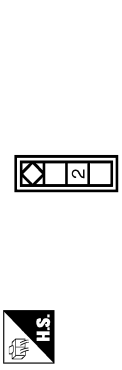


Terminal No.	Color of Wire	Signal Name [Specification]
74	V	–
78	GR	–
79	W	–
80	L	–
81	P	–
82	L	–
83	P	–

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

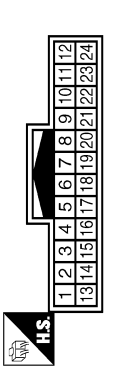
Terminal No.	Color of Wire	Signal Name [Specification]
2	GR	–

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



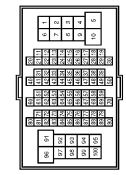
Terminal No.	Color of Wire	Signal Name [Specification]
2	W	–

Connector No.	B28
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
14	V	–

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

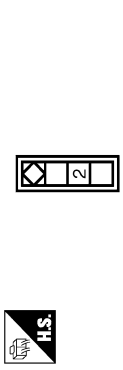


Terminal No.	Color of Wire	Signal Name [Specification]
60	GR	–
65	O	–
71	SB	–
72	V	–

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

Terminal No.	Color of Wire	Signal Name [Specification]
2	GR	–

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



Terminal No.	Color of Wire	Signal Name [Specification]
2	O	–

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	–

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INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

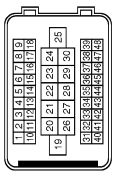
Connector No.	D102
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
14	SB	–

Connector No.	D122
Connector Name	BACK DOOR LOCK ASSEMBLY
Connector Type	NS08FW-CS

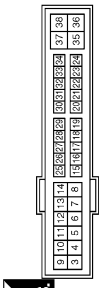
Terminal No.	Color of Wire	Signal Name [Specification]
7	SB	–
8	B	–

Connector No.	E3
Connector Name	WIRE TO WIRE
Connector Type	SAA36MB-RS10-SJZ2



Terminal No.	Color of Wire	Signal Name [Specification]
20	GR	–

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

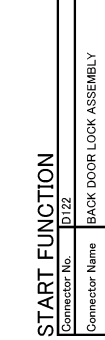


Terminal No.	Color of Wire	Signal Name [Specification]
11	BR	–
12	B	–
27	Y	–
28	O	–
30	GR	–
32	SB	–
33	P	–
36	G	–

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

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

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



Terminal No.	Color of Wire	Signal Name [Specification]
80	W	–

Connector No.	E10
Connector Name	WIRE TO WIRE
Connector Type	SAA36MB-RS8-SHZ8

Terminal No.	Color of Wire	Signal Name [Specification]
28	GR	–

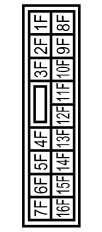
Connector No.	E41
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type	BAA42FB-AH24-LH

Terminal No.	Color of Wire	Signal Name [Specification]
14	P	CAN-L
35	L	CAN-H

JCKWM1460GB

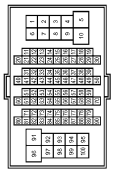
INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

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



Terminal No.	Color of Wire	Signal Name [Specification]
2F	W	–
8F	L	–

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

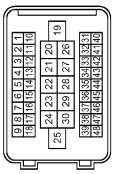


Terminal No.	Color of Wire	Signal Name [Specification]
31	BR	–
33	Y	–
34	O	–
35	SB	–
36	P	–
38	GR	–
47	L	–
48	P	–
49	SB	–
50	BR	–
96	W	–

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

Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
2	SB	–
3	L	–
4	W	–

Connector No.	F1
Connector Name	WIRE TO WIRE
Connector Type	SAA36FB-RS10-SJZ2

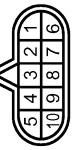


Terminal No.	Color of Wire	Signal Name [Specification]
20	GR	–

Connector No.	F10
Connector Name	WIRE TO WIRE
Connector Type	SAA36FB-RS8-SHZ8

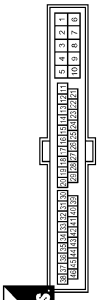
Terminal No.	Color of Wire	Signal Name [Specification]
28	LG	–

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



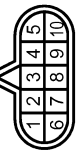
Terminal No.	Color of Wire	Signal Name [Specification]
3	L	–
8	P	–
9	LG	– [With VK engine]
9	GR	– [With VQ engine]

Connector No.	F103
Connector Name	WIRE TO WIRE
Connector Type	TK36FW-NS10



Terminal No.	Color of Wire	Signal Name [Specification]
43	P	–
44	L	–

Connector No.	F151
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Type	SP10FG



Terminal No.	Color of Wire	Signal Name [Specification]
3	R	CAN-H
8	BR	CAN-L
9	Y	START RLY

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INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

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

Terminal No.	Color of Wire	Signal Name [Specification]
1A	O	–
2A	G	–
4A	P	–
5A	V	–
7A	R	–

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

Terminal No.	Color of Wire	Signal Name [Specification]
3B	P	–
9B	BR	–

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

Terminal No.	Color of Wire	Signal Name [Specification]
12C	R	–

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

Terminal No.	Color of Wire	Signal Name [Specification]
31	BR	–
33	Y	–
34	L	–
35	L	–
36	P	–
38	R	–
47	L	–
48	P	–
49	O	–
50	LG	–
96	W	–

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

Terminal No.	Color of Wire	Signal Name [Specification]
74	LG	–
78	GR	–
79	R	–
80	L	–
81	P	–
82	L	–
83	P	–

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

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

Connector No.	M40
Connector Name	STEERING LOCK UNIT
Connector Type	TH08FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	S/L 12V (MECHANICAL)
2	GR	S/L (K LINE)
3	L	S/L CONDLTLON1
5	B	GND
6	B	GND
7	W	S/L 12V(CPU)
8	P	S/L CONDLTLON2

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

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	–
4	SB	–
5	GR	–
6	Y	–
7	V	–
8	P	–

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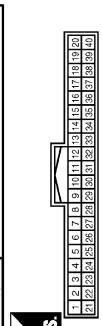
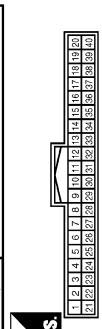
INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

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



Terminal No.	Color of Wire	Signal Name [Specification]
1	O	BAT
2	LG	COMM (METER->AMP.)
3	GR	COMM (AMP->METER)
5	B	GND
10	G	SECURITY
15	B	GND
21	R	IGN
22	B	GND
24	BR	COMM (LCD->AMP.)
25	Y	COMM (AMP->LCD)

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



Terminal No.	Color of Wire	Signal Name [Specification]
7	GR	COMM (AMP->METER)
14	BR	COMM (LCD->AMP.)
27	LG	COMM (METER->AMP.)
34	Y	COMM (AMP->LCD)

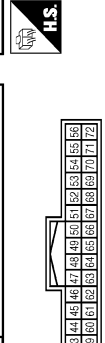
Connector No.	M107
Connector Name	ECM (WITH VQ ENGINE)
Connector Type	RH24FGY-R28-R-LH-Z

Terminal No.	Color of Wire	Signal Name [Specification]
113	P	VEHCAN-LI
114	L	VEHCAN-HI

Connector No.	M116
Connector Name	WIRE TO WIRE
Connector Type	TK36MW-NS10

Terminal No.	Color of Wire	Signal Name [Specification]
43	P	–
44	L	–

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
53	G	IGN
55	B	GND
56	L	CAN-H
71	B	GND
72	P	CAN-L

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

Terminal No.	Color of Wire	Signal Name [Specification]
60	LG	–
65	BR	–
71	SB	–
72	V	–

Connector No.	M104
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Type	JAB04FB

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	GND
2	GR	SIGNAL OUTPUT
4	BR	BATTERY

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

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

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INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

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

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

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

Terminal No.	Color of Wire	Signal Name [Specification]
34	SB	LUGGAGE ROOM ANT-
35	V	LUGGAGE ROOM ANT+
47	Y	IGN RELAY (IPDM E/R) CONT
52	LG	STARTER RELAY CONT
66	LG	BACK DOOR SW
68	BR	REAR RH DOOR SW
69	R	REAR LH DOOR SW

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

Terminal No.	Color of Wire	Signal Name [Specification]
116	BR	STOP LAMP SW 1
118	P	STOP LAMP SW 2
124	LG	PASSENGER DOOR SW
134	GR	LOCK IND
137	B	RECEIVER/SENSOR GND
140	R	SHIFT N/P
141	G	SECURITY INDICATOR OUTPUT
150	GR	DRIVER DOOR SW

Connector No.	M131
Connector Name	INSIDE KEY ANTENNA (INSTRUMENT CENTER)
Connector Type	RK02MGY

Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	–
2	Y	–

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

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

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

Terminal No.	Color of Wire	Signal Name [Specification]
10	GR	–
11	R	–

Connector No.	M146
Connector Name	INSIDE KEY ANTENNA (CONSOLE)
Connector Type	RK02FGY

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

Connector No.	M148
Connector Name	S/L CONDITION 2
Connector Type	SHIFT P
Connector Type	KEYLESS ENTRY RECEIVER POWER SUPPLY
Connector Type	S/L UNIT POWER SUPPLY
Connector Type	S/L UNIT COMM

Terminal No.	Color of Wire	Signal Name [Specification]
98	P	S/L CONDITION 2
99	R	SHIFT P
103	BR	KEYLESS ENTRY RECEIVER POWER SUPPLY
106	W	S/L UNIT POWER SUPPLY
111	GR	S/L UNIT COMM

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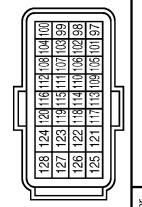
INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

Connector No.	M160
Connector Name	ECM (WITH VK ENGINE)
Connector Type	RH24FGY-RZ8-R-LH-Z



128	124	120	116	112	108	104	100
127	123	119	115	111	107	103	99
126	122	118	114	110	106	102	98
125	121	117	113	109	105	101	97

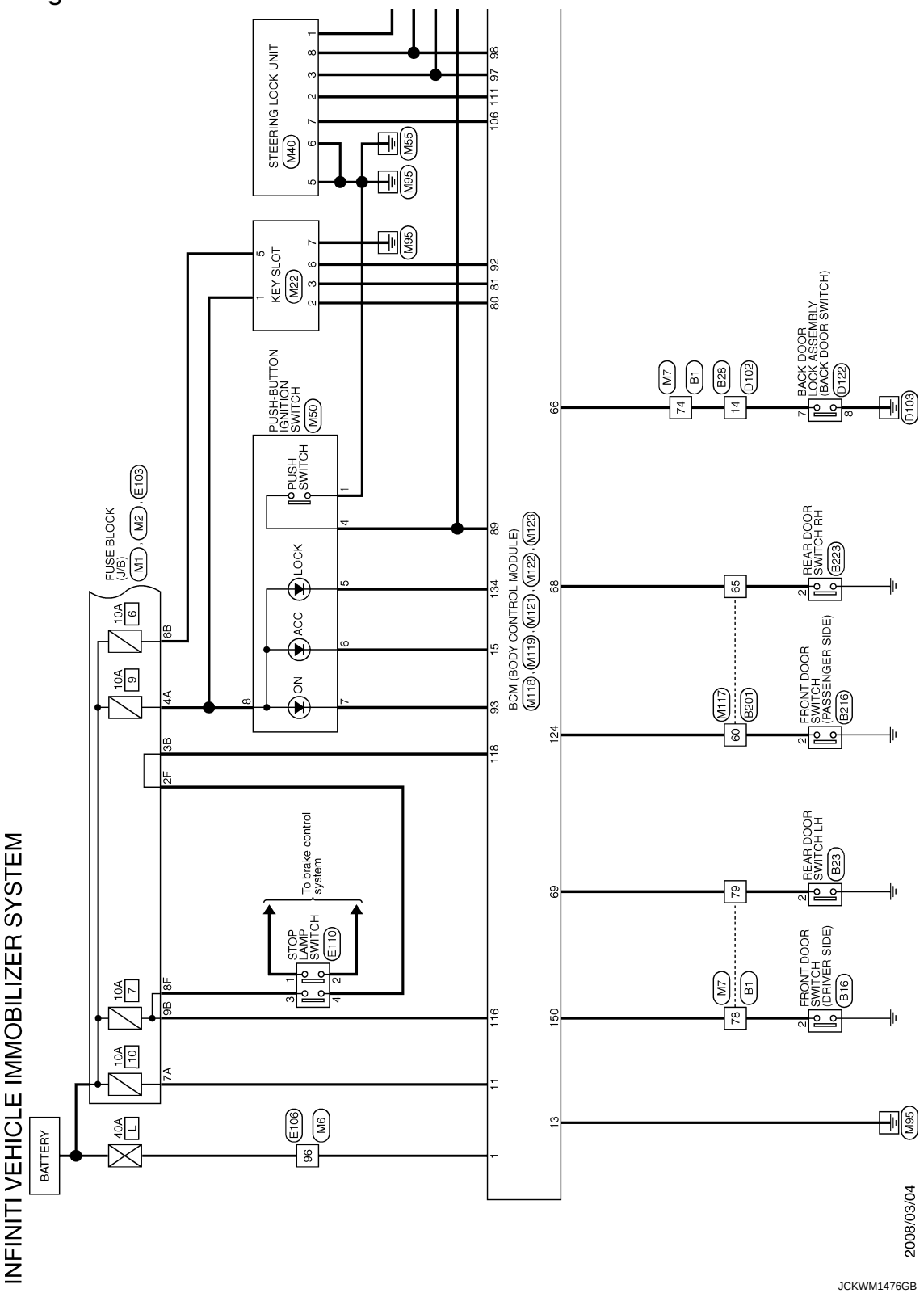
Terminal No.	Color of Wire	Signal Name [Specification]
101	P	VEHCAN-L
105	L	VEHCAN-H

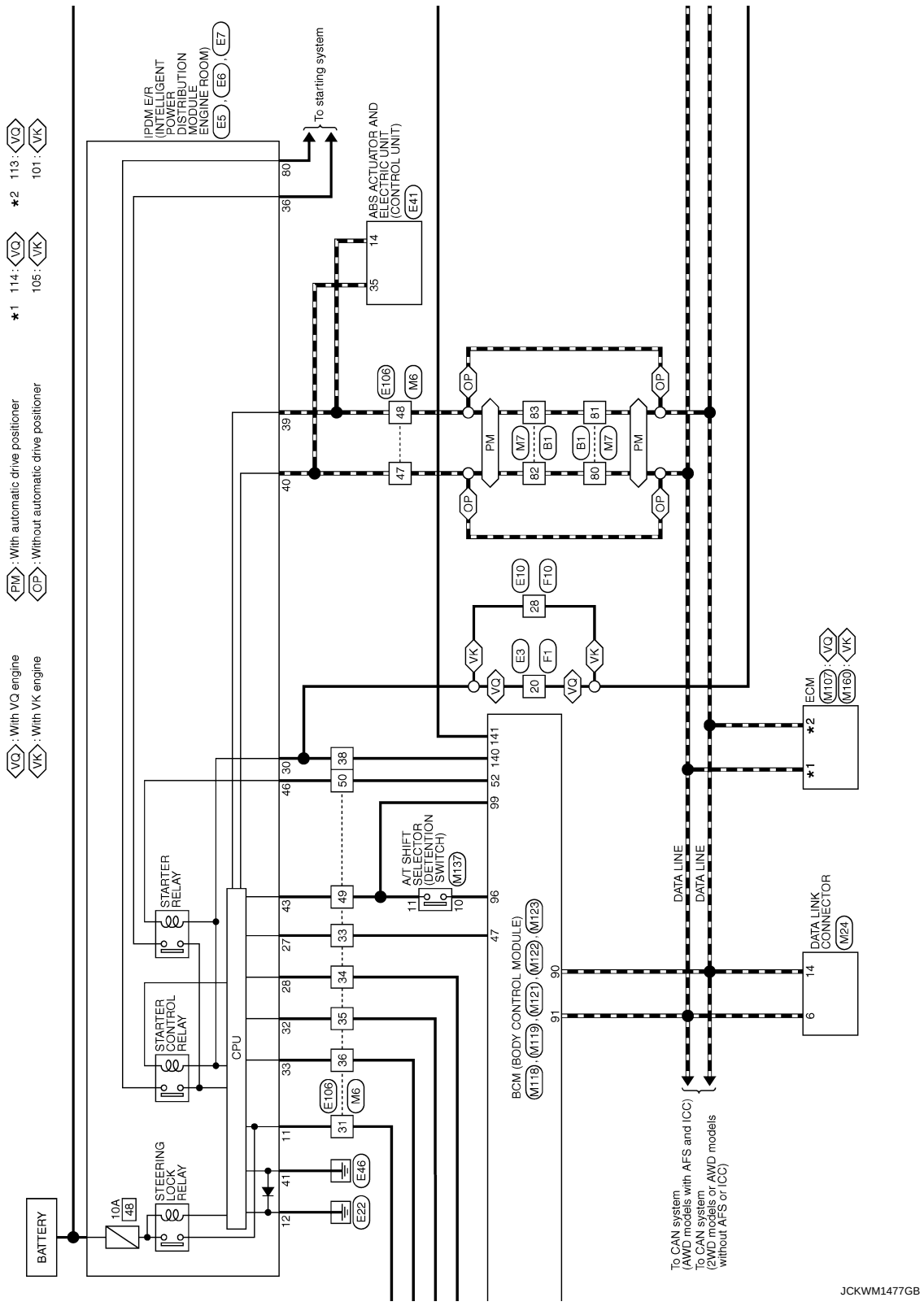
JCKWM1465GB

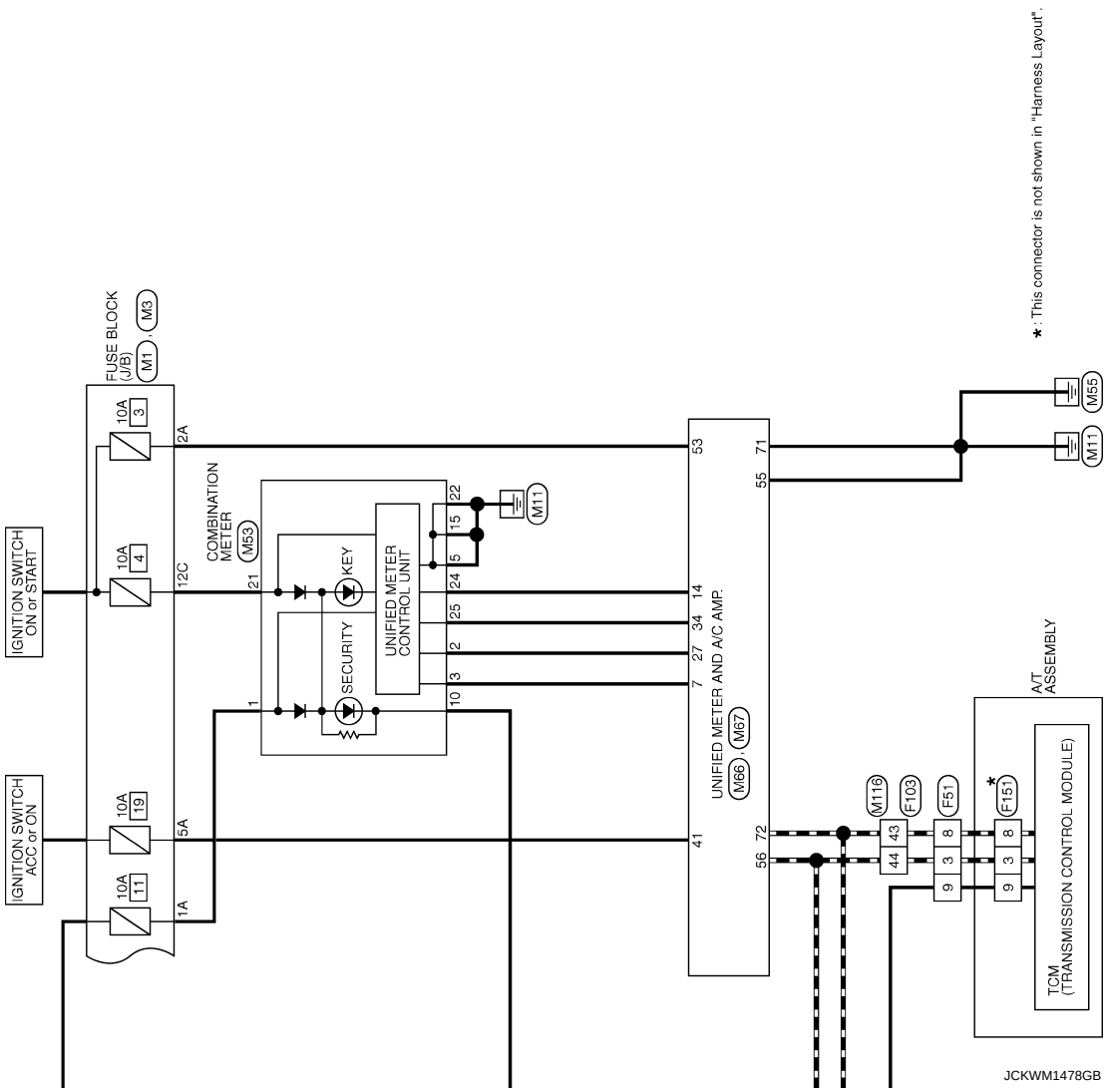
INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS

Wiring Diagram - IVIS -

INFOID:0000000003829482

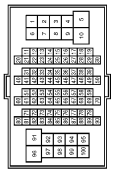



VQ : With VQ engine
VK : With VK engine
PM : With automatic drive positioner
OP : Without automatic drive positioner
*1 114 : VQ 105 : VK
*2 113 : VQ 101 : VK
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) E5, E6, E7
To starting system
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) E41
BATTERY
10A 48
STEERING LOCK RELAY
STARTER CONTROL RELAY
STARTER RELAY
CPU
E106 M6
E46
E22
A/T SHIFT SELECTOR (DETENTION SWITCH) M137
BCM (BODY CONTROL MODULE) M118, M119, M121, M122, M123
E10 F10
E3 F1
PM
OP
DATA LINE
ECM M107, M160
DATA LINK CONNECTOR M24
To CAN system (AWD models with AFS and ICC)
To CAN system (2WD models or AWD models without AFS or ICC)
JCKWM1477GB


★: This connector is not shown in "Harness Layout".
FUSE BLOCK (J/B)
M1
M3
10A 3
10A 4
10A 19
10A 11
2A
12C
5A
1A
IGNITION SWITCH ON or START
IGNITION SWITCH ACC or ON
COMBINATION METER
M53
21
1
KEY
SECURITY
UNIFIED METER CONTROL UNIT
22
15
5
24
25
2
3
10
M11
UNIFIED METER AND A/C AMP.
M66
M67
53
71
55
14
34
27
7
41
72
56
M55
M11
M116
F103
F51
F151
43
44
8
3
9
A/T ASSEMBLY
TCM (TRANSMISSION CONTROL MODULE)
JCKWM1478GB

INFINITI VEHICLE IMMOBILIZER SYSTEM

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

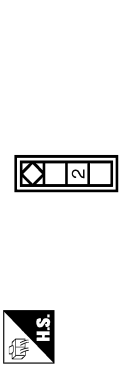


Terminal No.	Color of Wire	Signal Name [Specification]
74	V	–
78	GR	–
79	W	–
80	L	–
81	P	–
82	L	–
83	P	–

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

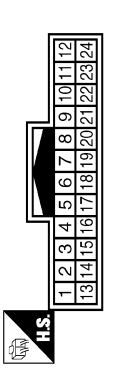
Terminal No.	Color of Wire	Signal Name [Specification]
2	GR	–

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



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

Connector No.	B28
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
14	V	–

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

Terminal No.	Color of Wire	Signal Name [Specification]
60	GR	–
65	O	–

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

Terminal No.	Color of Wire	Signal Name [Specification]
2	GR	–

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

Terminal No.	Color of Wire	Signal Name [Specification]
2	O	–

Connector No.	D102
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
14	SB	–

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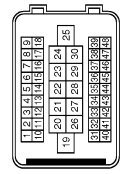
INFINITI VEHICLE IMMOBILIZER SYSTEM

Connector No.	D122
Connector Name	BACK DOOR LOCK ASSEMBLY
Connector Type	NS08FW-CS

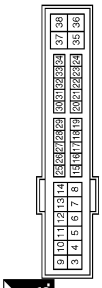
Terminal No.	Color of Wire	Signal Name [Specification]
7	SB	–
8	B	–

Connector No.	E3
Connector Name	WIRE TO WIRE
Connector Type	SAA36MB-RS10-SJZ2



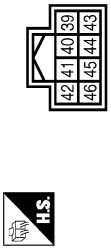
Terminal No.	Color of Wire	Signal Name [Specification]
20	GR	–

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



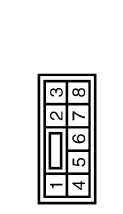
Terminal No.	Color of Wire	Signal Name [Specification]
11	BR	–
12	B	–
27	Y	–
28	O	–
30	GR	–
32	SB	–
33	P	–
36	G	–

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



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

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



Terminal No.	Color of Wire	Signal Name [Specification]
80	W	–

Connector No.	E10
Connector Name	WIRE TO WIRE
Connector Type	SAA36MB-RS8-SHZ8

Terminal No.	Color of Wire	Signal Name [Specification]
28	GR	–

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]
14	P	CAN-L
35	L	CAN-H

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

Terminal No.	Color of Wire	Signal Name [Specification]
2F	W	–
9F	L	–

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INFINITI VEHICLE IMMOBILIZER SYSTEM

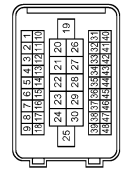
Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
31	BR	–
33	Y	–
34	O	–
35	SB	–
36	P	–
38	GR	–
47	L	–
48	P	–
49	SB	–
50	BR	–
96	W	–

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

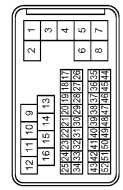
Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
2	SB	–
3	L	–
4	W	–

Connector No.	F1
Connector Name	WIRE TO WIRE
Connector Type	SAA36FB-RS10-SJZ2



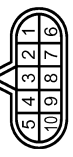
Terminal No.	Color of Wire	Signal Name [Specification]
20	GR	–

Connector No.	F10
Connector Name	WIRE TO WIRE
Connector Type	SAA36FB-RS8-SH28



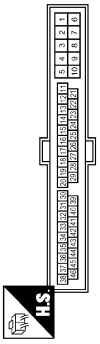
Terminal No.	Color of Wire	Signal Name [Specification]
28	LG	–

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



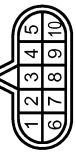
Terminal No.	Color of Wire	Signal Name [Specification]
3	L	–
8	P	–
9	LG	– [With VK engine]
9	GR	– [With YQ engine]

Connector No.	F103
Connector Name	WIRE TO WIRE
Connector Type	TK36FW-NS10



Terminal No.	Color of Wire	Signal Name [Specification]
43	P	–
44	L	–

Connector No.	F151
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Type	SP10FG



Terminal No.	Color of Wire	Signal Name [Specification]
3	R	CAN-H
8	BR	CAN-L
9	Y	START RLY

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

Terminal No.	Color of Wire	Signal Name [Specification]
1A	O	–
2A	G	–
4A	P	–
5A	V	–
7A	R	–

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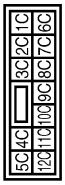
INFINITI VEHICLE IMMOBILIZER SYSTEM

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

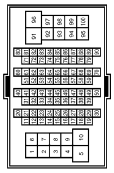
Terminal No.	Color of Wire	Signal Name [Specification]
3B	P	–
6B	Y	–
9B	BR	–

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



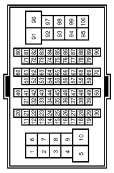
Terminal No.	Color of Wire	Signal Name [Specification]
12C	R	–

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



Terminal No.	Color of Wire	Signal Name [Specification]
31	BR	–
33	Y	–
34	L	–
35	L	–
36	P	–
38	R	–
47	L	–
48	P	–
49	O	–
50	LG	–
96	W	–

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



Terminal No.	Color of Wire	Signal Name [Specification]
74	LG	–
78	GR	–
79	R	–
80	L	–
81	P	–
82	L	–
83	P	–

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

Terminal No.	Color of Wire	Signal Name [Specification]
1	R	BAT
2	GR	CLOCK
3	W	DATA
5	Y	ILL BAT
6	LG	ILL
7	B	GND

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

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

Connector No.	M40
Connector Name	STEERING LOCK UNIT
Connector Type	TH08FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	S/L 12V (MECHANICAL)
2	GR	S/L (K LINE)
3	L	S/L CONDLTLON1
5	B	GND
6	B	GND
7	W	S/L 12V(CPU)
8	P	S/L CONDLTLON2

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

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	–
4	SB	–
5	GR	–
6	Y	–
7	V	–
8	P	–

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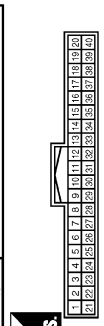
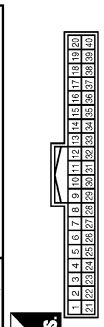
INFINITI VEHICLE IMMOBILIZER SYSTEM

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



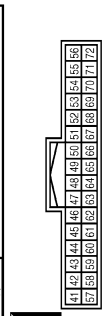
Terminal No.	Color of Wire	Signal Name [Specification]
1	O	BAT
2	LG	COMM (METER->AMP.)
3	GR	COMM (AMP->METER)
5	B	GND
10	G	SECURITY
15	B	GND
21	R	IGN
22	B	GND
24	BR	COMM (LCD->AMP.)
25	Y	COMM (AMP->LCD)

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



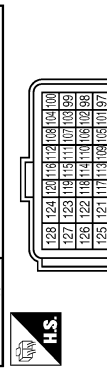
Terminal No.	Color of Wire	Signal Name [Specification]
7	GR	COMM (AMP->METER)
14	BR	COMM (LCD->AMP.)
27	LG	COMM (METER->AMP.)
34	Y	COMM (AMP->LCD)

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



Terminal No.	Color of Wire	Signal Name [Specification]
41	V	ACC
53	G	IGN
55	B	GND
56	L	CAN-H
71	B	GND
72	P	CAN-L

Connector No.	M107
Connector Name	ECM (WITH VQ ENGINE)
Connector Type	RH24FGY-RZ8-R-LH-Z



Terminal No.	Color of Wire	Signal Name [Specification]
113	P	VEHCAN-LI
114	L	VEHCAN-HI

Connector No.	M116
Connector Name	WIRE TO WIRE
Connector Type	TK36MW-NS10

Terminal No.	Color of Wire	Signal Name [Specification]
43	P	–
44	L	–

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

Terminal No.	Color of Wire	Signal Name [Specification]
60	LG	–
65	BR	–

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

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

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

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

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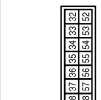
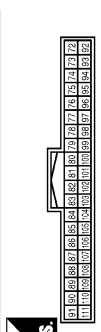
INFINITI VEHICLE IMMOBILIZER SYSTEM

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



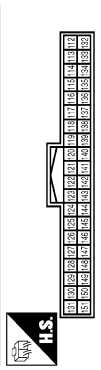
Terminal No.	Color of Wire	Signal Name [Specification]
47	Y	IGN RELAY (IPDM E/R) CONT
52	LG	STARTER RELAY CONT
66	LG	BACK DOOR SW
68	BR	REAR RH DOOR SW
69	R	REAR LH DOOR SW

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



Terminal No.	Color of Wire	Signal Name [Specification]
80	GR	IMMOBI ANTENNA CONTROL
81	W	IMMOBI ANTENNA SIGNAL
89	SB	PUSH SW
90	P	CAN-L
91	L	CAN-H
92	LG	KEY SLOT ILL
93	V	ON IND
96	GR	A/T SHIFT SELECTOR POWER SUPPLY
97	L	S/L CONDITION 1
98	P	S/L CONDITION 2
99	R	SHIFT P

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



Terminal No.	Color of Wire	Signal Name [Specification]
116	BR	STOP LAMP SW 1
118	P	STOP LAMP SW 2
124	LG	PASSENGER DOOR SW
134	GR	LOCK IND
140	R	SHIFT N/P
141	G	SECURITY INDICATOR OUTPUT
150	GR	DRIVER DOOR SW

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

Terminal No.	Color of Wire	Signal Name [Specification]
10	GR	-
11	R	-

Connector No.	M160
Connector Name	ECM (WITH VK ENGINE)
Connector Type	RH24FGY-RZB-R-LH-Z

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

106	W	S/L UNIT POWER SUPPLY
111	GR	S/L UNIT COMM

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VEHICLE SECURITY SYSTEM

Wiring Diagram - VEHICLE SECURITY SYSTEM -

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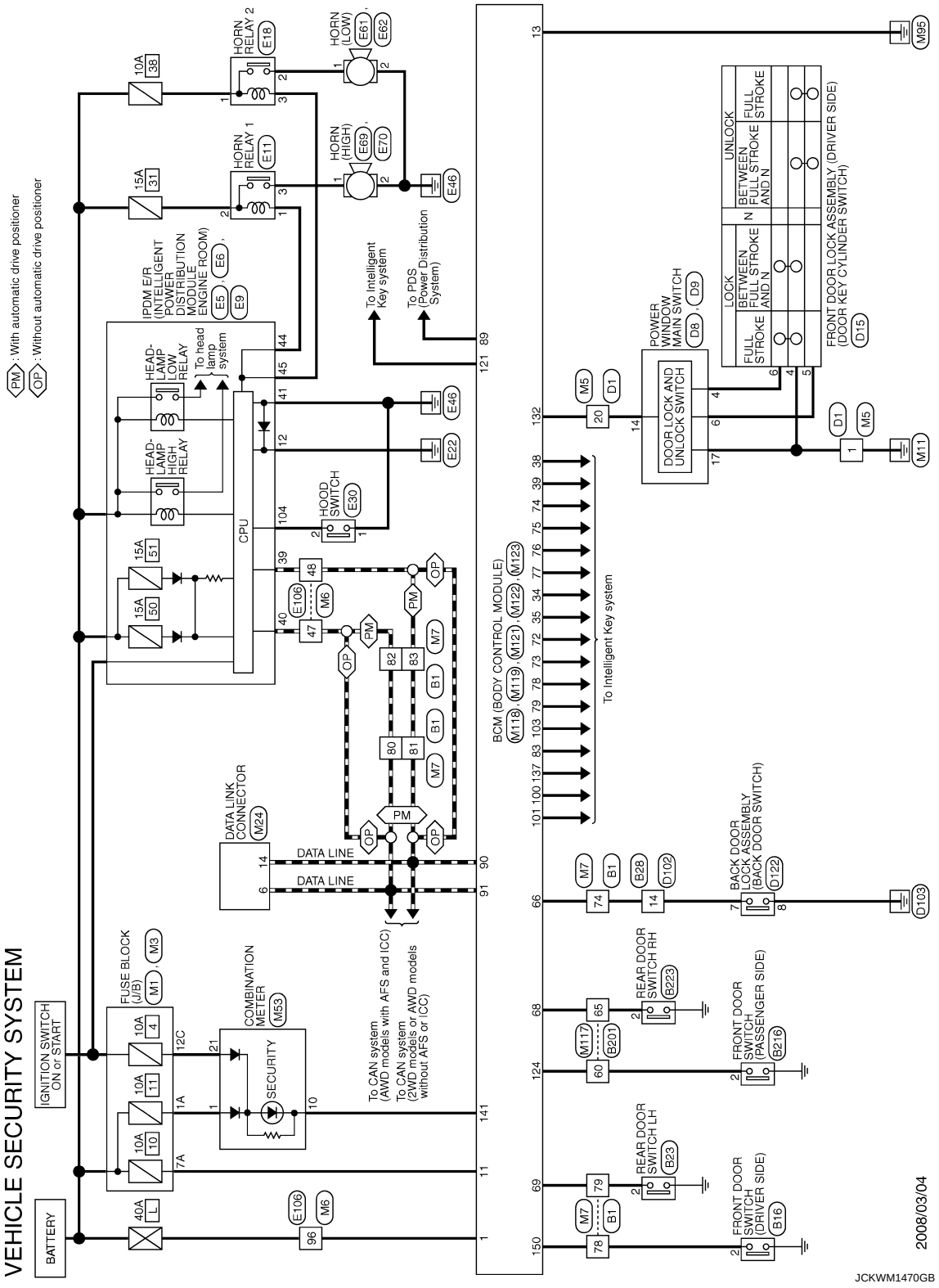
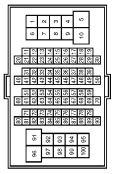


VEHICLE SECURITY SYSTEM

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



Terminal No.	Color of Wire	Signal Name [Specification]
74	V	–
78	GR	–
79	W	–
80	L	–
81	P	–
82	L	–
83	P	–

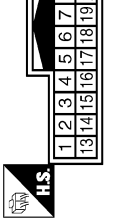
Connector No.	B16
Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)
Connector Type	A03FW

Terminal No.	Color of Wire	Signal Name [Specification]
2	GR	–

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

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

Connector No.	B28
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
14	V	–

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

Terminal No.	Color of Wire	Signal Name [Specification]
60	GR	–
65	O	–

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

Terminal No.	Color of Wire	Signal Name [Specification]
2	GR	–

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

Terminal No.	Color of Wire	Signal Name [Specification]
2	O	–

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Type	TH40FW-CS15

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	–
20	V	–

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VEHICLE SECURITY SYSTEM

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

H.S.

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

Terminal No.	Color of Wire	Signal Name [Specification]
4	V	–
6	Y	–
14	V	–

Connector No.	D9
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS03FW-CS

H.S.

17	18	19

Terminal No.	Color of Wire	Signal Name [Specification]
17	B	–

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

H.S.

1	2	3	4	5	6

Terminal No.	Color of Wire	Signal Name [Specification]
4	B	–
5	Y	–
6	V	–

Connector No.	D102
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH

H.S.

12	11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13

Terminal No.	Color of Wire	Signal Name [Specification]
14	SB	–

Connector No.	D122
Connector Name	BACK DOOR LOCK ASSEMBLY
Connector Type	NS08FW-CS

H.S.

1		2	3
4	5	6	7	8

Terminal No.	Color of Wire	Signal Name [Specification]
7	SB	–
8	B	–

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

H.S.

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

Terminal No.	Color of Wire	Signal Name [Specification]
12	B	–

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

H.S.

42	41	40	39
46	45	44	43

Terminal No.	Color of Wire	Signal Name [Specification]
39	P	–
40	L	–
41	B	–
44	W	–
45	G	–

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

H.S.

98	97	96	95	94	93	92	91
106	105	104	103	102	101	100	99

Terminal No.	Color of Wire	Signal Name [Specification]
104	LG	–

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VEHICLE SECURITY SYSTEM

Connector No.	E11
Connector Name	HORN RELAY 1
Connector Type	24381 7990A

Terminal No.	Color of Wire	Signal Name [Specification]
1	LG	–
2	BR	–
3	G	–

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

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

Connector No.	E30
Connector Name	HOOD SWITCH
Connector Type	RH02FB

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

Connector No.	E61
Connector Name	HORN (LOW)
Connector Type	P01FB-A

Terminal No.	Color of Wire	Signal Name [Specification]
1	Y	–

Connector No.	E62
Connector Name	HORN (LOW)
Connector Type	P01FB-A

Terminal No.	Color of Wire	Signal Name [Specification]
2	B	–

Connector No.	E69
Connector Name	HORN (HIGH)
Connector Type	P01FB-A

Terminal No.	Color of Wire	Signal Name [Specification]
1	G	–

Connector No.	E70
Connector Name	HORN (HIGH)
Connector Type	P01FB-A

Terminal No.	Color of Wire	Signal Name [Specification]
2	B	–

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

Terminal No.	Color of Wire	Signal Name [Specification]
47	L	–
48	P	–
96	W	–

JCKWM1473GB

VEHICLE SECURITY SYSTEM

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

Terminal No.	Color of Wire	Signal Name [Specification]
1A	O	–
7A	R	–

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

Terminal No.	Color of Wire	Signal Name [Specification]
12C	R	–

Connector No.	M5
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS15

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	–
20	O	–

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

Terminal No.	Color of Wire	Signal Name [Specification]
47	L	–
48	P	–
96	W	–

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

Terminal No.	Color of Wire	Signal Name [Specification]
74	LG	–
78	GR	–
79	R	–
80	L	–
81	P	–
82	L	–
83	P	–

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

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

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

Terminal No.	Color of Wire	Signal Name [Specification]
1	O	BAT
10	G	SECURITY
21	R	IGN

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

Terminal No.	Color of Wire	Signal Name [Specification]
60	LG	–
65	BR	–

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VEHICLE SECURITY SYSTEM

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)

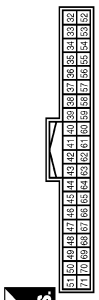
Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-CS

H.S.

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

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+
66	LG	BACK DOOR SW
68	BR	REAR RH DOOR SW
69	R	REAR LH DOOR SW

91	L	CAN-H
100	G	PASSENGER DOOR REQUEST SW
101	SB	DRIVER DOOR REQUEST SW
103	BR	KEYLESS ENTRY RECEIVER POWER SUPPLY

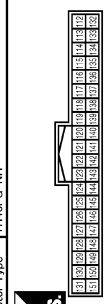
Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
72	R	ROOM ANT2-
73	G	ROOM ANT2+
74	SB	PASSENGER DOOR ANT-
75	BR	PASSENGER DOOR ANT+
76	V	DRIVER DOOR ANT-
77	LG	DRIVER DOOR ANT+
78	Y	ROOM ANT1-
79	BR	ROOM ANT1+
83	GR	KEYLESS ENTRY RECEIVER SIGNAL
89	SB	PUSH SW
90	P	CAN-L

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

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
121	BR	KEY SLOT SW
124	LG	PASSENGER DOOR SW
132	O	POWER WINDOW SW COMM
137	B	RECEIVER/SENSOR GND
141	G	SECURITY INDICATOR OUTPUT
150	GR	DRIVER DOOR SW

JCKWM1475GB

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:0000000003940716

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

Monitor Item	Condition	Value/Status
FR WIPER HI	Other than front wiper switch HI	Off
	Front wiper switch HI	On
FR WIPER LOW	Other than front wiper switch LO	Off
	Front wiper switch LO	On
FR WASHER SW	Front washer switch OFF	Off
	Front washer switch ON	On
FR WIPER INT	Other than front wiper switch INT	Off
	Front wiper switch INT	On
FR WIPER STOP	Front wiper is not in STOP position	Off
	Front wiper is in STOP position	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position
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
FR FOG SW	Front fog lamp switch OFF	Off
	Front fog lamp switch ON	On

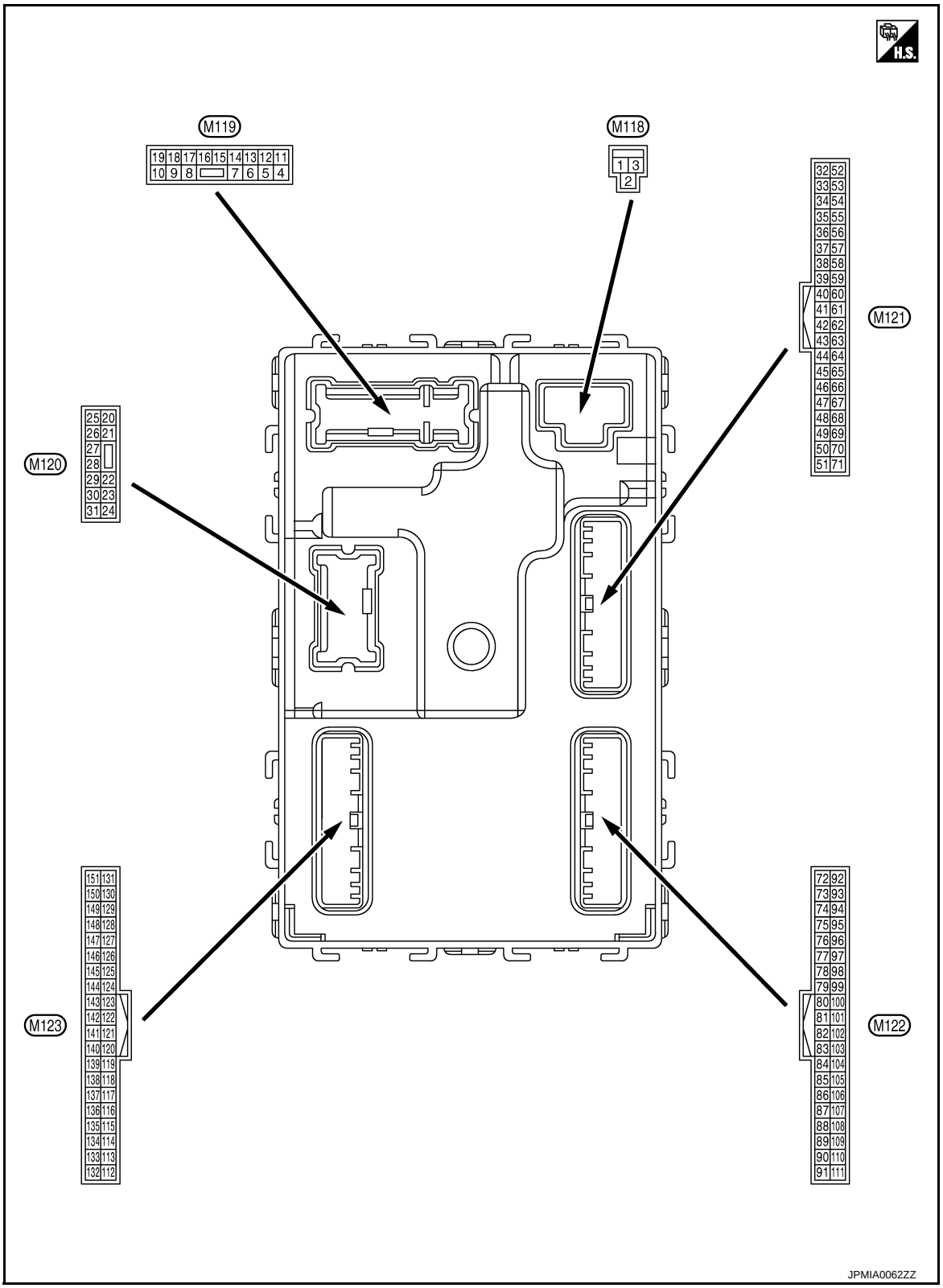
Monitor Item	Condition	Value/Status
RR FOG SW	**NOTE:** The item is indicated, but not monitored.	Off
DOOR SW-DR	Driver door closed	Off
	Driver door opened	On
DOOR SW-AS	Passenger door closed	Off
	Passenger door opened	On
DOOR SW-RR	Rear RH door closed	Off
	Rear RH door opened	On
DOOR SW-RL	Rear LH door 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:** The item is indicated, but not monitored.	Off
HAZARD SW	Hazard switch is OFF	Off
	Hazard switch is ON	On
REAR DEF SW	**NOTE:** The item is indicated, but not monitored.	Off
TR CANCEL SW	**NOTE:** 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:** The item is indicated, but not monitored.	Off
RKE-LOCK	LOCK button of the Intelligent Key is not pressed	Off
	LOCK button of the Intelligent Key is pressed	On
RKE-UNLOCK	UNLOCK button of the Intelligent Key is not pressed	Off
	UNLOCK button of the Intelligent Key is pressed	On
RKE-TR/BD	**NOTE:** The item is indicated, but not monitored.	Off
RKE-PANIC	PANIC button of the Intelligent Key is not pressed	Off
	PANIC button of the Intelligent Key is pressed	On
RKE-P/W OPEN	UNLOCK button of the Intelligent Key is not pressed	Off
	UNLOCK button of the Intelligent Key is pressed and held	On
RKE-MODE CHG	LOCK/UNLOCK button of the Intelligent Key is not pressed and held simultaneously	Off
	LOCK/UNLOCK button of the Intelligent 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

Monitor Item	Condition	Value/Status
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	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On
CLUCH SW	**NOTE:** The item is indicated, but not monitored.	Off
BRAKE SW 1	The brake pedal is 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	Steering is unlocked	Off
	Steering is locked	On
S/L -UNLOCK	Steering is locked	Off
	Steering is unlocked	On
S/L RELAY-F/B	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On
UNLK SEN -DR	Driver door is unlocked	Off
	Driver door is locked	On
PUSH SW -IPDM	Push-button ignition switch (push-switch) is not pressed	Off
	Push-button ignition switch (push-switch) is pressed	On
IGN RLY1 -F/B	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On
DETE SW -IPDM	Selector lever in 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
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

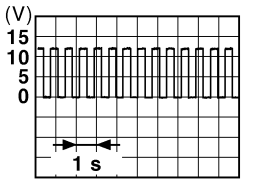
Monitor Item	Condition	Value/Status
ENGINE STATE	Engine stopped	Stop
	While the engine stalls	Stall
	At engine cranking	Crank
	Engine running	Run
S/L LOCK-IPDM	Steering is unlocked	Off
	Steering is locked	On
S/L UNLK-IPDM	Steering is locked	Off
	Steering is unlocked	On
S/L RELAY-REQ	Steering lock system is not the LOCK condition and the changing condition from LOCK to UNLOCK	Off
	Steering lock system is the LOCK condition or the changing condition from LOCK to UNLOCK	On
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	Steering is locked	Reset
	Steering is unlocked	Set
PRMT ENG STRT	The engine start is prohibited	Reset
	The engine start is permitted	Set
PRMT RKE STRT	**NOTE:** The item is indicated, but not monitored.	Reset
KEY SW -SLOT	The Intelligent Key is not inserted into key slot	Off
	The Intelligent Key is inserted into key slot	On
RKE OPE COUN1	During the operation of the Intelligent Key	Operation frequency of the Intelligent Key
RKE OPE COUN2	**NOTE:** The item is indicated, but not monitored.	—
CONFRM ID ALL	The key ID that the key slot receives is not recognized by 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 is not recognized by the fourth key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the fourth key ID registered to BCM.	Done
CONFIRM ID3	The key ID that the key slot receives is not recognized by the third key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the third key ID registered to BCM.	Done
CONFIRM ID2	The key ID that the key slot receives is not recognized by the second key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the second key ID registered to BCM.	Done

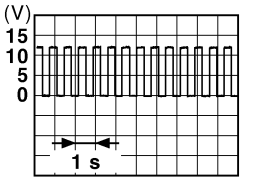
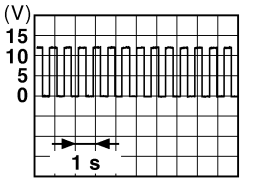
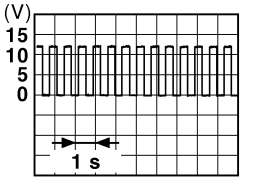
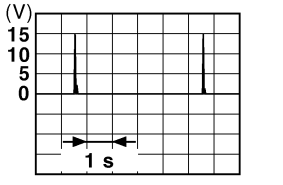
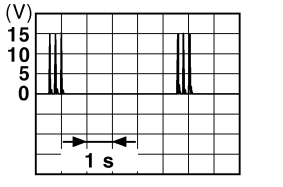
Monitor Item	Condition	Value/Status
CONFIRM ID1	The key ID that the key slot receives is not recognized by the first key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the first key ID registered to BCM.	Done
TP 4	The ID of fourth Intelligent Key is not registered to BCM	Yet
	The ID of fourth Intelligent Key is registered to BCM	Done
TP 3	The ID of third Intelligent Key is not registered to BCM	Yet
	The ID of third Intelligent Key is registered to BCM	Done
TP 2	The ID of second Intelligent Key is not registered to BCM	Yet
	The ID of second Intelligent Key is registered to BCM	Done
TP 1	The ID of first Intelligent Key is not registered to BCM	Yet
	The ID of first Intelligent Key is registered to BCM	Done

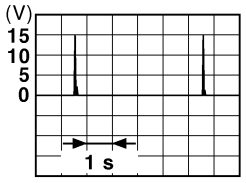
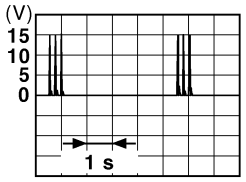
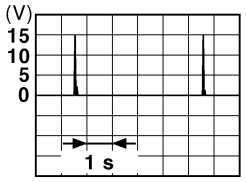
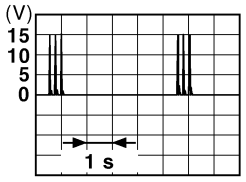
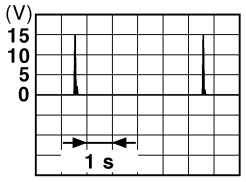
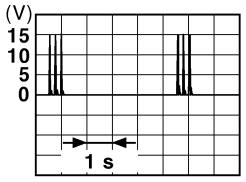
TERMINAL LAYOUT

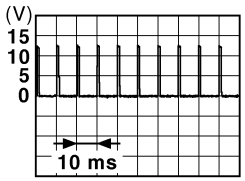
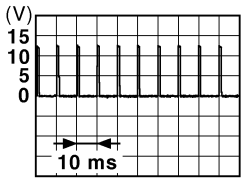
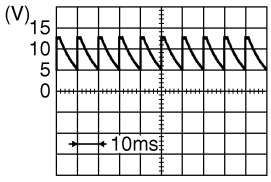
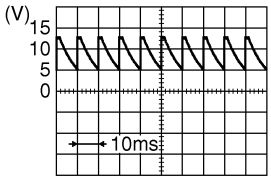


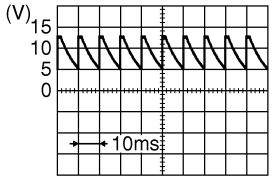
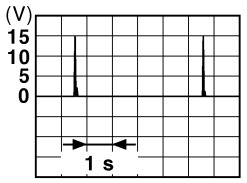
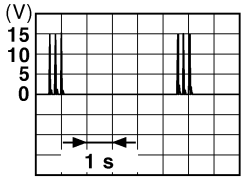
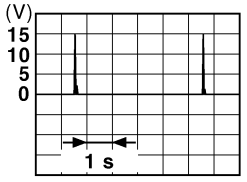
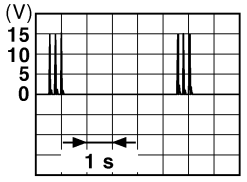
PHYSICAL VALUES

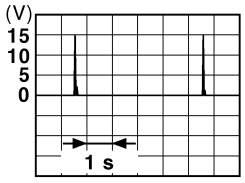
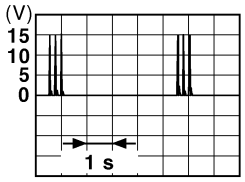
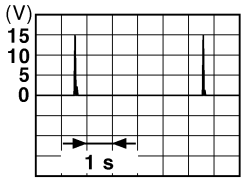
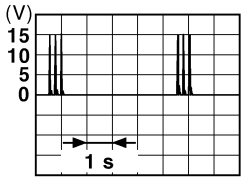
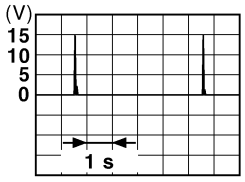
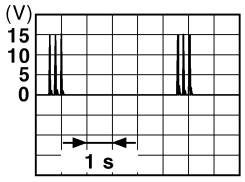
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
1 (W)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (Y)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF		12 V
3 (O)	Ground	P/W power supply (RAP)	Output	Ignition switch ON		12 V
4 (P)	Ground	Interior room lamp power supply (Battery saver signal)	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)		12 V
5 (V)	Ground	Passenger door UNLOCK	Output	Passenger door	UNLOCK (Actuator is activated)	12 V
					Other than UNLOCK (Actuator is not activated)	0 V
7 (Y)	Ground	Step lamp	Output	Step lamp	ON	0 V
					OFF	12 V
8 (V)	Ground	All doors, fuel lid LOCK	Output	All doors, fuel lid	LOCK (Actuator is activated)	12 V
					Other than LOCK (Actuator is not activated)	0 V
9 (G)	Ground	Driver door, fuel lid UNLOCK	Output	Driver door, fuel lid	UNLOCK (Actuator is activated)	12 V
					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)	12 V
					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
15 (Y)	Ground	ACC indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage
					ACC or ON	0 V
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

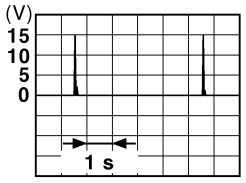
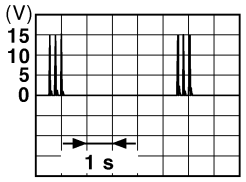
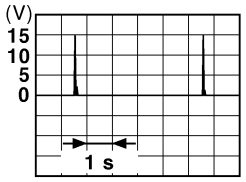
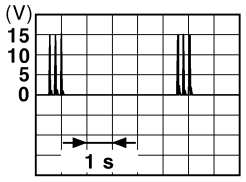
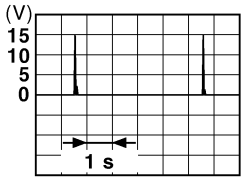
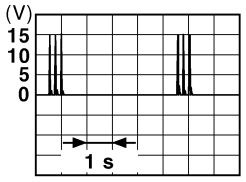
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
		Signal name	Input/ Output			
+	–					
18 (O)	Ground	Turn signal LH (Front)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 PKID0926E 6.5 V
19 (SB)	Ground	Room lamp timer	Output	Other than under condition		5.0 V
				• Interior room lamp timer is activated. (Door is unlocked. etc...) • Welcome light function is activated.		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
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)	12 V
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

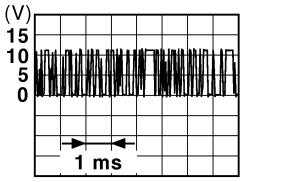
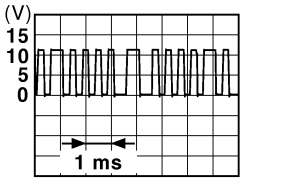
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
35 (V)	Ground	Luggage room antenna (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
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
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	12 V
					ON	0 V

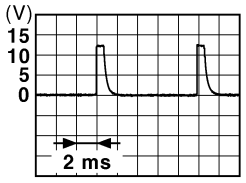
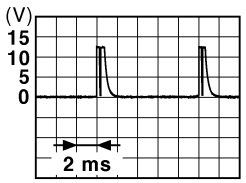
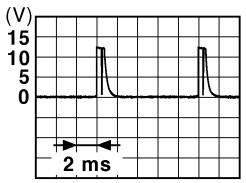
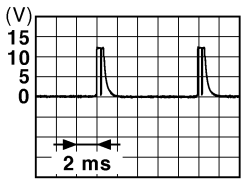
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
48 (W)	Ground	Back door opener switch operation	Output	Back door opener switch	Not pressed	12 V
					Pressed	0 V
52 (LG)	Ground	Starter relay control	Output	Ignition switch ON	When selector lever is in P or N position	12 V
					When selector lever is not in P or N position	0 V
61 (W)	Ground	Back door opener request switch	Input	Back door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	 JPMIA0016GB 1.0 V
64 (L)	Ground	Intelligent Key warning buzzer (Engine room)	Output	Intelligent Key warning buzzer (Engine room)	Sounding	0 V
					Not sounding	12 V
65 (O)	Ground	Rear wiper stop position	Input	Rear wiper	In stop position	 JPMIA0016GB 1.0 V
					Not in stop position	0 V
66 (LG)	Ground	Back door switch	Input	Back door switch	OFF (Door close)	12 V
					ON (Door open)	0 V
67 (P)	Ground	Back door opener switch	Input	Back door opener switch	Pressed	0 V
					Not pressed	 JPMIA0594GB 8.5 - 9.0 V
68 (BR)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (Door close)	 JPMIA0594GB 8.5 - 9.0 V
					ON (Door open)	0 V

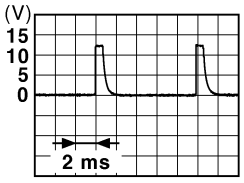
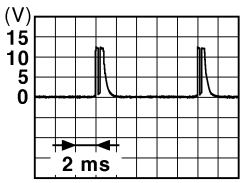
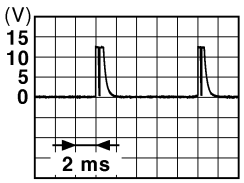
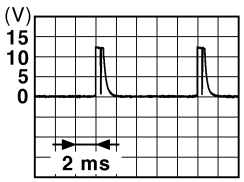
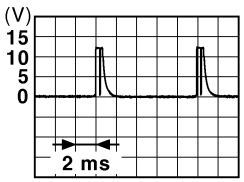
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
69 (R)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (Door close)	 JPMIA0594GB 8.5 - 9.0 V
					ON (Door open)	0 V
72 (R)	Ground	Room antenna 2 (–) (Center console)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
73 (G)	Ground	Room antenna 2 (+) (Center console)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB

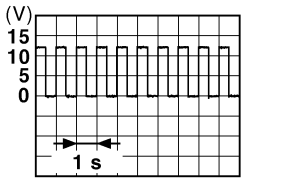
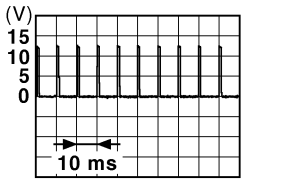
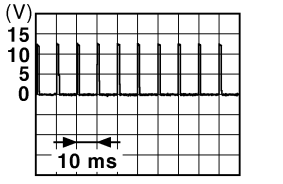
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
74 (SB)	Ground	Passenger door antenna (–)	Output	When the passenger door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When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

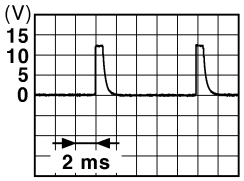
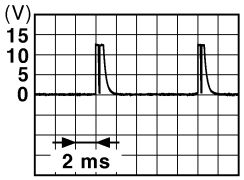
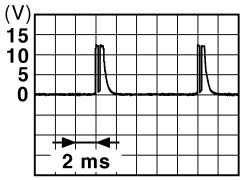
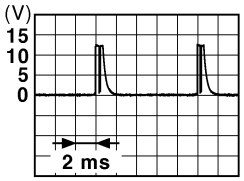
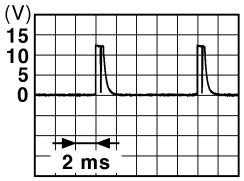
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
77 (LG)	Ground	Driver door antenna (+)	Output	When the driver door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent 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

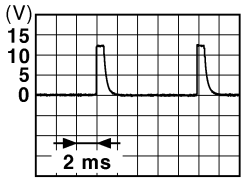
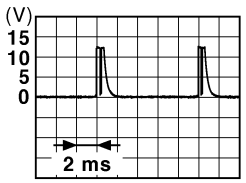
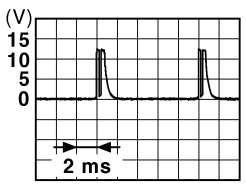
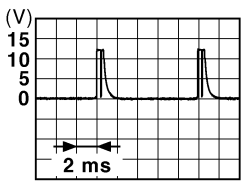
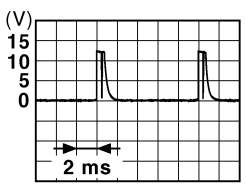
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
		Signal name	Input/ Output			
+	–					
80 (GR)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
81 (W)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
82 (P)	Ground	Ignition relay [Fuse block (J/B)] control	Output	Ignition switch	OFF or ACC	0 V
					ON	12 V
83 (GR)	Ground	Remote keyless entry receiver communication	Input/ Output	During waiting		 JMKIA0064GB
				When operating either button on the Intelligent Key		 JMKIA0065GB

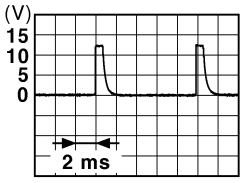
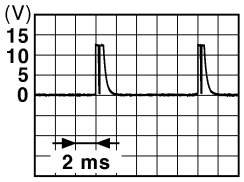
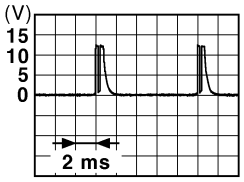
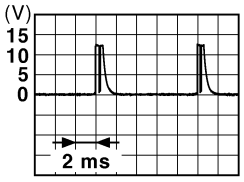
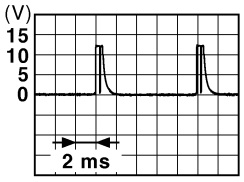
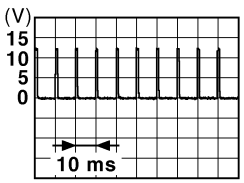
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
87 (BR)	Ground	Combination switch INPUT 5	Input	Combination switch	All switches OFF (Wiper intermittent dial 4)	 JPMIA0041GB 1.4 V
					Front fog lamp switch ON (Wiper intermittent dial 4)	 JPMIA0037GB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

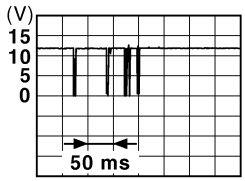
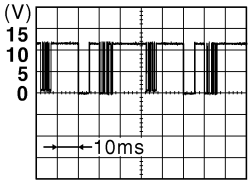
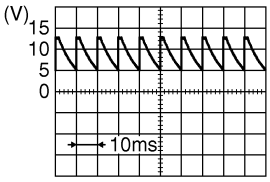
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
88 (V)	Ground	Combination switch INPUT 3	Input	Combination switch	All switches OFF (Wiper intermittent dial 4)	 JPMIA0041GB 1.4 V
					Lighting switch HI (Wiper intermittent dial 4)	 JPMIA0036GB 1.3 V
					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 • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	 JPMIA0040GB 1.3 V
89 (SB)	Ground	Push-button ignition switch (Push switch)	Input	Push-button ignition switch (Push switch)	Pressed	0 V
					Not pressed	12 V
90 (P)	Ground	CAN-L	Input/ Output	—		—
91 (L)	Ground	CAN-H	Input/ Output	—		—

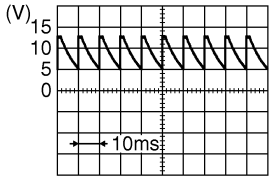
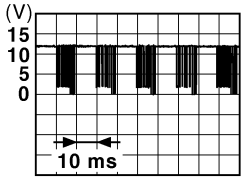
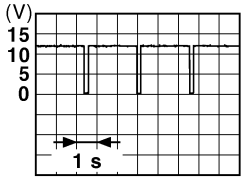
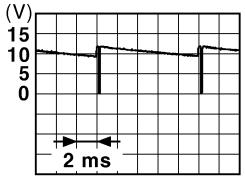
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
92 (LG)	Ground	Key slot illumination	Output	Key slot illumination	OFF	12 V
					Blinking	 JPMIA0015GB 6.5 V
					ON	0 V
93 (V)	Ground	ON indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage
					ON or ACC	0 V
95 (O)	Ground	ACC relay control	Output	Ignition switch	OFF	0 V
					ACC or ON	12 V
96 (GR)	Ground	A/T shift selector (Detention switch) power supply	Output	—		12 V
97 (L)	Ground	Steering lock condition No. 1	Input	Steering lock	LOCK status	0 V
					UNLOCK status	12 V
98 (P)	Ground	Steering lock condition No. 2	Input	Steering lock	LOCK status	12 V
					UNLOCK status	0 V
99 (R)	Ground	Selector lever P position switch	Input	Selector lever	P position	0 V
					Any position other than P	12 V
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 (O)	Ground	Blower fan motor relay control	Output	Ignition switch	OFF or ACC	0 V
					ON	12 V
103 (BR)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OFF		12 V

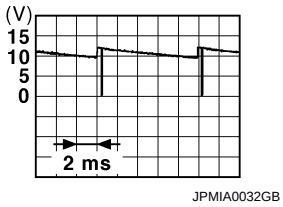
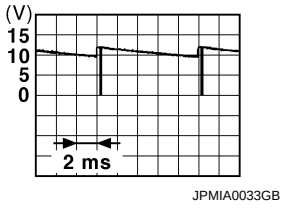
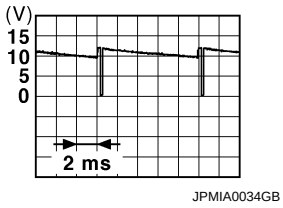
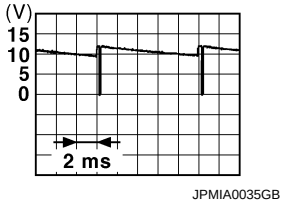
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
		Signal name	Input/ Output			
+	–					
106 (W)	Ground	Steering lock unit power supply	Output	Ignition switch	OFF or ACC	12 V
					ON	0 V
107 (LG)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermittent dial 4)	All switches OFF	 JPMIA0041GB 1.4 V
					Turn signal switch LH	 JPMIA0037GB 1.3 V
					Turn signal switch RH	 JPMIA0036GB 1.3 V
					Front wiper switch LO	 JPMIA0038GB 1.3 V
					Front washer switch ON	 JPMIA0039GB 1.3 V

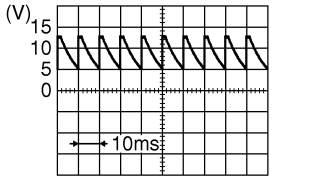
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
108 (R)	Ground	Combination switch INPUT 4	Input	Combination switch	All switches OFF (Wiper intermittent dial 4)	 JPMIA0041GB 1.4 V
					Lighting switch AUTO (Wiper intermittent dial 4)	 JPMIA0038GB 1.3 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 • Wiper intermittent dial 1 • Wiper intermittent dial 5 • 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			
+	–					
111 (GR)	Ground	Steering lock unit communication	Input/ Output	Steering lock	LOCK status	12 V
					LOCK or UNLOCK	 JMKIA0066GB
					For 15 seconds after UNLOCK	12 V
					15 seconds or later after UNLOCK	0 V
112 (GR)	Ground	Rain sensor serial link	Input/ Output	Ignition switch ON		 JPMIA0156GB 8.7 V
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 (BR)	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)	 JPMIA0594GB 8.5 - 9.0 V
					UNLOCK status (Unlock switch sensor ON)	0 V
121 (BR)	Ground	Key slot switch	Input	When the Intelligent Key is inserted into key slot		12 V
				When the Intelligent Key is not inserted into key slot		0 V
122 (V)	Ground	ACC feedback	Input	Ignition switch	OFF	0 V
					ACC or ON	Battery voltage

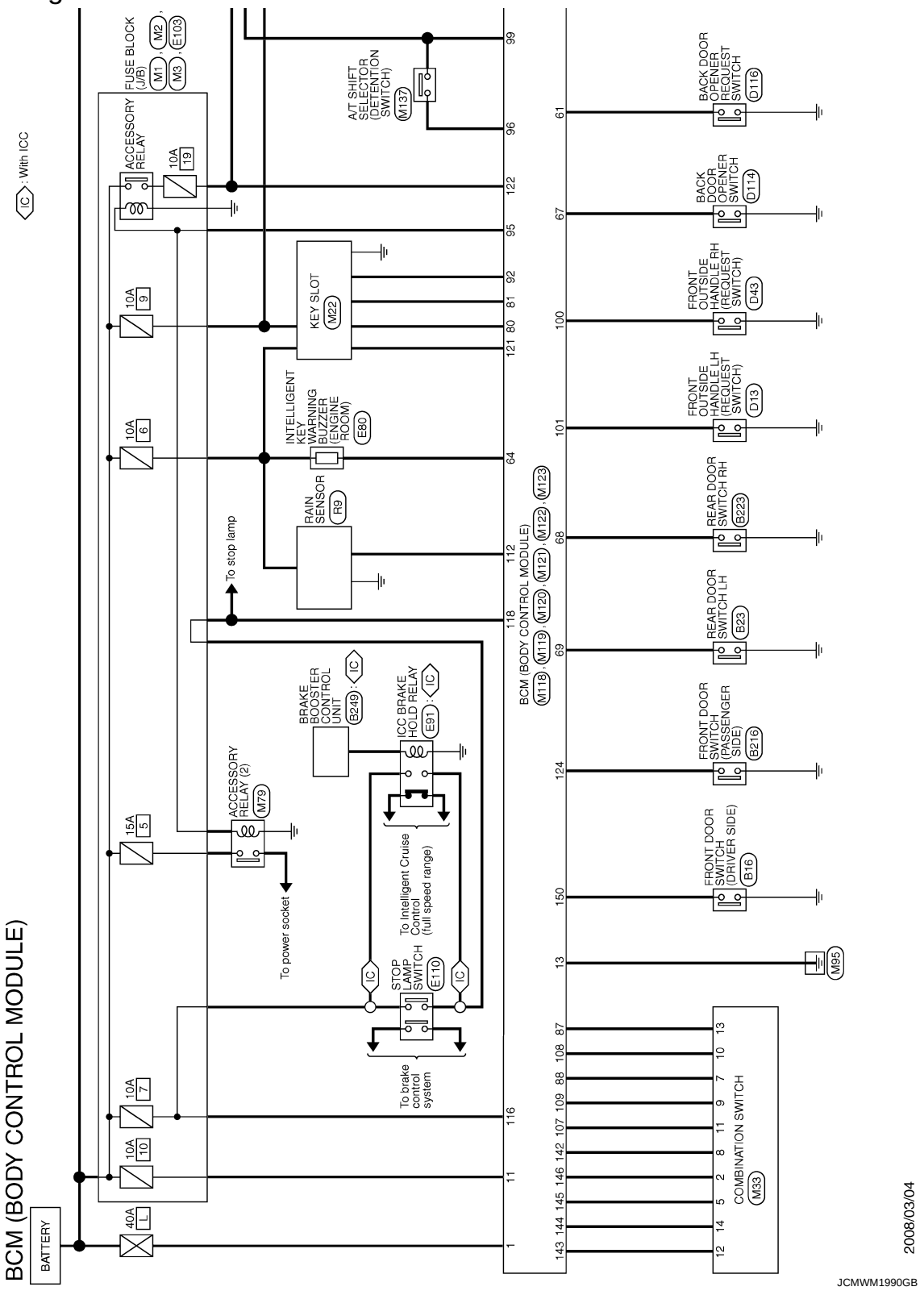
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
		Signal name	Input/ Output			
+	–					
123 (W)	Ground	IGN feedback	Input	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage
124 (LG)	Ground	Passenger door switch	Input	Passenger door switch	OFF (Door close)	 JPMIA0594GB 8.5 - 9.0 V
					ON (Door opene)	0 V
132 (O)	Ground	Power window switch communication	Input/ Output	Ignition switch ON		 JPMIA0013GB 10.2 V
				Ignition switch OFF or ACC		12 V
134 (GR)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	OFF	Battery voltage
					ON	0 V
137 (B)	Ground	Receiver and sensor ground	Input	Ignition switch ON		0 V
138 (Y)	Ground	Sensor power supply	Output	Ignition switch	OFF	0 V
					ACC or ON	5.0 V
140 (R)	Ground	Selector lever P/N position	Input	Selector lever	P or N position	12 V
					Except P and N positions	0 V
141 (G)	Ground	Security indicator	Output	Security indicator	ON	0 V
					Blinking	 JPMIA0014GB 11.3 V
					OFF	12 V
142 (O)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermit-tent dial 4)	All switches OFF	0 V
					Lighting switch 1ST	 JPMIA0031GB 10.7 V
					Lighting switch HI	
					Lighting switch 2ND	
					Turn signal switch RH	

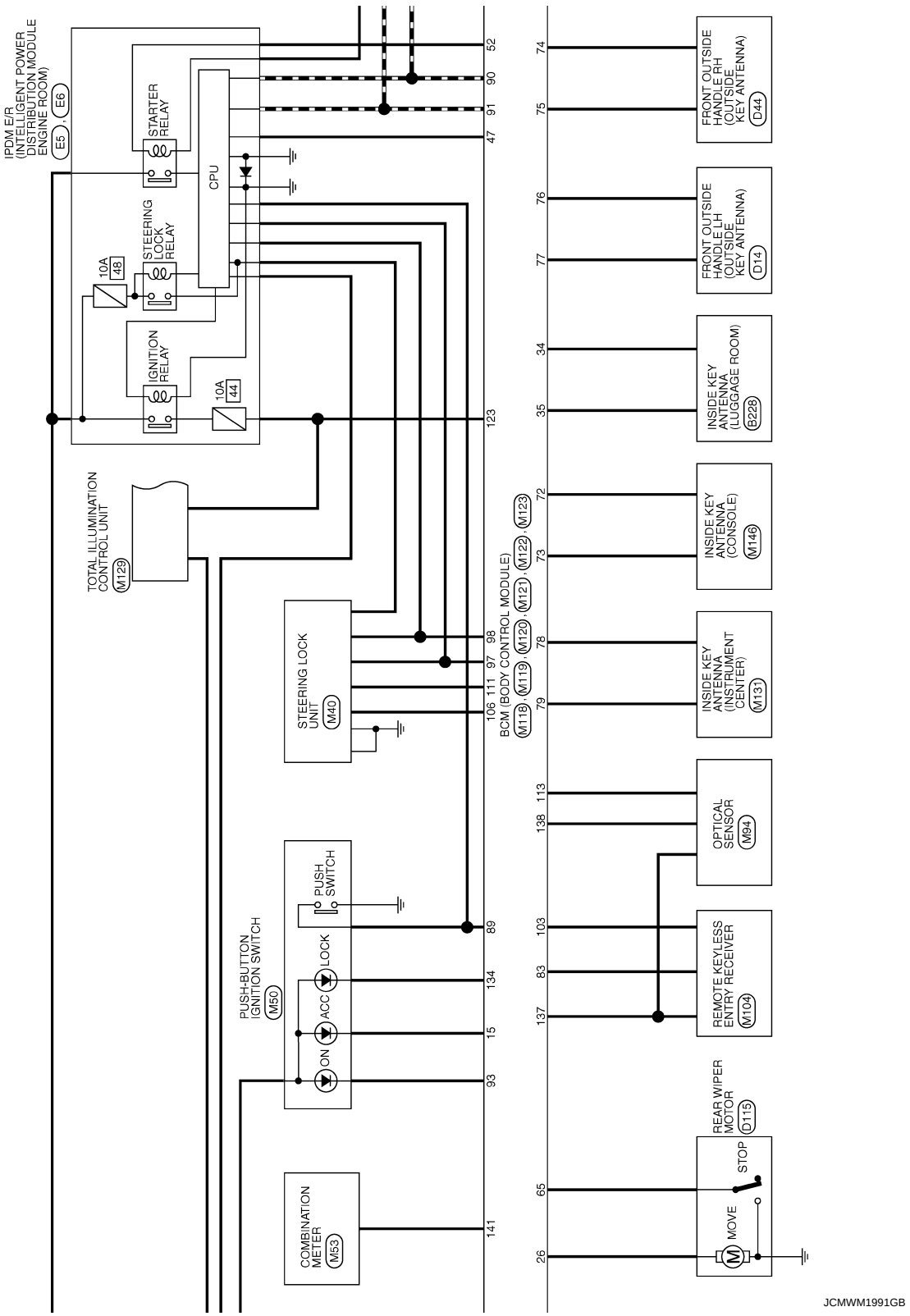
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
143 (P)	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switches OFF (Wiper intermittent dial 4)	0 V
					Front wiper switch HI (Wiper intermittent dial 4)	 JPMIA0032GB 10.7 V
					Rear wiper switch INT (Wiper intermittent dial 4)	
					Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3 • Wiper intermittent dial 6 • 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 • Wiper intermittent dial 1 • Wiper intermittent dial 5 • 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	
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	

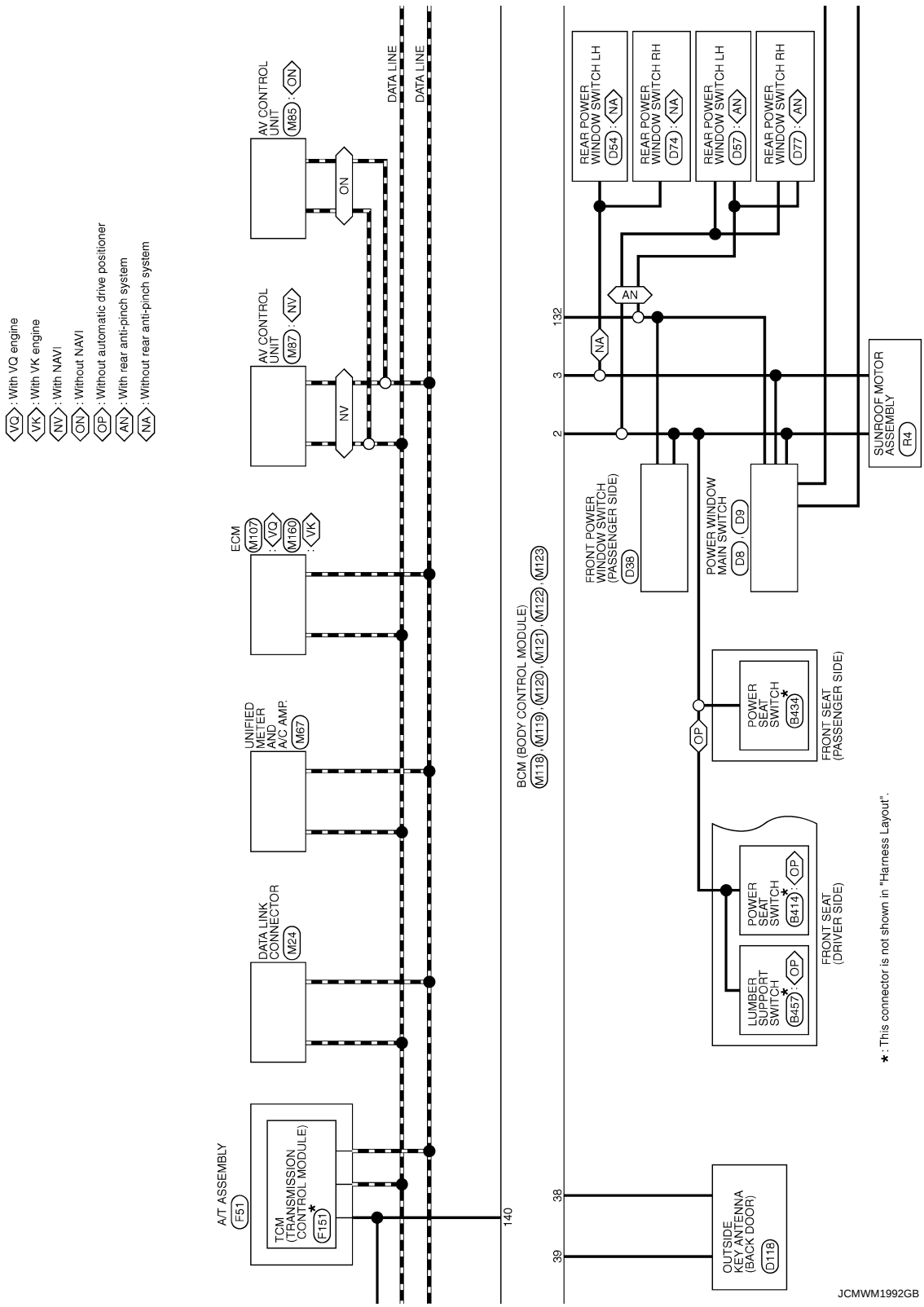
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
150 (GR)	Ground	Driver door switch	Input	Driver door switch	OFF (Door close)	 JPMIA0594GB 8.5 - 9.0 V
					ON (Door open)	0 V
151 (G)	Ground	Rear window defogger relay control	Output	Rear window defogger	Active	0 V
					Not activated	Battery voltage

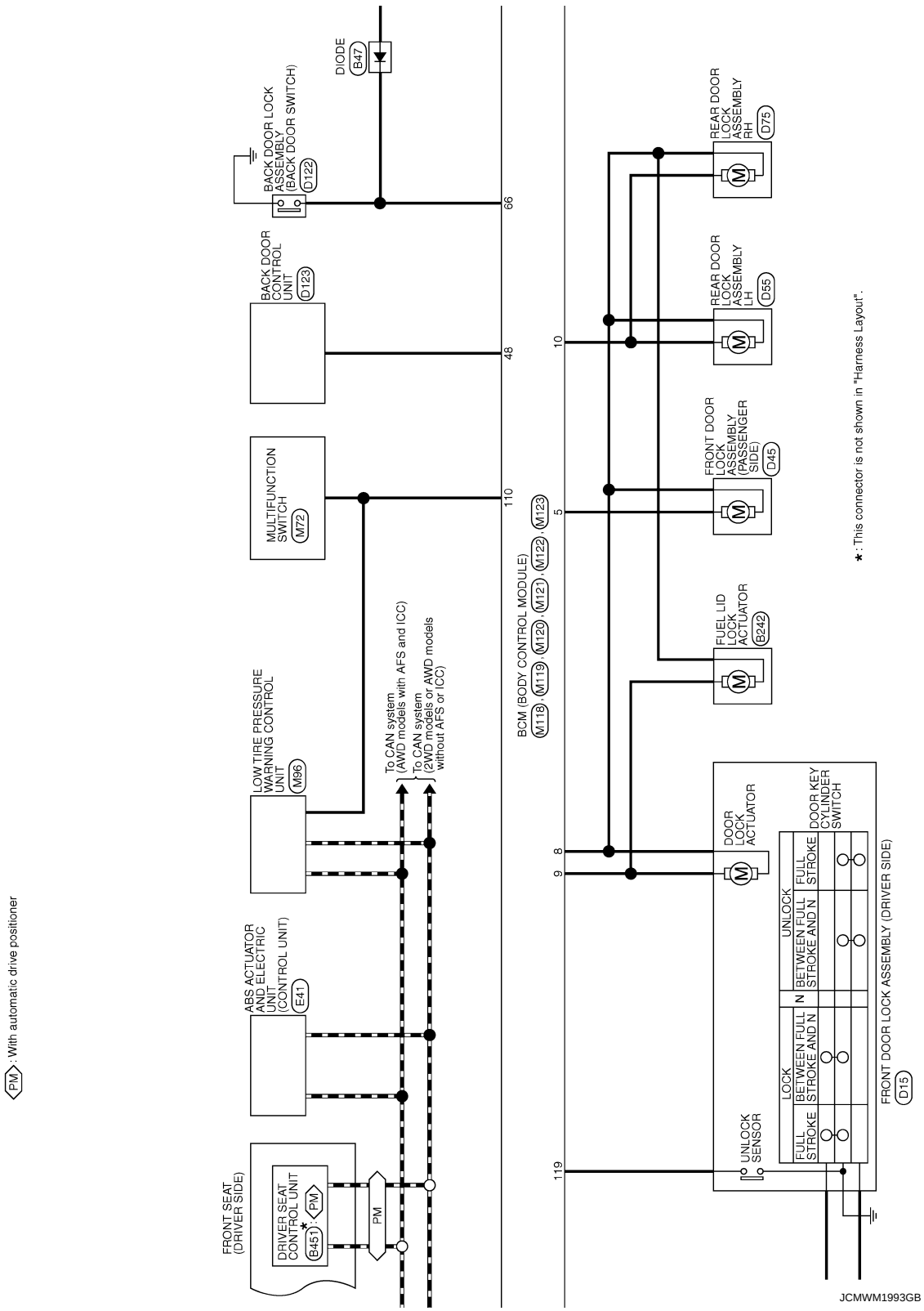
Wiring Diagram - BCM -

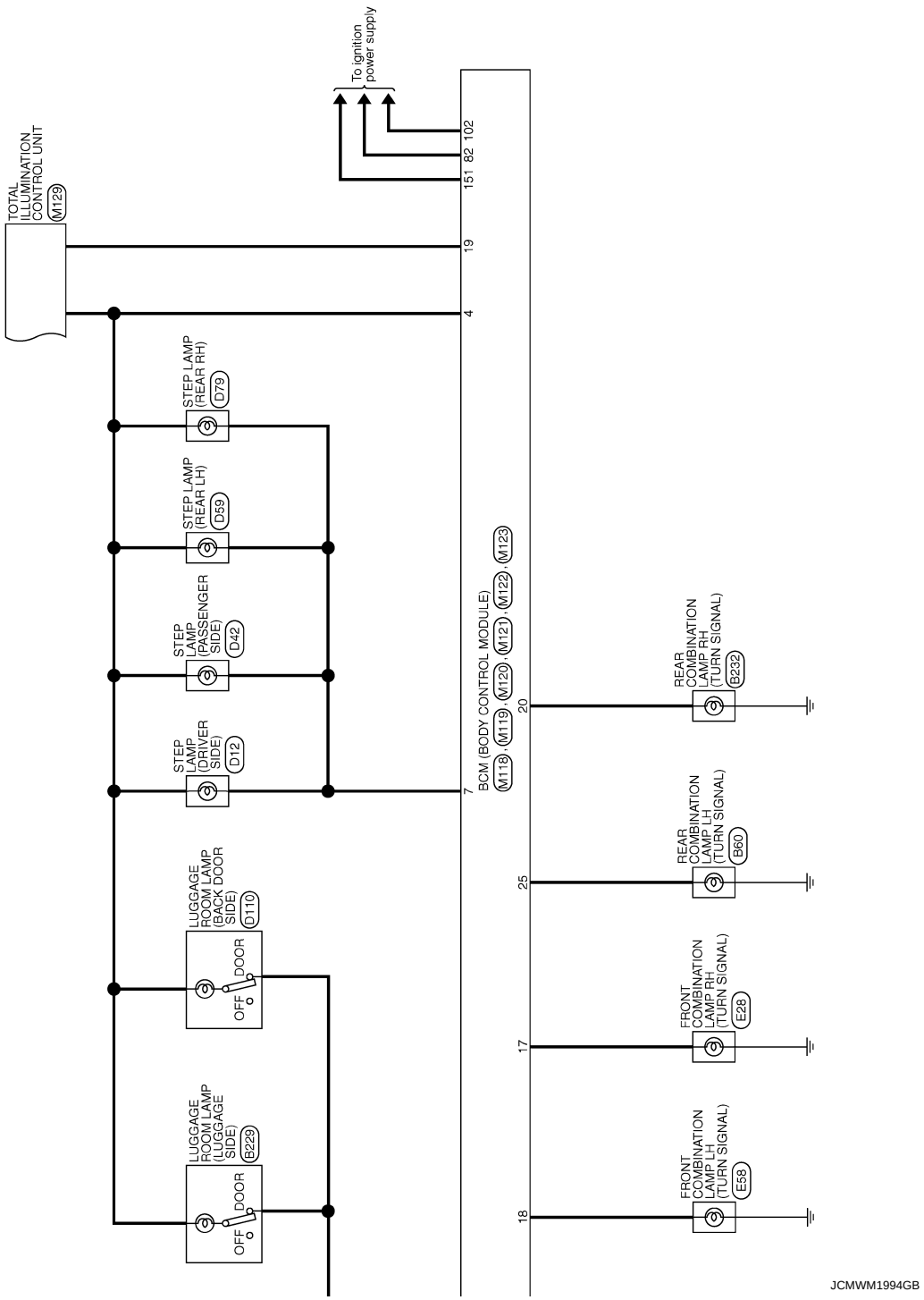
INFOID:0000000003940717




IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) E5, E6
STARTER RELAY
CPU
STEERING LOCK RELAY
10A 48
IGNITION RELAY
10A 44
TOTAL ILLUMINATION CONTROL UNIT M129
STEERING LOCK UNIT M40
PUSH-BUTTON IGNITION SWITCH M50
PUSH SWITCH
LOCK
ACC
ON
COMBINATION METER M53
BCM (BODY CONTROL MODULE) M118, M119, M120, M121, M122, M123
52 90 91 47 123 98 97 111 106 89 134 15 93 141
74 75 76 77 34 35 72 73 78 79 113 138 103 83 137 65 26
FRONT OUTSIDE HANDLE RH (OUTSIDE KEY ANTENNA) D44
FRONT OUTSIDE HANDLE LH (OUTSIDE KEY ANTENNA) D14
INSIDE KEY ANTENNA (LUGGAGE ROOM) B228
INSIDE KEY ANTENNA (CONSOLE) M146
INSIDE KEY ANTENNA (INSTRUMENT CENTER) M131
OPTICAL SENSOR M94
REMOTE KEYLESS ENTRY RECEIVER M104
REAR WIPER MOTOR D115
STOP
MOVE
JCMWM1991GB


VQ : With VQ engine
VK : With VK engine
NV : With NAVI
ON : Without NAVI
OP : Without automatic drive positioner
AN : With rear anti-pinch system
NA : Without rear anti-pinch system
AV CONTROL UNIT (M85) : ON
AV CONTROL UNIT (M87) : NV
ECM (M107) : VQ (M160) : VK
UNIFIED METER AND A/C AMP. (M67)
DATA LINK CONNECTOR (M24)
A/T ASSEMBLY (F51)
TCM (TRANSMISSION CONTROL MODULE) (F151)*
DATA LINE
DATA LINE
140
BCM (BODY CONTROL MODULE) (M118), (M119), (M120), (M121), (M122), (M123)
132
3
2
38
39
REAR POWER WINDOW SWITCH LH (D54) : NA
REAR POWER WINDOW SWITCH RH (D74) : NA
REAR POWER WINDOW SWITCH LH (D57) : AN
REAR POWER WINDOW SWITCH RH (D77) : AN
SUNROOF MOTOR ASSEMBLY (R4)
FRONT POWER WINDOW SWITCH (PASSENGER SIDE) (D38)
POWER WINDOW MAIN SWITCH (D8), (D9)
POWER SEAT SWITCH* (B434)
FRONT SEAT (PASSENGER SIDE)
POWER SEAT SWITCH* (B414) : OP
LUMBER SUPPORT SWITCH* (B457) : OP
FRONT SEAT (DRIVER SIDE)
OUTSIDE KEY ANTENNA (BACK DOOR) (D118)
*: This connector is not shown in "Harness Layout".
JCMWM1992GB


PM : With automatic drive positioner
FRONT SEAT (DRIVER SIDE)
DRIVER SEAT CONTROL UNIT B451 PM
PM
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) E41
LOW TIRE PRESSURE WARNING CONTROL UNIT M96
MULTIFUNCTION SWITCH M72
BACK DOOR CONTROL UNIT D123
BACK DOOR LOCK ASSEMBLY (BACK DOOR SWITCH) D122
DIODE B47
To CAN system (AWD models with AFS and ICC)
To CAN system (2WD models or AWD models without AFS or ICC)
110
48
66
BCM (BODY CONTROL MODULE) M118 M119 M120 M121 M122 M123
119
9
8
5
10
UNLOCK SENSOR
DOOR LOCK ACTUATOR
FUEL LID LOCK ACTUATOR B242
FRONT DOOR LOCK ASSEMBLY (PASSENGER SIDE) D45
REAR DOOR LOCK ASSEMBLY LH D55
REAR DOOR LOCK ASSEMBLY RH D75
FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE) D15
LOCK
UNLOCK
N
FULL STROKE
BETWEEN FULL STROKE AND N
DOOR KEY CYLINDER SWITCH
*: This connector is not shown in "Harness Layout".
JCMWM1993GB


To ignition power supply
151 82 102
TOTAL ILLUMINATION CONTROL UNIT (M129)
19
4
STEP LAMP (REAR RH) (D73)
STEP LAMP (REAR LH) (D59)
STEP LAMP (PASSENGER SIDE) (D42)
STEP LAMP (DRIVER SIDE) (D12)
LUGGAGE ROOM LAMP (BACK DOOR SIDE) (D110)
OFF DOOR
LUGGAGE ROOM LAMP (LUGGAGE SIDE) (B229)
OFF DOOR
BCM (BODY CONTROL MODULE) (M118), (M119), (M120), (M121), (M122), (M123)
7
20
25
17
18
REAR COMBINATION LAMP RH (TURN SIGNAL) (B232)
REAR COMBINATION LAMP LH (TURN SIGNAL) (B60)
FRONT COMBINATION LAMP RH (TURN SIGNAL) (E28)
FRONT COMBINATION LAMP LH (TURN SIGNAL) (E58)
JCMWM1994GB

BCM (BODY CONTROL MODULE)

Connector No.	M33
Connector Name	COMBINATION SWITCH
Connector Type	TH16FW-NH

H.S.

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

Terminal No.	Color of Wire	Signal Name [Specification]
2	SB	OUTPUT 4
5	L	OUTPUT 3
7	V	INPUT 3
8	O	OUTPUT 5
9	Y	INPUT 2
10	R	INPUT 4
11	LG	INPUT 1
12	P	OUTPUT 1
13	BR	INPUT 5
14	G	OUTPUT 2

Connector No.	M120
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS12FW-CS

H.S.

20	21		22	23	24
25	26	27	28	29	30	31

Terminal No.	Color of Wire	Signal Name [Specification]
20	V	TURN SIGNAL RH (REAR)
25	G	TURN SIGNAL LH (REAR)
26	G	REAR WIPER OUTPUT

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

H.S.

1	3
2	

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

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

H.S.

51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32
71	70	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52

Terminal No.	Color of Wire	Signal Name [Specification]
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
48	W	BK DOOR OPENER SW OPERATION
52	LG	STARTER RELAY CONT
61	W	BACK DOOR OPENER REQUEST SW
64	L	I-KEY WARN BUZZER (ENG ROOM)
65	O	REAR WIPER STOP POSITION
66	LG	BACK DOOR SW

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

H.S.

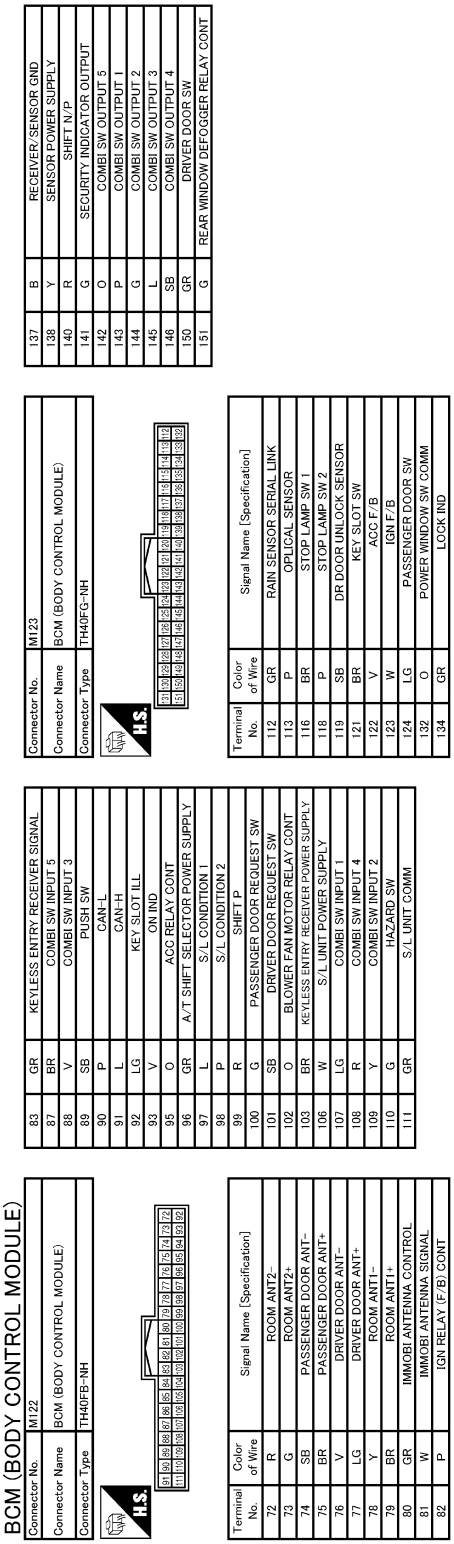
4	5	6	7		8	9	10
11	12	13	14	15	16	17	18	19

Terminal No.	Color of Wire	Signal Name [Specification]
4	P	INT ROOM LAMP PWR SUPPLY(BAT SAVE)
5	V	PASSENGER DOOR UNLOCK OUTPUT
7	Y	STEP LAMP OUTPUT
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	GND
15	Y	ACC IND
17	W	TURN SIGNAL RH (FRONT)
18	O	TURN SIGNAL LH (FRONT)

67	P	BACK DOOR OPENER SW
68	BR	REAR RH DOOR SW
69	R	REAR LH DOOR SW

19	SB	ROOM LAMP TIMER

JCMWM1995GB



JCMWM1996GB

Fail-safe

INFOID:0000000005176546

FAIL-SAFE CONTROL BY DTC

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

Display contents of CONSULT	Fail-safe	Cancellation
B2013: ID DISCORD BCM-S/L	Inhibit engine cranking	Erase DTC
B2014: CHAIN OF S/L-BCM	Inhibit engine cranking	Erase DTC
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI SCANNING	Inhibit engine cranking	Ignition switch ON → OFF
B2557: VEHICLE SPEED	Inhibit steering lock	When normal vehicle speed signals are received from ABS actuator and electric unit (control unit) for 500 ms
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status becomes consistent • Starter control relay signal • Starter relay status signal
B2601: SHIFT POSITION	Inhibit steering lock	500 ms after the following signal reception status becomes consistent • Selector lever P position switch signal • P range signal (CAN)
B2602: SHIFT POSITION	Inhibit steering lock	5 seconds after the following BCM recognition conditions are fulfilled • Ignition switch is in the ON position • Selector lever P position switch signal: Except P position (battery voltage) • Vehicle speed: 4 km/h (2.5 MPH) or more
B2603: SHIFT POSI STATUS	Inhibit steering lock	500 ms after the following BCM recognition conditions are fulfilled • Ignition switch is in the ON position • Selector lever P position switch signal: Except P position (battery voltage) • Selector lever P/N position signal: Except P and N positions (0 V)
B2604: PNP SW	Inhibit steering lock	500 ms after any of the following BCM recognition conditions are fulfilled • Status 1 - Ignition switch is in the ON position - Selector lever P/N position signal: P and N position (battery voltage) - P range signal or N range signal (CAN): ON • Status 2 - Ignition switch is in the ON position - Selector lever P/N position signal: Except P and N positions (0 V) - P range signal and N range signal (CAN): OFF
B2605: PNP SW	Inhibit steering lock	500 ms after any of the following BCM recognition conditions are fulfilled • Ignition switch is in the ON position - Power position: IGN - Selector lever P/N position signal: Except P and N positions (0 V) - Interlock/PNP switch signal (CAN): OFF • Status 2 - Ignition switch is in the ON position - Selector lever P/N position signal: P or N position (battery voltage) - PNP switch signal (CAN): ON
B2606: S/L RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status becomes consistent • Steering lock relay signal (Request signal) • Steering lock relay signal (Condition signal)

Display contents of CONSULT	Fail-safe	Cancellation
B2607: S/L RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status becomes consistent • Steering lock relay signal (Request signal) • Steering lock relay signal (Condition signal)
B2608: STARTER RELAY	Inhibit engine cranking	500 ms after the following signal communication status becomes consistent • Starter motor relay control signal • Starter relay status signal (CAN)
B2609: S/L STATUS	• Inhibit engine cranking • Inhibit steering lock	When the following steering lock conditions agree • BCM steering lock control status • Steering lock condition No. 1 signal status • Steering lock condition No. 2 signal status
B260A: IGNITION RELAY	Inhibit engine cranking	500 ms after the following conditions are fulfilled • IGN relay (IPDM E/R) control signal: OFF (Battery voltage) • Ignition ON signal (CAN to IPDM E/R): OFF (Request signal) • Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions are fulfilled • Power position changes to ACC • Receives engine status signal (CAN)
B2612: S/L STATUS	• Inhibit engine cranking • Inhibit steering lock	When any of the following conditions are fulfilled • Steering lock unit status signal (CAN) is received normally • The BCM steering lock control status matches the steering lock status recognized by the steering lock unit status signal (CAN from IPDM E/R)
B2617: STARTER RELAY CIRC	Inhibit engine cranking	1 second after the starter motor relay control inside BCM becomes normal
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM becomes normal
B2619: BCM	Inhibit engine cranking	1 second after the steering lock unit power supply output control inside BCM becomes normal
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization
B26E9: S/L STATUS	• Inhibit engine cranking • Inhibit steering lock	When BCM transmits the LOCK request signal to steering lock unit, and receives LOCK response signal from steering lock unit, the following conditions are fulfilled • Steering condition No. 1 signal: LOCK (0 V) • Steering condition No. 2 signal: LOCK (Battery voltage)

HIGH FLASHER OPERATION

BCM detects the turn signal lamp circuit status by the current value.
BCM increases the turn signal lamp blinking speed if the bulb or harness open is detected with the turn signal lamp operating.

NOTE:
The blinking speed is normal while activating the hazard warning lamp.

FAIL-SAFE CONTROL BY RAIN SENSOR MALFUNCTION

- BCM judges the rain sensor serial link error by the rain sensor serial link condition and detects the rain sensor malfunction by rain sensor malfunction signal.
- When BCM detects the rain sensor serial link error or the rain sensor malfunction while front wiper AUTO operation, BCM operates a fail-safe control.

NOTE:
If rain sensor malfunction is detected when ignition switch is turned OFF ⇒ ON and front wiper switch is INT position, BCM operates a fail-safe control.

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:0000000003940719

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 • U1010: CONTROL UNIT (CAN)
3	• B2190: NATS ANTENNA AMP • B2191: DIFFERENCE OF KEY • B2192: ID DISCORD BCM-ECM • B2193: CHAIN OF BCM-ECM • B2195: ANTI SCANNING
4	• B2013: ID DISCORD BCM-S/L • B2014: CHAIN OF S/L-BCM • B2553: IGNITION RELAY • B2555: STOP LAMP • B2556: PUSH-BTN IGN SW • B2557: VEHICLE SPEED • B2560: STARTER CONT RELAY • B2601: SHIFT POSITION • B2602: SHIFT POSITION • B2603: SHIFT POSI STATUS • B2604: PNP SW • B2605: PNP SW • B2606: S/L RELAY • B2607: S/L RELAY • B2608: STARTER RELAY • B2609: S/L STATUS • B260A: IGNITION RELAY • B260B: STEERING LOCK UNIT • B260C: STEERING LOCK UNIT • B260D: STEERING LOCK UNIT • B260F: ENG STATE SIG LOST • B2612: S/L STATUS • B2614: ACC RELAY CIRC • B2615: BLOWER RELAY CIRC • B2616: IGN RELAY CIRC • B2617: STARTER RELAY CIRC • B2618: BCM • B2619: BCM • B261A: PUSH-BTN IGN SW • B261E: VEHICLE TYPE • B26E9: S/L STATUS • B26EA: KEY REGISTRATION • U0415: VEHICLE SPEED SIG
5	• B2621: INSIDE ANTENNA • B2622: INSIDE ANTENNA • B2623: INSIDE ANTENNA
6	B26E7: TPMS CAN COMM

DTC Index

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NOTE:
The details of time display are as follows.
- CRNT: A malfunction is detected now.
- PAST: A malfunction was detected in the past.

IGN counter is displayed on Freeze Frame Data. For details of Freeze Frame Data, refer to BCS-16, "COMMON ITEM : CONSULT-III Function (BCM - COMMON ITEM)".

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Reference page
No DTC is detected. Further testing may be required.	—	—	—	—
U1000: CAN COMM	—	—	—	SEC-31
U1010: CONTROL UNIT (CAN)	—	—	—	SEC-33
U0415: VEHICLE SPEED SIG	—	—	—	BCS-36
B2013: ID DISCORD BCM-S/L	×	×	—	SEC-50
B2014: CHAIN OF S/L-BCM	×	×	—	SEC-51
B2190: NATS ANTENNA AMP	×	—	—	SEC-42
B2191: DIFFERENCE OF KEY	×	—	—	SEC-45
B2192: ID DISCORD BCM-ECM	×	—	—	SEC-46
B2193: CHAIN OF BCM-ECM	×	—	—	SEC-48
B2195: ANTI SCANNING	×	—	—	SEC-49
B2553: IGNITION RELAY	—	×	—	PCS-50
B2555: STOP LAMP	—	×	—	SEC-54
B2556: PUSH-BTN IGN SW	—	×	×	SEC-56
B2557: VEHICLE SPEED	×	×	×	SEC-58
B2560: STARTER CONT RELAY	×	×	×	SEC-59
B2562: LOW VOLTAGE	—	×	—	BCS-37
B2601: SHIFT POSITION	×	×	×	SEC-60
B2602: SHIFT POSITION	×	×	×	SEC-63
B2603: SHIFT POSI STATUS	×	×	×	SEC-65
B2604: PNP SW	×	×	×	SEC-68
B2605: PNP SW	×	×	×	SEC-70
B2606: S/L RELAY	×	×	×	SEC-72
B2607: S/L RELAY	×	×	×	SEC-73
B2608: STARTER RELAY	×	×	×	SEC-75
B2609: S/L STATUS	×	×	×	SEC-77
B260A: IGNITION RELAY	×	×	×	PCS-52
B260B: STEERING LOCK UNIT	—	×	×	SEC-81
B260C: STEERING LOCK UNIT	—	×	×	SEC-82
B260D: STEERING LOCK UNIT	—	×	×	SEC-83
B260F: ENG STATE SIG LOST	×	×	×	SEC-84
B2612: S/L STATUS	×	×	×	SEC-88
B2614: ACC RELAY CIRC	—	×	×	PCS-54
B2615: BLOWER RELAY CIRC	—	×	×	PCS-56
B2616: IGN RELAY CIRC	—	×	×	PCS-58
B2617: STARTER RELAY CIRC	×	×	×	SEC-92
B2618: BCM	×	×	×	PCS-60
B2619: BCM	×	×	×	SEC-94
B261A: PUSH-BTN IGN SW	—	×	×	SEC-95
B261E: VEHICLE TYPE	×	×	× (Turn ON for 15 seconds)	SEC-98

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Reference page
B2621: INSIDE ANTENNA	—	×	—	DLK-61
B2622: INSIDE ANTENNA	—	×	—	DLK-63
B2623: INSIDE ANTENNA	—	×	—	DLK-65
B26E7: TPMS CAN COMM	—	—	—	BCS-38
B26E9: S/L STATUS	×	×	× (Turn ON for 15 seconds)	SEC-86
B26EA: KEY REGISTRATION	—	×	× (Turn ON for 15 seconds)	SEC-87

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

Reference Value

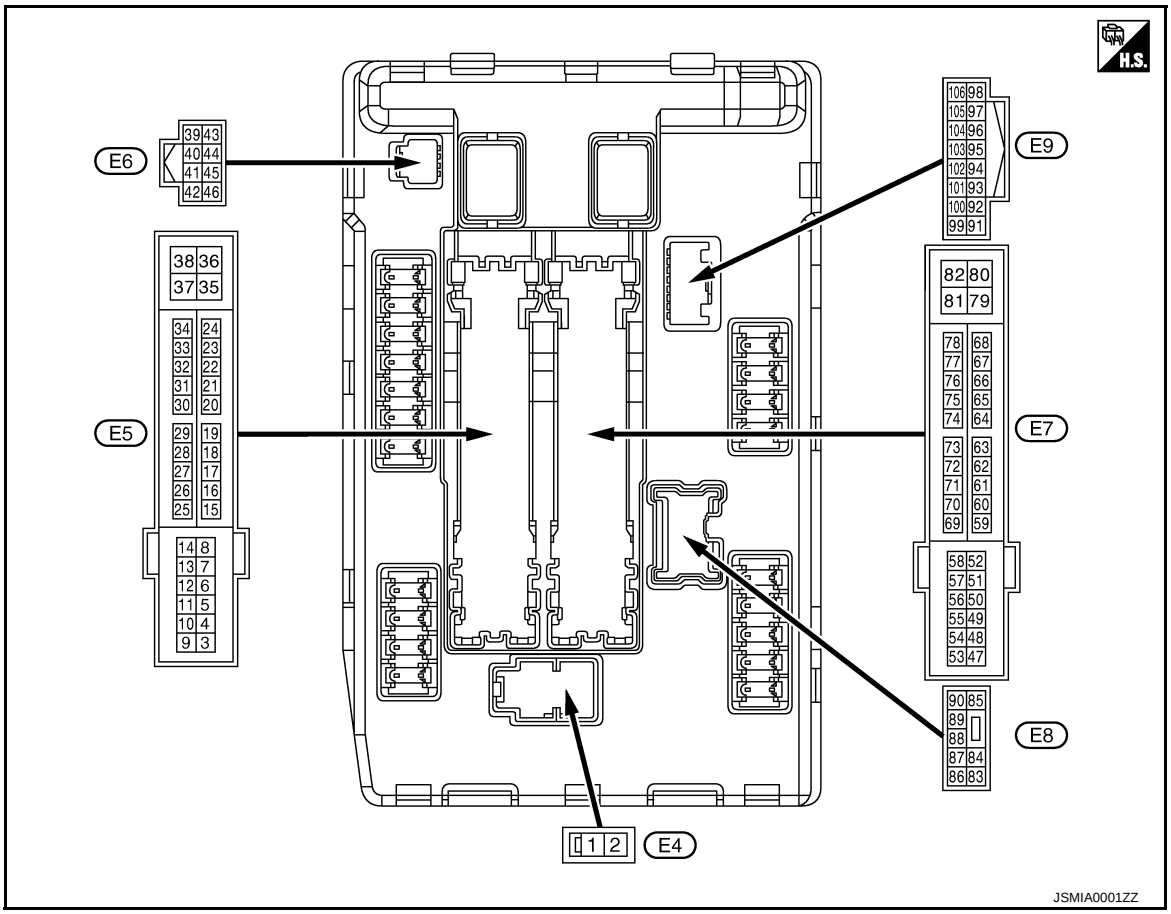
INFOID:0000000003940721

VALUES ON THE DIAGNOSIS TOOL

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 • 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 → ST
	The status of starter relay or starter control relay cannot be recognized by the battery voltage malfunction, etc. when the starter relay is ON and the starter control relay is OFF		UNKWN
DETENT SW	Ignition switch ON	• Press the selector button with selector lever in P position • Selector lever in any position other than P	Off
	Release the selector button with selector lever in P position		On
S/L RLY -REQ	None of the conditions below are present		Off
	• Open the driver door after the ignition switch is turned OFF (for a few seconds) • Press the push-button ignition switch when the steering lock is activated		On
S/L STATE	Steering lock is activated		LOCK
	Steering lock is deactivated		UNLOCK
	[DTC: B210A] is detected		UNKWN
DTRL REQ	**NOTE:** The item is indicated, but not monitored.		Off
OIL P SW	Ignition switch OFF, ACC or engine running		Open
	Ignition switch ON		Close
HOOD SW	Close the hood		Off
	Open the hood		On
HL WASHER REQ	**NOTE:** The item is indicated, but not monitored.		Off
THFT HRN REQ	Not operation		Off
	• Panic alarm is activated • Horn is activated with VEHICLE SECURITY (THEFT WARNING) SYSTEM		On
HORN CHIRP	Not operating		Off
	Door locking with Intelligent Key (horn chirp mode)		On
CRNRNG LMP REQ	**NOTE:** The item is indicated, but not monitored.		Off

TERMINAL LAYOUT

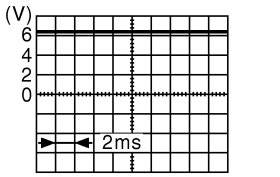
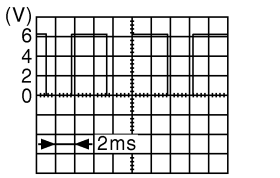
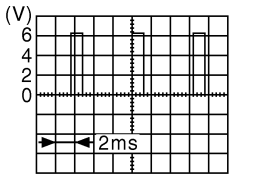


PHYSICAL VALUES

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
10*1 (SB)	Ground	ECM relay power supply	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		0 V
				• Ignition switch ON • Ignition switch OFF (For a few seconds after turning ignition switch OFF)		Battery voltage

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
11 (BR)	Ground	Steering lock unit power supply	Output	Ignition switch OFF	A few seconds after opening the driver door	Battery voltage
				Ignition switch LOCK	Press the push-button ignition switch	Battery voltage
				Ignition switch ACC or ON		0 V
12 (B)	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 • Engine running		Battery voltage
16 (LG)	Ground	Front wiper stop position	Input	Ignition switch ON	Front wiper stop position	0 V
					Any position other than front wiper stop position	Battery voltage
19 (W)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
25 (G)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
26*2 (R)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
27 (Y)	Ground	Ignition relay monitor	Input	Ignition switch OFF or ACC		Battery voltage
				Ignition switch ON		0 V
28 (O)	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
32 (SB)	Ground	Steering lock unit condition-1	Input	Steering lock is activated		0 V
				Steering lock is deactivated		Battery voltage
33 (P)	Ground	Steering lock unit condition-2	Input	Steering lock is activated		Battery voltage
				Steering lock is deactivated		0 V
36 (G)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
39 (P)	—	CAN-L	Input/ Output	—		—
40 (L)	—	CAN-H	Input/ Output	—		—
41 (B)	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

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
43 (SB)	Ground	Control device (Detention switch)	Input	Ignition switch ON	• Press the selector button (Selector lever P) • Selector lever in any position other than P	Battery voltage
					Release the selector button (selector lever P)	0 V
44 (W)	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 (BR)	Ground	Starter relay control	Input	Ignition switch ON	Selector lever in any position other than P or N	0 V
					Selector lever P or N	Battery voltage
48 (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 (W)*1 (SB)*3	Ground	ECM relay power supply	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		0 V
				• Ignition switch ON • Ignition switch OFF (For a few seconds after turning ignition switch OFF)		Battery voltage
51 (G)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
52*1 (W)	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 • Ignition switch OFF (For a few seconds after turning ignition switch OFF)		Battery voltage
54 (R)	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 • Ignition switch OFF (For a few seconds after turning ignition switch OFF)		Battery voltage
55 (BR)	Ground	ECM power supply	Output	Ignition switch OFF		Battery voltage
56 (O)*1 (V)*3	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
57 (LG)*1 (R)*3	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
58 (Y)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
69 (W)	Ground	ECM relay control	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		Battery voltage
				• Ignition switch ON • Ignition switch OFF (For a few seconds after turning ignition switch OFF)		0 – 1.5 V
70 (O)	Ground	Throttle control motor relay control	Output	Ignition switch ON → OFF		0 – 1.0 V ↓ Battery voltage ↓ 0 V
				Ignition switch ON		0 – 1.0 V
74 (G)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
75 (Y)	Ground	Oil pressure switch	Input	Ignition switch ON	Engine stopped	0 V
					Engine running	Battery voltage
76 (P)*1 (V)*3	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 (B)*1 (L)*3	Ground	Fuel pump relay control	Output	• Approximately 1 second after turning the ignition switch ON • Engine running		0 – 1.0 V
				Approximately 1 second or more after turning the ignition switch ON		Battery voltage
80 (W)	Ground	Starter motor	Output	At engine cranking		Battery voltage

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
83 (R)	Ground	Headlamp LO (RH)	Output	Ignition switch ON	Lighting switch OFF	0 V
					Lighting switch 2ND	Battery voltage
84 (P)	Ground	Headlamp LO (LH)	Output	Ignition switch ON	Lighting switch OFF	0 V
					Lighting switch 2ND	Battery voltage
86 (W)	Ground	Front fog lamp (RH)	Output	Lighting switch 2ND	• Front fog lamp switch ON • Daytime running light activated (Only for Canada)	Battery voltage
					Front fog lamp switch OFF	0 V
87 (GR)	Ground	Front fog lamp (LH)	Output	Lighting switch 2ND	• Front fog lamp switch ON • Daytime running light activated (Only for Canada)	Battery voltage
					Front fog lamp switch OFF	0 V
88 (G)	Ground	Washer pump power supply	Output	Ignition switch ON		Battery voltage
89 (BR)	Ground	Headlamp HI (RH)	Output	Ignition switch ON	• Lighting switch HI • Lighting switch PASS	Battery voltage
					Lighting switch OFF	0 V
90 (Y)	Ground	Headlamp HI (LH)	Output	Ignition switch ON	• Lighting switch HI • Lighting switch PASS	Battery voltage
					Lighting switch OFF	0 V
91 (P)	Ground	Parking lamp (RH)	Output	Ignition switch ON	Lighting switch 1ST	Battery voltage
					Lighting switch OFF	0 V
92 (O)	Ground	Parking lamp (LH)	Output	Ignition switch ON	Lighting switch 1ST	Battery voltage
					Lighting switch OFF	0 V
97 (V)	Ground	Cooling fan control	Output	Engine idling		0 – 5 V
104 (LG)	Ground	Hood switch	Input	Close the hood		Battery voltage
				Open the hood		0 V

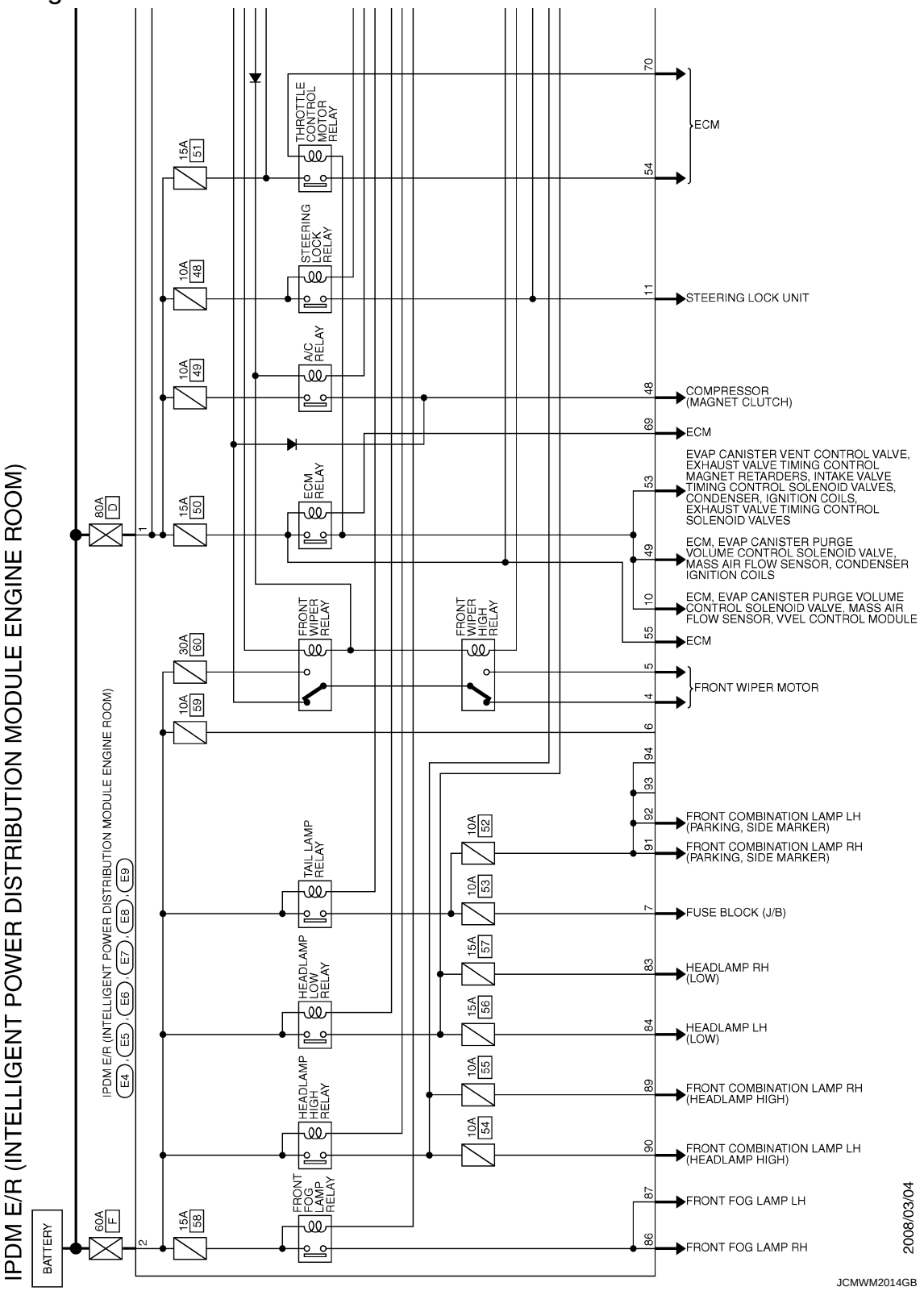
*1: VK engine models

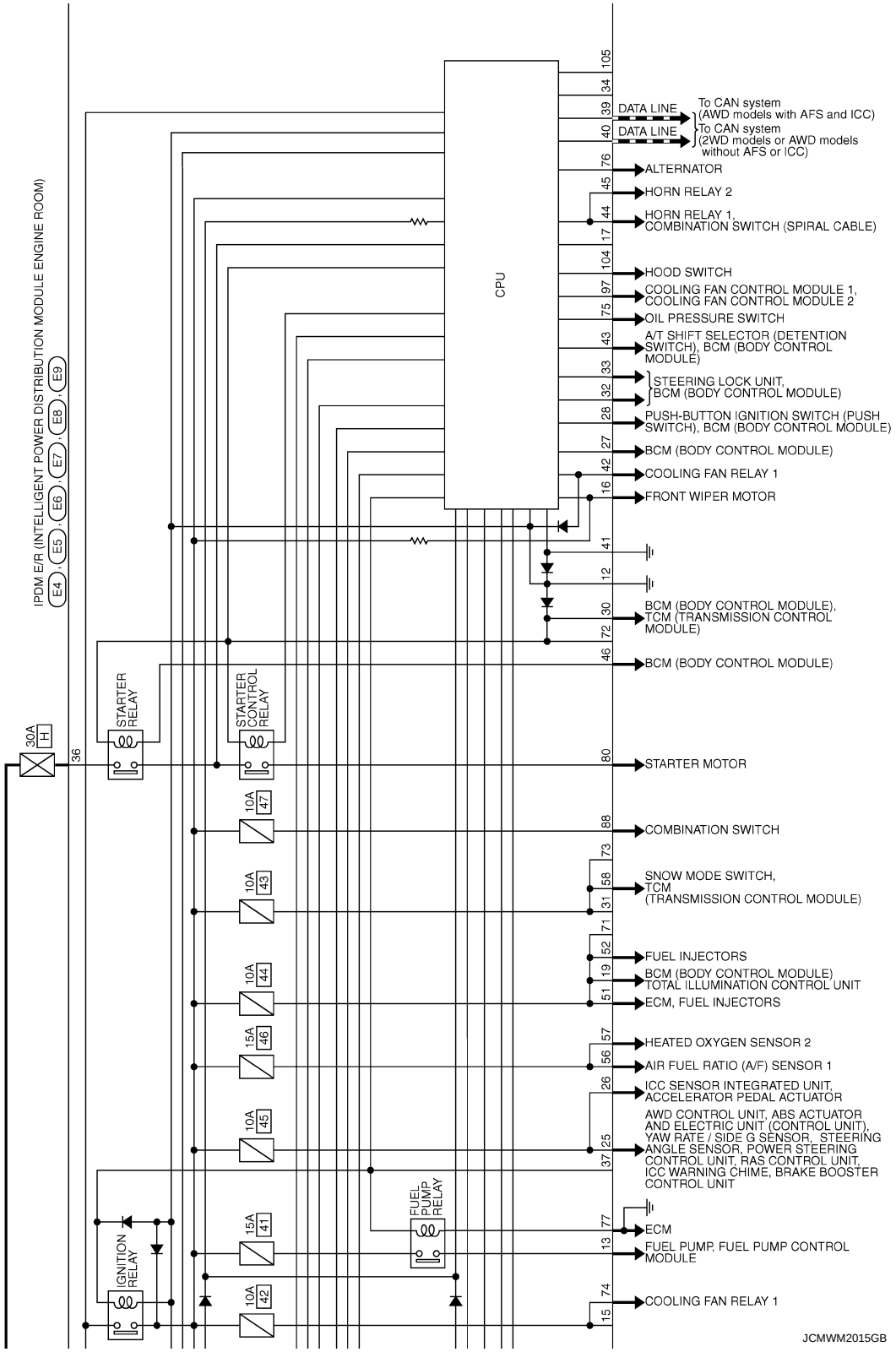
*2: Only for the models with ICC system

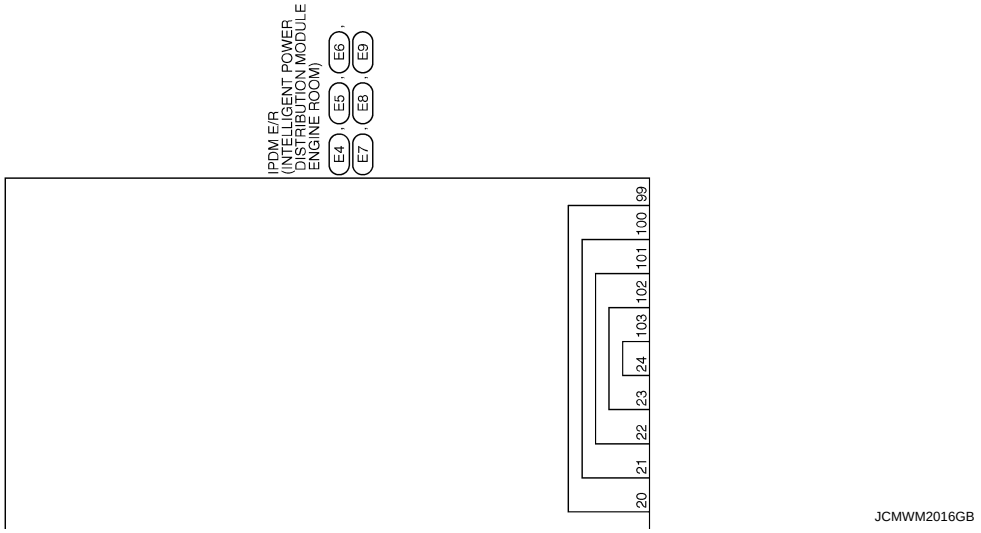
*3: VQ engine models

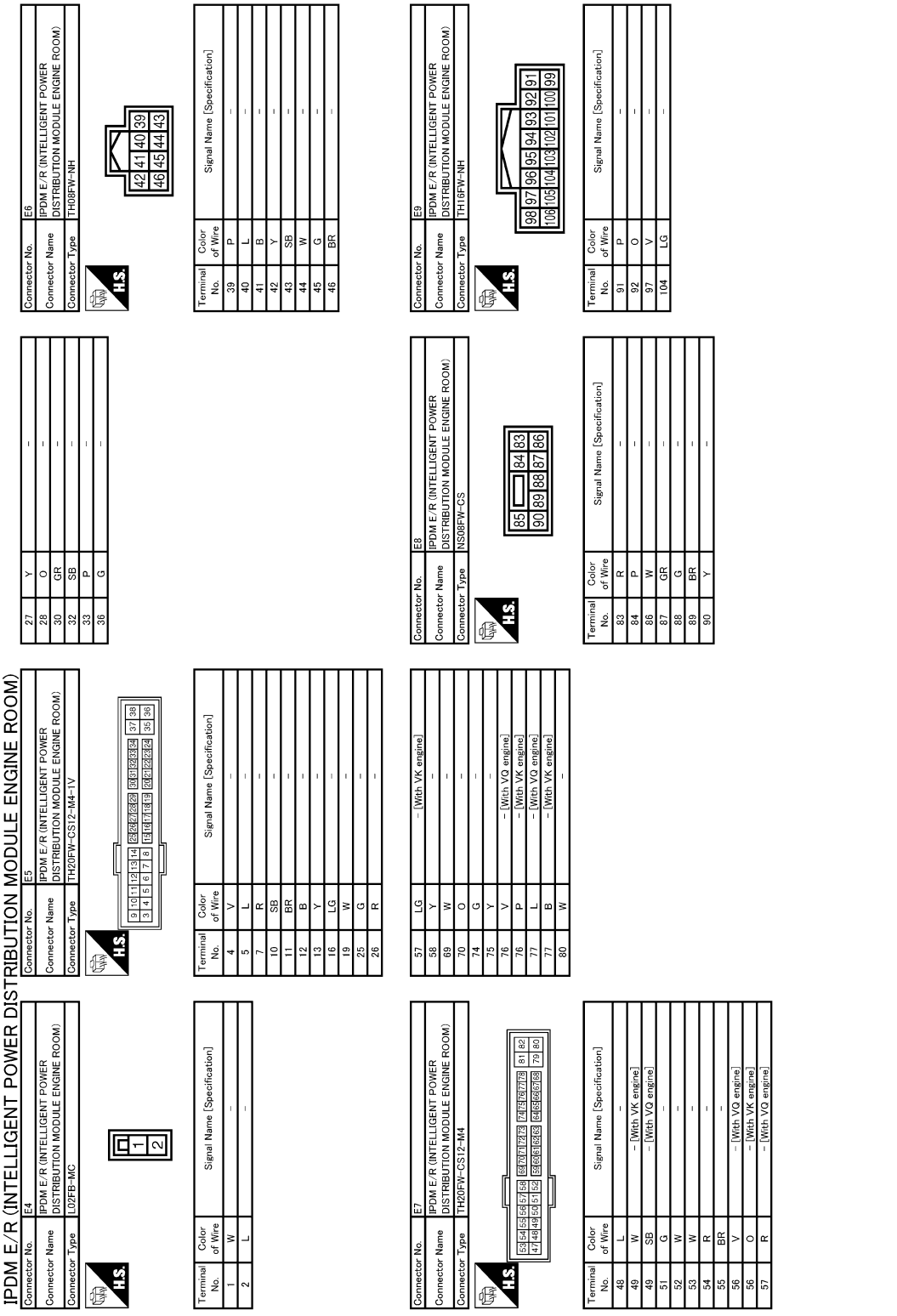
Wiring Diagram - IPDM E/R -

INFOID:0000000003940722




IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E4, E5, E6, E7, E8, E9
CPU
105
34
39
DATA LINE
To CAN system (AWD models with AFS and ICC)
40
DATA LINE
To CAN system (2WD models or AWD models without AFS or ICC)
76
ALTERNATOR
45
HORN RELAY 2
44
HORN RELAY 1, COMBINATION SWITCH (SPIRAL CABLE)
17
104
HOOD SWITCH
97
COOLING FAN CONTROL MODULE 1, COOLING FAN CONTROL MODULE 2
75
OIL PRESSURE SWITCH
43
A/T SHIFT SELECTOR (DETENTION SWITCH), BCM (BODY CONTROL MODULE)
33
32
STEERING LOCK UNIT, BCM (BODY CONTROL MODULE)
28
PUSH-BUTTON IGNITION SWITCH (PUSH SWITCH), BCM (BODY CONTROL MODULE)
27
BCM (BODY CONTROL MODULE)
42
COOLING FAN RELAY 1
16
FRONT WIPER MOTOR
41
12
30
72
BCM (BODY CONTROL MODULE), TCM (TRANSMISSION CONTROL MODULE)
46
BCM (BODY CONTROL MODULE)
30A H
36
STARTER RELAY
STARTER CONTROL RELAY
80
STARTER MOTOR
10A 47
88
COMBINATION SWITCH
10A 43
73
58
31
SNOW MODE SWITCH, TCM (TRANSMISSION CONTROL MODULE)
71
52
FUEL INJECTORS
10A 44
19
BCM (BODY CONTROL MODULE) TOTAL ILLUMINATION CONTROL UNIT
51
ECM, FUEL INJECTORS
15A 46
57
HEATED OXYGEN SENSOR 2
56
AIR FUEL RATIO (A/F) SENSOR 1
26
ICC SENSOR INTEGRATED UNIT, ACCELERATOR PEDAL ACTUATOR
10A 45
AWD CONTROL UNIT, ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT), YAW RATE / SIDE G SENSOR, STEERING ANGLE SENSOR, POWER STEERING CONTROL UNIT, RAS CONTROL UNIT, ICC WARNING CHIME, BRAKE BOOSTER CONTROL UNIT
25
37
FUEL PUMP RELAY
15A 41
77
ECM
13
FUEL PUMP, FUEL PUMP CONTROL MODULE
IGNITION RELAY
10A 42
74
15
COOLING FAN RELAY 1
JCMWM2015GB


IPDM E/R
(INTELLIGENT POWER
DISTRIBUTION MODULE
ENGINE ROOM)
E4
E5
E6
E7
E8
E9
99
100
101
102
103
24
23
22
21
20
JCMWM2016GB



JCMWM2017GB

Fail-safe

INFOID:0000000003940723

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 • 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 • Turns OFF the headlamp low relay when the ignition switch is turned OFF • Headlamp high relay OFF
• Parking lamps • License plate lamps • Side marker lamps • Illuminations • Tail lamps	• Turns ON the tail lamp relay when the ignition switch is turned ON • Turns OFF the tail lamp relay when the ignition switch is turned OFF
Front wiper	• The status just before activation of fail-safe control is maintained until the ignition switch is turned OFF while the front wiper is operating at LO or HI speed. • The wiper is operated at LO speed until the ignition switch is turned OFF if the fail-safe control is activated while the front wiper is set in the INT mode and the front wiper motor is operating.
Front fog lamps	Front fog lamp relay OFF
Horn	Horn OFF
Ignition relay	The status just before activation of fail-safe is maintained.
Starter motor	Starter control relay OFF
Steering lock unit	Steering lock relay OFF

IGNITION RELAY MALFUNCTION DETECTION FUNCTION

- IPDM E/R monitors the voltage at the contact circuit and excitation coil circuit of the ignition relay inside it.
- IPDM E/R judges the ignition relay error if the voltage differs between the contact circuit and the excitation coil circuit.
- If the ignition relay cannot turn OFF due to contact seizure, it activates the tail lamp relay for 10 minutes to alert the user to the ignition relay malfunction when the ignition switch is turned OFF.

Voltage judgment		IPDM E/R judgment	Operation
Ignition relay contact side	Ignition relay excitation coil side		
ON	ON	Ignition relay ON normal	—
OFF	OFF	Ignition relay OFF normal	—
ON	OFF	Ignition relay ON stuck	• Detects DTC “B2098: IGN RELAY ON” • Turns ON the tail lamp relay for 10 minutes
OFF	ON	Ignition relay OFF stuck	Detects DTC “B2099: IGN RELAY OFF”

FRONT WIPER CONTROL

IPDM E/R detects front wiper stop position by a front wiper 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:0000000003940724

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-16
B2098: IGN RELAY ON	×	PCS-17
B2099: IGN RELAY OFF	—	PCS-18
B2108: STRG LCK RELAY ON	—	SEC-99
B2109: STRG LCK RELAY OFF	—	SEC-100
B210A: STRG LCK STATE SW	—	SEC-101
B210B: START CONT RLY ON	—	SEC-105
B210C: START CONT RLY OFF	—	SEC-106
B210D: STARTER RELAY ON	—	SEC-107
B210E: STARTER RELAY OFF	—	SEC-108
B210F: INTRLCK/PNP SW ON	—	SEC-110
B2110: INTRLCK/PNP SW OFF	—	SEC-112

SYMPTOM DIAGNOSIS

ENGINE DOES NOT START WHEN INTELLIGENT KEY IS INSIDE OF VEHICLE

Description

INFOID:0000000003829494

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

NOTE:

The engine start function, door lock function, power distribution system and IVIS in the Intelligent Key system are closely related to each other regarding control.

Conditions of Vehicle (Operating Conditions)

- “ENGINE START BY I-KEY” in “WORK SUPPORT” is ON when setting on CONSULT-III.
- Intelligent Key is not inserted in key slot.
- One or more of Intelligent Keys with registered Intelligent Key ID is in the vehicle.

Diagnosis Procedure

INFOID:0000000003829495

1.CHECK DOOR LOCK FUNCTION

Lock/unlock door with door request switch.
Refer to DLK-19, "DOOR LOCK FUNCTION : System Description".

Is the operation normal?

YES >> GO TO 2.
NO >> Check door lock function. Refer to DLK-186, "DRIVER SIDE : Diagnosis Procedure".

2.PERFORM WORK SUPPORT

Perform “INSIDE ANT DIAGNOSIS” on “Work Support” of “INTELIGENT KEY”.
Refer to SEC-25, "INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY)".

>> GO TO 3.

3.PERFORM SELF DIAGNOSTIC RESULT

Perform “Self Diagnostic Result” of “BCM”.
Refer to SEC-25, "INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY)".

Is DTC detected?

YES >> Refer to DLK-61, "DTC Logic" (instrument center), refer to DLK-63, "DTC Logic" (console), refer to DLK-65, "DTC Logic" (luggage room).
NO >> GO TO 4.

4.CHECK PUSH-BUTTON IGNITION SWITCH

Check push-button ignition switch.
Refer to PCS-64, "Component Function Check".

Is the inspection normal?

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

5.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection normal?

YES >> Check intermittent incident. Refer to GI-35, "Intermittent Incident".
NO >> GO TO 1.

STEERING DOES NOT LOCK

Description

INFOID:0000000003829496

If door switch is malfunctioning, BCM cannot lock the steering. If BCM does not detect DTC, steering lock unit is normal.

Diagnosis Procedure

INFOID:0000000003829497

1.CHECK DOOR SWITCH

Check door switch.
Refer to DLK-69, "Component Function Check".

Is the inspection normal?

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

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection normal?

YES >> Check intermittent incident. Refer to GI-35, "Intermittent Incident".
NO >> GO TO 1.

SECURITY INDICATOR LAMP DOES NOT TURN ON OR FLASH

Description

INFOID:0000000003829500

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

Conditions of Vehicle (Operating Conditions)

Ignition switch position is not in ON position.

Diagnosis Procedure

INFOID:0000000003829501

1.CHECK SECURITY INDICATOR LAMP

Check security indicator lamp.
Refer to SEC-119, "Component Function Check".

Is the inspection result normal?

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

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-35, "Intermittent Incident".
NO >> GO TO 1.

VEHICLE SECURITY SYSTEM CAN NOT BE SET

INTELLIGENT KEY

INTELLIGENT KEY : Description

INFOID:0000000003829502

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

Conditions of Vehicle (Operating Conditions)
“SECURITY ALARM SET” in “WORK SUPPORT” is ON when setting on CONSULT-III.

INTELLIGENT KEY : Diagnosis Procedure

INFOID:0000000003829503

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

Lock/unlock door with Intelligent Key.
Refer to DLK-16, "INTELLIGENT KEY SYSTEM : System Description".

Is the operation normal?

YES >> GO TO 2.
NO >> Check Intelligent Key system. Refer to DLK-189, "Diagnosis Procedure".

2.CHECK HOOD SWITCH

Check hood switch. Refer to SEC-116, "Component Function Check".

Is the inspection normal?

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

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-35, "Intermittent Incident".
NO >> GO TO 1.

DOOR REQUEST SWITCH

DOOR REQUEST SWITCH : Description

INFOID:0000000003829504

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

Conditions of Vehicle (Operating Conditions)
“SECURITY ALARM SET” in “WORK SUPPORT” is ON when setting on CONSULT-III.

DOOR REQUEST SWITCH : Diagnosis Procedure

INFOID:0000000003829505

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 operation normal?

YES >> GO TO 2.
NO >> Check Intelligent Key system. Refer to DLK-186, "DRIVER SIDE : Diagnosis Procedure".

2.CHECK HOOD SWITCH

Check hood switch. Refer to SEC-116, "Component Function Check".

Is the inspection normal?

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

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-35, "Intermittent Incident".
NO >> GO TO 1.

DOOR KEY CYLINDER

DOOR KEY CYLINDER : Description

INFOID:0000000003829506

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

Conditions of Vehicle (Operating Conditions)

“SECURITY ALARM SET” in “WORK SUPPORT” is ON when setting on CONSULT-III.

DOOR KEY CYLINDER : Diagnosis Procedure

INFOID:0000000003829507

1.CHECK POWER DOOR LOCK SYSTEM (DOOR KEY CYLINDER)

Lock/unlock door with door key cylinder.
Refer to DLK-12, "System Description".

Is the operation normal?

YES >> GO TO 2.
NO >> Check power door lock system (door key cylinder). Refer to DLK-185, "Diagnosis Procedure".

2.CHECK HOOD SWITCH

Check hood switch. Refer to SEC-116, "Component Function Check".

Is the inspection normal?

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

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-35, "Intermittent Incident".
NO >> GO TO 1.

VEHICLE SECURITY ALARM DOES NOT ACTIVATE

Description

INFOID:0000000003829508

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

Diagnosis Procedure

INFOID:0000000003829509

1.CHECK CONDITION OF ALARM

Operate alarm.

Which alarm does not operate?

Headlamp and horn>>GO TO 2.
Headlamp>>GO TO 4.
Horn >> GO TO 5.

2.CHECK DOOR SWITCH

Check door switch.
Refer to DLK-69, "Component Function Check".

Is the inspection result normal?

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

3.CHECK HOOD SWITCH

Check hood switch. Refer to SEC-116, "Component Function Check".

Is the inspection normal?

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

4.CHECK HEADLAMP

Check headlamp operation.
Refer to SEC-118, "Component Function Check".

Is the inspection result normal?

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

5.CHECK HORN

Check horn.
Refer to DLK-105, "Component Function Check".

Is the inspection result normal?

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

6.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-35, "Intermittent Incident".
NO >> GO TO 1.

KEY SLOT INDICATOR DOES NOT ILLUMINATE

Diagnosis Procedure

INFOID:0000000003829517

1.CHECK KEY SLOT INDICATOR

Check key slot illumination.
Refer to DLK-103, "Component Function Check".

Is the inspection normal?

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

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection normal?

YES >> Check intermittent incident. Refer to GI-35, "Intermittent Incident".
NO >> GO TO 1.

PRECAUTION

PRECAUTIONS

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

INFOID:0000000003960651

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:

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the “SRS AIR BAG”.**
- **Do not 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:

- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, DO NOT 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 Necessary for Steering Wheel Rotation after Battery Disconnect

INFOID:0000000003960652

NOTE:

- Before removing and installing any control units, first turn the push-button ignition switch to the LOCK position, then disconnect both battery cables.
- After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

This vehicle is equipped with a push-button ignition switch and a steering lock unit.
If the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.
If turning the steering wheel is required with the battery disconnected or discharged, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

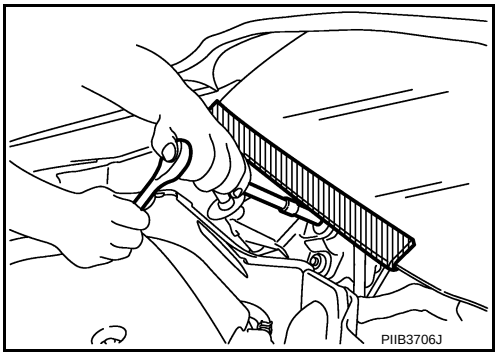
1. Connect both battery cables.
   NOTE:
   Supply power using jumper cables if battery is discharged.
2. Turn the push-button ignition switch to ACC position.
   (At this time, the steering lock will be released.)
3. Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.
4. Perform the necessary repair operation.

5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the push-button ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the push-button ignition switch is turned to LOCK position.)
6. Perform self-diagnosis check of all control units using CONSULT-III.

Precaution for Procedure without Cowl Top Cover

INFOID:0000000003960660

When performing the procedure after removing cowl top cover, cover the lower end of windshield with urethane, etc.



REMOVAL AND INSTALLATION

KEY SLOT

Exploded View

INFOID:0000000003940996

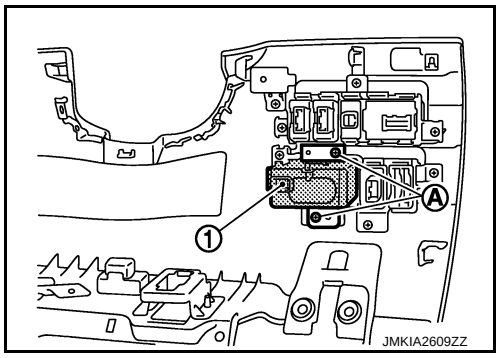
Refer to IP-11, "Exploded View".

Removal and Installation

INFOID:0000000003940997

REMOVAL

1. Remove the instrument lower panel LH. Refer to IP-12, "Removal and Installation".
2. Disconnect the key slot connector.
3. Remove the mounting screw (A), and then remove the key slot (1).



INSTALLATION

Install in the reverse order of removal.

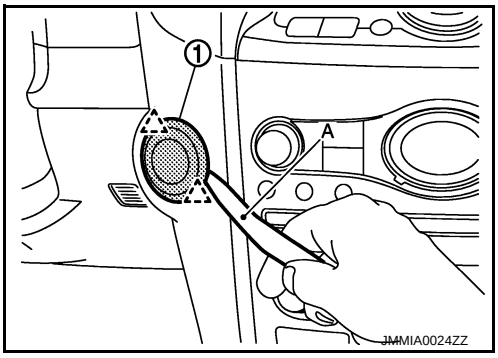
PUSH BUTTON IGNITION SWITCH

Removal and Installation

INFOID:0000000003940998

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.