SECTION SEC
SECURITY CONTROL SYSTEM

CONTENTS

WITH INTELLIGENT KEY SYSTEM

PRECAUTION

PRECAUTIONS

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

INFOID:0000000006226148

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 that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see 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:0000000006226149

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.

For vehicle with 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 operation procedure below before starting the repair operation.

OPERATION PROCEDURE

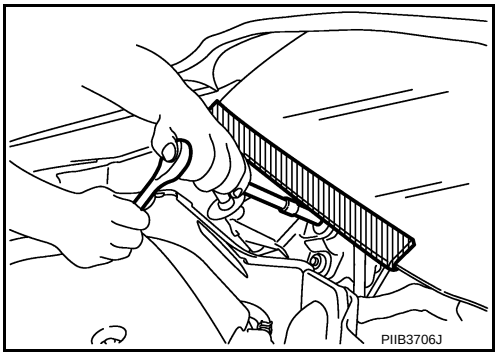
1. Connect both battery cables.
   NOTE:
   Supply power using jumper cables if battery is discharged.
2. Turn the push-button ignition switch to ACC position.
   (At this time, the steering lock will be released.)
3. Disconnect both battery cables. The steering lock will remain released with both battery 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:0000000006226150

When performing the procedure after removing cowl top cover, cover the lower end of windshield with urethane, etc.

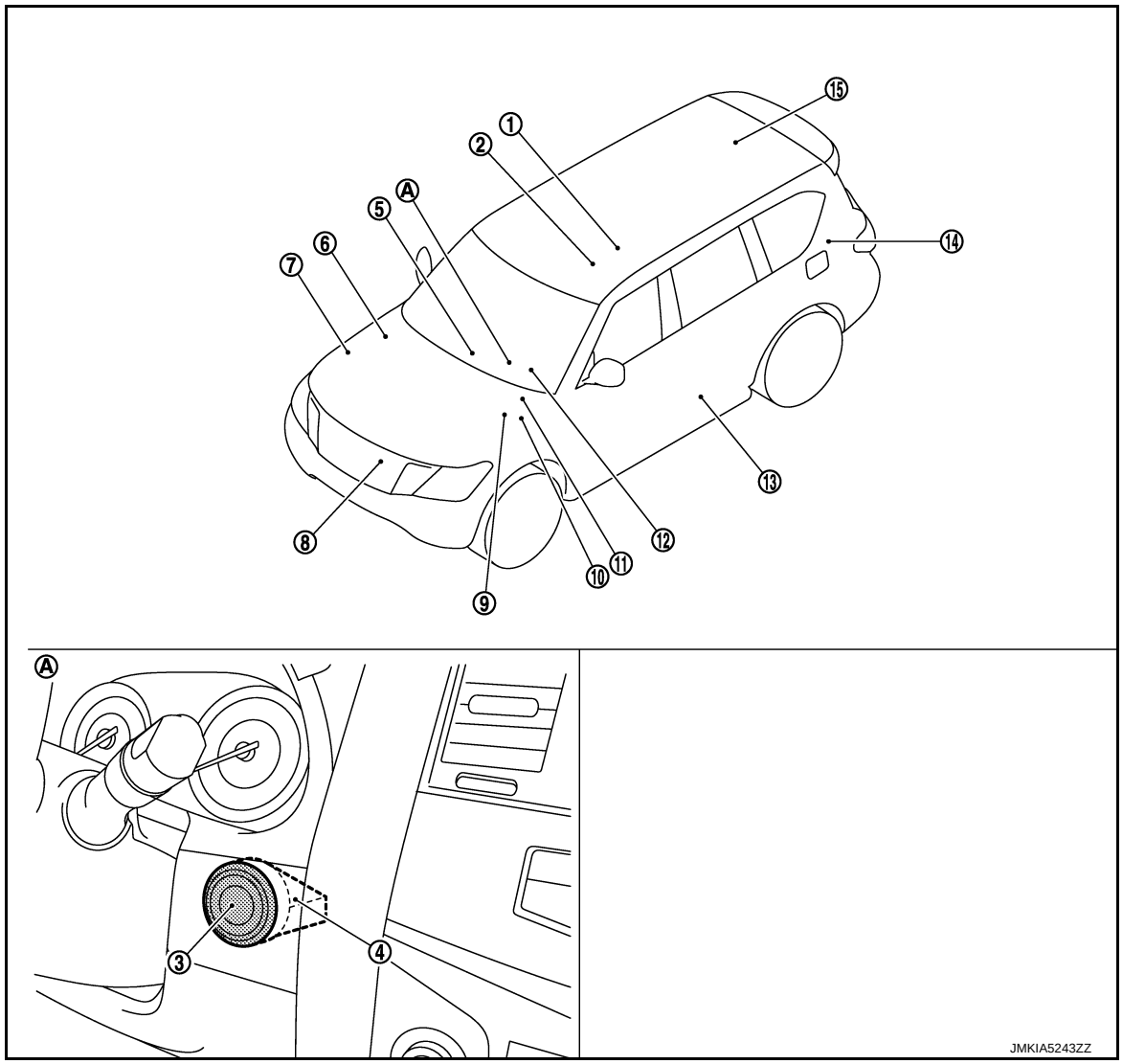


SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000006226151



1. Inside key antenna (console) Refer to DLK-11, "DOOR LOCK SYSTEM : Component Parts Location".
2. A/T assembly Refer to TM-10, "A/T CONTROL SYSTEM : Component Parts Location".
3. Push-button ignition switch
4. NATS antenna amp.
5. Inside key antenna (instrument center) Refer to DLK-11, "DOOR LOCK SYSTEM : Component Parts Location".
6. IPDM E/R Refer to PCS-4, "Component Parts Location".
7. ECM Refer to EC-16, "Component Parts Location").
8. Horn
9. ABS actuator and electric unit (control unit) Refer to BRC-10, "Component Parts Location".
10. Stop lamp switch Refer to EC-16, "Component Parts Location".
11. BCM Refer to BCS-4, "BODY CONTROL SYSTEM : Component Parts Location".
12. Combination meter Refer to MWI-6, "METER SYSTEM : Component Parts Location".

13. Front door switch (driver side) Refer to DLK-11, "DOOR LOCK SYSTEM : Component Parts Location".
14. Remote keyless entry receiver Refer to DLK-11, "DOOR LOCK SYSTEM : Component Parts Location".
15. Inside key antenna (luggage room) Refer to DLK-11, "DOOR LOCK SYSTEM : Component Parts Location".

A. Behind push-button ignition switch

Component Description

INFOID:0000000006226152

Component	Reference
A/T shift selector (detention switch)	SEC-8
BCM	SEC-8
ECM	SEC-9
IPDM E/R	SEC-9
NATS antenna amp.	SEC-9
TCM	SEC-9
Combination meter	SEC-9
Door switch	SEC-9
Hood switch	SEC-9
Inside key antenna	SEC-9
Intelligent Key	SEC-9
Push-button ignition switch	SEC-10
Remote keyless entry receiver	SEC-10
Security indicator lamp	SEC-10
Starter control relay	SEC-10
Starter relay	SEC-10
Steering lock relay	SEC-10
Steering lock unit	SEC-10
Stop lamp switch	SEC-10
Transmission range switch	SEC-10
Vehicle information display	SEC-11

A/T Shift Selector (Detention Switch)

INFOID:0000000006226153

Detention switch detects that A/T shift selector is in the P position, and then transmits the signal to BCM and IPDM E/R.
BCM confirms the A/T shift selector position with the following 5 signals.
- P position signal from A/T shift selector (detention switch)
- P/N position signal from TCM
- P position signal from IPDM E/R (CAN)
- P/N position signal from IPDM E/R (CAN)
- P/N position signal from TCM (CAN)

IPDM E/R confirms the A/T shift selector position with the following 3 signals.
- P position signal from A/T shift selector (detention switch)
- P/N position signal from TCM
- P/N position signal from BCM (CAN)

BCM

INFOID:0000000006226154

BCM controls INTELLIGENT KEY SYSTEM (ENGINE START FUNCTION), INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS [IVIS (NATS)], and VEHICLE SECURITY SYSTEM.
BCM performs the ID verification between BCM and Intelligent Key when the Intelligent Key is carried into the detection area of inside key antenna, and push-button ignition switch is pressed. If the ID verification result is OK, push-button ignition switch operation is available.

Then, when the power supply position is turned ON, BCM performs ID verification between BCM and ECM. If the ID verification result is OK, ECM can start engine.

ECM

INFOID:0000000006226155

ECM controls the engine.
When power supply position is turned ON, BCM starts communication with ECM and performs the ID verification between BCM and ECM.
If the verification result is OK, the engine can start. If the verification result is NG, the engine can not start.

IPDM E/R

INFOID:0000000006226156

IPDM E/R has steering lock relay, starter relay and starter control relay inside. Steering lock relay is used for the steering lock/unlock function. Starter relay and starter control relay are used for the engine starting function. IPDM E/R controls these relays while communicating with BCM.

NATS Antenna Amp.

INFOID:0000000006226157

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

TCM

INFOID:0000000006226158

TCM transmits the shift position signal (P/N position) to BCM and IPDM E/R. And further, TCM transmits the shift position signal (P/N position) to BCM via CAN communication.
BCM confirms the A/T shift selector position with the following 5 signals.
- P position signal from A/T shift selector (detention switch)
- P/N position signal from TCM
- P position signal from IPDM E/R (CAN)
- P/N position signal from IPDM E/R (CAN)
- P/N position signal from TCM (CAN)

IPDM E/R confirms the A/T shift selector position with the following 3 signals.
- P position signal from A/T shift selector (detention switch)
- P/N position signal from TCM
- P/N position signal from BCM (CAN)

Combination Meter

INFOID:0000000006226159

Combination meter transmits the vehicle speed signal to BCM via CAN communication.
BCM also receives the vehicle speed signal from ABS actuator and electric unit (control unit) via CAN communication. BCM compares both signals to detect the vehicle speed.

Door Switch

INFOID:0000000006226160

Door switch detects door open/close condition and then transmits ON/OFF signal to BCM.

Hood Switch

INFOID:0000000006226161

Hood switch detects that hood is open, and then transmits the signal to IPDM E/R. IPDM E/R transmits hood switch signal to BCM via CAN communication.

Inside Key Antenna

INFOID:0000000006226162

Inside key antenna detects whether Intelligent Key is inside the vehicle, and transmits the signal to BCM.
Three inside key antennas are installed in the instrument center, console and luggage room.

Intelligent Key

INFOID:0000000006226163

Each Intelligent key has an individual electronic ID, and transmits the ID signal by request from BCM.
Carrying the Intelligent Key whose ID is registered in BCM, the driver can performs door lock/unlock operation and push-button ignition switch operation.

Push-button Ignition Switch

INFOID:0000000006226165

Push-button ignition switch detects that push-button is pressed, and then transmits the signal to BCM. BCM changes the power supply position with the operation of push-button ignition switch. BCM maintains the power supply position status while push-button is not operated.

Remote Keyless Entry Receiver

INFOID:0000000006226166

Remote keyless entry receiver receives each button operation signal and electronic key ID signal from Intelligent Key, and then transmits the signal to BCM.

Security Indicator Lamp

INFOID:0000000006226167

Security indicator lamp is located on combination meter.
Security indicator lamp blinks when power supply position is any position other than ON to warn that INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS [IVIS (NATS)] is on board.

Starter Control Relay

INFOID:0000000006226170

Engine starting system functions by controlling both starter relay and starter control relay.
Both relays are integrated in IPDM E/R. Starter relay is controlled by BCM, and starter control relay is controlled by IPDM E/R on request from BCM.
IPDM E/R transmits starter relay and starter control relay status signal to BCM via CAN communication.

Starter Relay

INFOID:0000000006226171

Engine starting system functions by controlling both starter relay and starter control relay.
Both relays are integrated in IPDM E/R. Starter relay is controlled by BCM, and starter control relay is controlled by IPDM E/R on request from BCM.
IPDM E/R transmits starter relay and starter control relay status signal to BCM via CAN communication.

Steering Lock Relay

INFOID:0000000006226172

Steering lock relay is integrated in IPDM E/R, and supplies power source to steering lock unit.
When IPDM E/R receives the steering lock relay ON request signal from BCM, IPDM E/R turns ON steering lock relay and then transmits the steering lock relay condition signal to BCM.

Steering Lock Unit

INFOID:0000000006226173

Steering lock unit performs steering lock/unlock operation on request from BCM, and power source is supplied from steering lock relay integrated in IPDM E/R.
When push-button ignition switch is pressed while the Intelligent Key is inside the vehicle, BCM performs the ID verification with steering lock unit. Steering lock unit releases the steering lock based on the result of the ID verification.
Steering lock unit has 2 switches (steering lock status switch and steering unlock status switch) inside. BCM judges the steering lock/unlock condition by comparing these switch signals and steering lock unit status signal transmitted from IPDM E/R via CAN communication.

Stop Lamp Switch

INFOID:0000000006226174

Stop lamp switch detects that brake pedal is depressed, and then transmits the signal to BCM.

Transmission Range Switch

INFOID:0000000006226175

Transmission range switch is integrated in A/T assembly, and detects the A/T shift selector position.
TCM receives the transmission range switch signal and then transmits the P/N position signal to BCM and IPDM E/R.
BCM confirms the A/T shift selector position with the following 5 signals.
- P position signal from A/T shift selector (detention switch)
- P/N position signal from TCM
- P position signal from IPDM E/R (CAN)
- P/N position signal from IPDM E/R (CAN)
- P/N position signal from TCM (CAN)

IPDM E/R confirms the A/T shift selector position with the following 3 signals.

- P position signal from A/T shift selector (detention switch)
- P/N position signal from TCM
- P/N position signal from BCM (CAN)

Vehicle Information Display

INFOID:0000000006226176

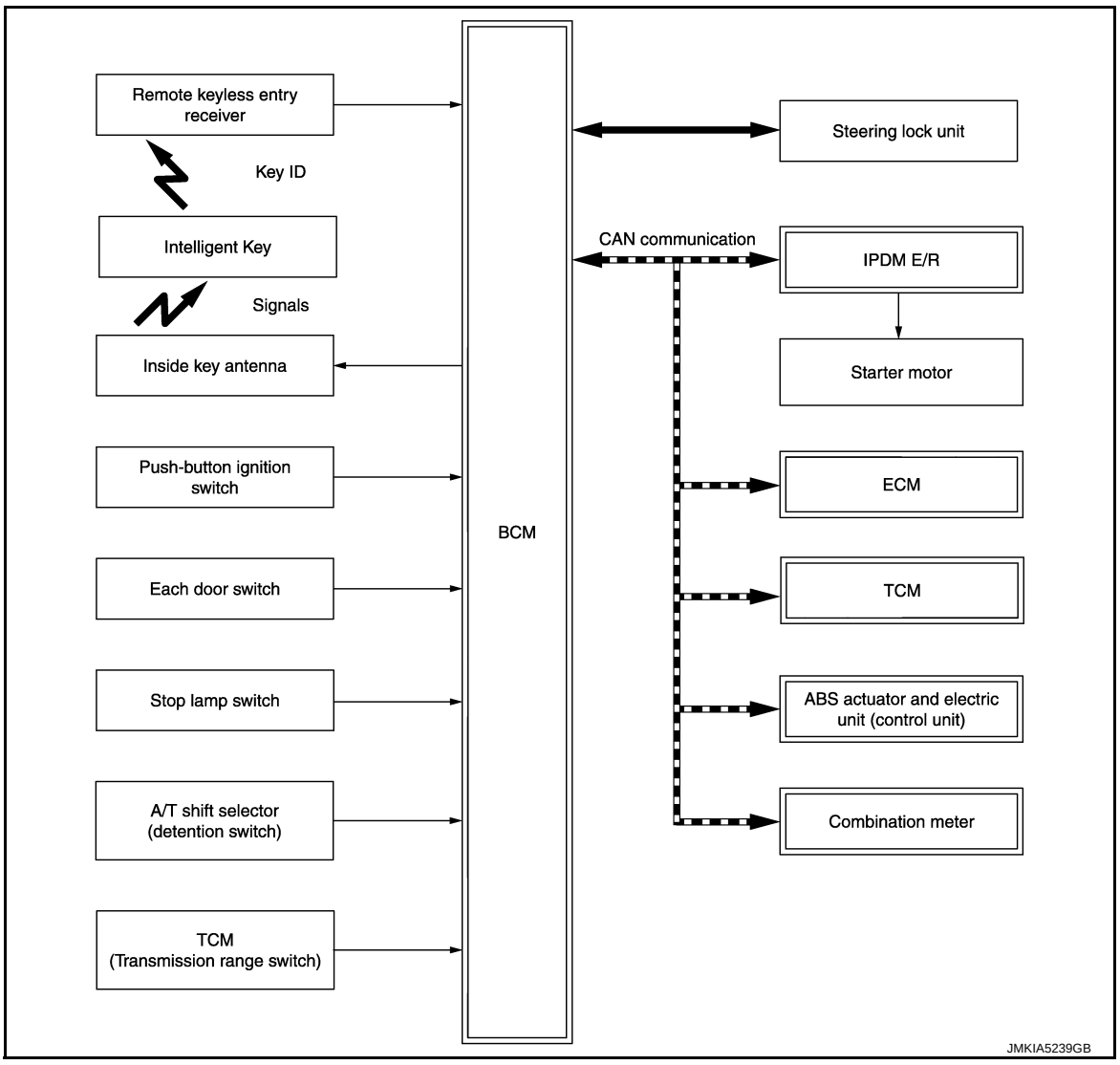
Vehicle information display is integrated in combination meter.
Various information and warnings regarding to the Intelligent Key System are displayed.

SYSTEM

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION : System Diagram

INFOID:0000000006226178



INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION : System Description

INFOID:0000000006226179

SYSTEM DESCRIPTION

- The engine start function of Intelligent Key system makes it possible to start and stop the engine without using the key, based on the electronic ID verification. The electronic ID verification is performed between BCM and Intelligent Key when the push-button ignition switch is pressed while the Intelligent Key is within the detection area of inside key antenna.
  NOTE:
  The driver should carry the Intelligent Key at all times.
- Intelligent Key has 2 IDs [Intelligent Key ID and IVIS (NATS) ID]. It can perform the door lock/unlock operation and the push-button ignition switch operation when the registered Intelligent Key is carried.
- When Intelligent Key battery is discharged, engine can be started by operating push-button ignition switch after contacting Intelligent Key backside to push-button ignition switch. At that time, the IVIS (NATS) ID verification is performed.
- If the ID is successfully verified, when push-button ignition switch is pressed, steering lock is released and the engine can be started.

- Up to 4 Intelligent Keys can be registered (Including the standard Intelligent Key) upon request from the customer.
  NOTE:
  Refer to DLK-18, "INTELLIGENT KEY SYSTEM : System Description" for any functions other than engine start function of Intelligent Key system.

PRECAUTIONS FOR 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, ID verification cannot be performed by mechanical key only.
In that case, the IVIS (NATS) ID verification can be performed when Intelligent Key backside is contacted to push-button ignition switch. If verification result is OK, engine can be started.

OPERATION WHEN INTELLIGENT KEY IS CARRIED

1. When the push-button ignition switch is pressed, the BCM activates the inside key antenna and transmits the request signal to the Intelligent Key.
2. The Intelligent Key receives the request signal and transmits the Intelligent Key ID signal to the BCM.
3. BCM receives the Intelligent Key ID signal via remote keyless entry receiver and verifies it with the registered ID.
4. BCM transmits the 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 supply to the steering lock unit.
6. The steering lock releases.
7. BCM transmits the power supply stop signal to IPDM E/R when detecting 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 detects that the selector lever position and brake pedal operating condition.
12. BCM transmits the starter request signal to IPDM E/R and turns the starter relay in IPDM E/R ON if BCM judges that the engine start condition* is satisfied.
13. IPDM E/R turns the starter control relay ON when receiving the starter request signal.
14. Power supply is supplied through the starter relay and the starter control relay to operate the starter motor.
    CAUTION:
    If a malfunction is detected in the Intelligent Key system, the “KEY” warning lamp in the combination meter illuminates. At that time, the engine cannot be started.
15. When BCM receives feedback signal from ECM indicating that the engine is started, the BCM transmits a stop signal to IPDM E/R and stops cranking by turning OFF the starter motor relay. (If engine start is unsuccessful, cranking stops automatically within 5 seconds.)
    CAUTION:
    When the Intelligent Key is carried outside of the vehicle (inside key antenna detection area) while the power supply is in the ACC or ON position, even if the engine start condition* is satisfied, the engine cannot be started.

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

OPERATION RANGE

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

ENGINE START OPERATION WHEN INTELLIGENT KEY IS CONTACTED TO PUSH-BUTTON IGNITION SWITCH

When Intelligent Key battery is discharged, the IVIS (NATS) ID verification between transponder in Intelligent Key and BCM is performed when Intelligent Key backside is contacted to push-button ignition switch. If the verification result is OK, engine can be started.

STEERING LOCK OPERATION

Steering is locked by steering lock unit when any of the following conditions are met.

- When ignition switch is in the OFF position, selector lever is in the P position, and any of the following conditions are met.
- Closing door
- Opening door
- Door is locked using door request switch
- Door is locked using Intelligent Key
- When BCM power consumption control system is released by meeting any of the following conditions.
- Opening any door
- Operating door lock using door request switch
- Operating door lock using Intelligent Key

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

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

NOTE:

- When an Intelligent Key is within the detection area of inside key antenna and when Intelligent Key backside is contacted to push-button ignition switch, it is equivalent to the operations below.
- When starting the engine, the BCM monitors under the engine start conditions,
- Brake pedal operating condition
- Selector lever position
- Vehicle speed

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

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

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

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

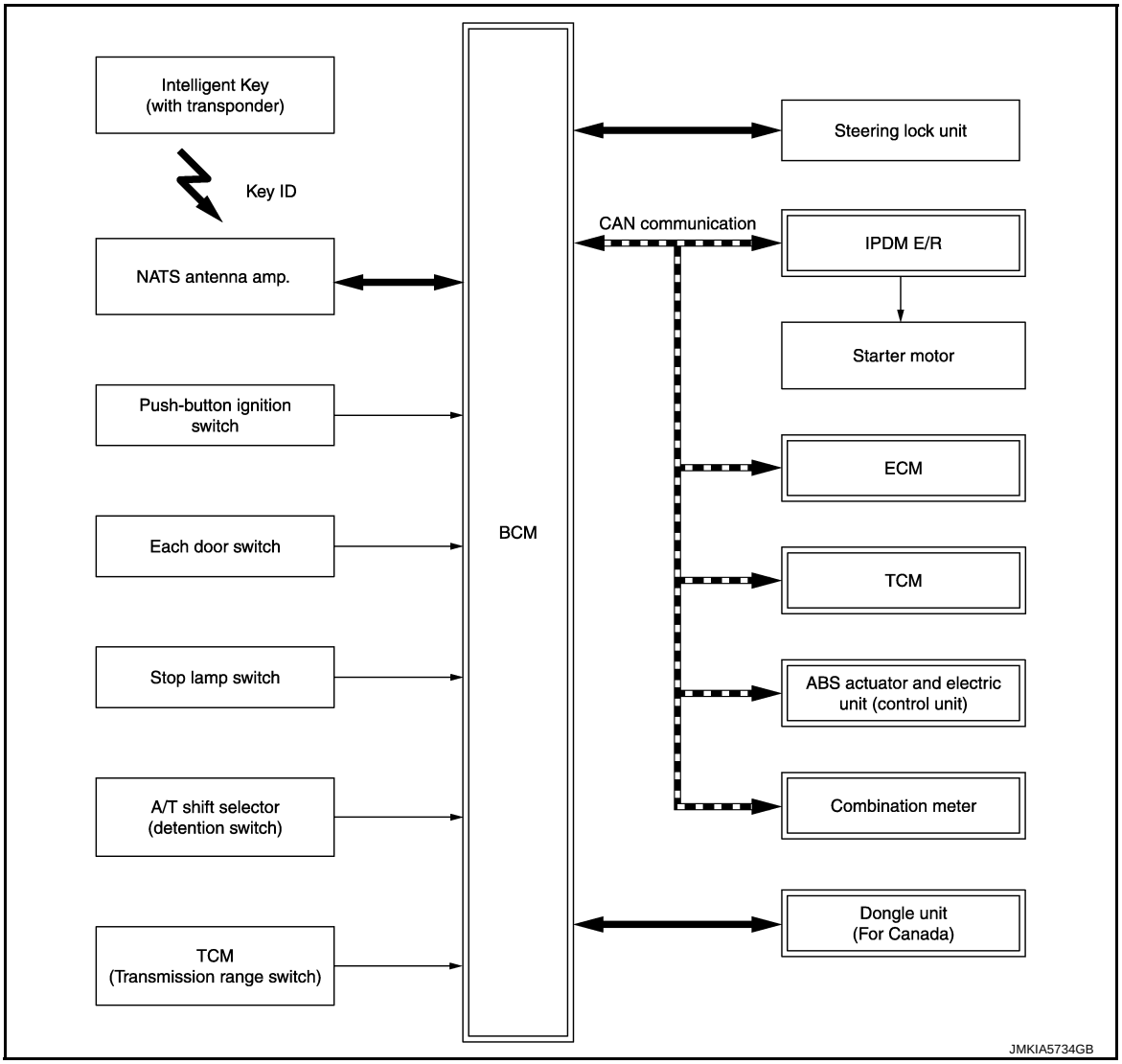
Emergency stop operation

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

INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS

INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS : System Diagram

INFOID:0000000006226180



INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS : System Description

INFOID:0000000006226181

SYSTEM DESCRIPTION

- The INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS [IVIS (NATS)] prevents the engine from being started by Intelligent Key whose ID is not registered to the vehicle (BCM). It has higher protection against auto theft involving the duplication of mechanical keys.
- The ignition key integrated in the Intelligent Key cannot start the engine. When the Intelligent Key battery is discharged, the IVIS (NATS) ID verification is performed between the transponder integrated with Intelligent Key and BCM via NATS antenna amp. when the Intelligent Key backside is contacted to push-button ignition switch. 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 that warns that the IVIS (NATS) is on board the model.
- Security indicator lamp always blinks when the power supply position is any position other than ON.
- Up to 4 Intelligent Keys can be registered (including the standard ignition key) upon request from the owner.
- Specified registration is required when replacing ECM, BCM or Intelligent Key. For the registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.
- Possible symptom of IVIS (NATS) malfunction is “Engine cannot start”. The engine can not be started because of other than IVIS (NATS) malfunction, so start the trouble diagnosis according to SEC-48, "Work Flow".
- If ECM other than genuine part is installed, the engine cannot be started. For ECM replacement procedure, refer to EC-143, "Work Procedure".

PRECAUTIONS FOR KEY REGISTRATION

- The ID registration is a procedure that erases the current IVIS (NATS) ID once, and then reregisters a new ID. Therefore before starting the registration operation, collect all registered Intelligent Keys from the customer.
- When registering the Intelligent Key, perform only one procedure to simultaneously register both ID [IVIS (NATS) ID and Intelligent Key ID].

SECURITY INDICATOR LAMP

- Warns that the vehicle is equipped with IVIS (NATS).
- Security indicator lamp always blinks when the power supply position is any position other than ON.

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

ENGINE START OPERATION WHEN INTELLIGENT KEY IS CONTACTED TO PUSH-BUTTON IGNITION SWITCH

1. When brake pedal is depressed while selector lever is in the P position, BCM activates NATS antenna amp. that is located behind push-button ignition switch.
2. When Intelligent Key (transponder built-in) backside is contacted to push-button ignition switch, BCM starts IVIS (NATS) ID verification between BCM and Intelligent Key (transponder built-in) via NATS antenna amp.
3. When the IVIS (NATS) ID verification result is OK, buzzer in combination meter sounds and BCM transmits the result to ECM.
4. When push-button ignition switch is pressed, BCM transmits steering unlock signal to steering lock unit and IPDM E/R.
5. IPDM E/R turns steering lock relay ON and supplies power supply to the steering lock unit.
6. The steering lock is released.
7. BCM transmits the power supply stop signal to IPDM E/R when detecting that the steering lock is in the unlock position.
8. IPDM E/R turns steering lock relay OFF and stops power supply to the steering lock unit.
9. BCM turns ACC relay ON and transmits 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 detects that the selector lever position is P or N.
12. BCM transmits starter request signal to IPDM E/R and turns the starter relay in IPDM E/R ON if BCM judges that the engine start condition* is satisfied.
13. IPDM E/R turns the starter control relay ON when receiving the starter request signal.
14. Power supply is supplied through the starter relay and the starter control relay to operate the starter motor.
15. When BCM receives feedback signal from ECM indicating that the engine is started, BCM transmits a stop signal to IPDM E/R and stops cranking by turning off the starter motor relay. (If engine start is unsuccessful, cranking stops automatically within 5 seconds.)

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

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

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

NOTE:

- When an Intelligent Key is within the detection area of inside key antenna and when Intelligent Key backside is contacted to push-button ignition switch, it is equivalent to the operations below.
- When starting the engine, the BCM monitors under the engine start conditions,

- Brake pedal operating condition
- Selector lever position
- Vehicle speed

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

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

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

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

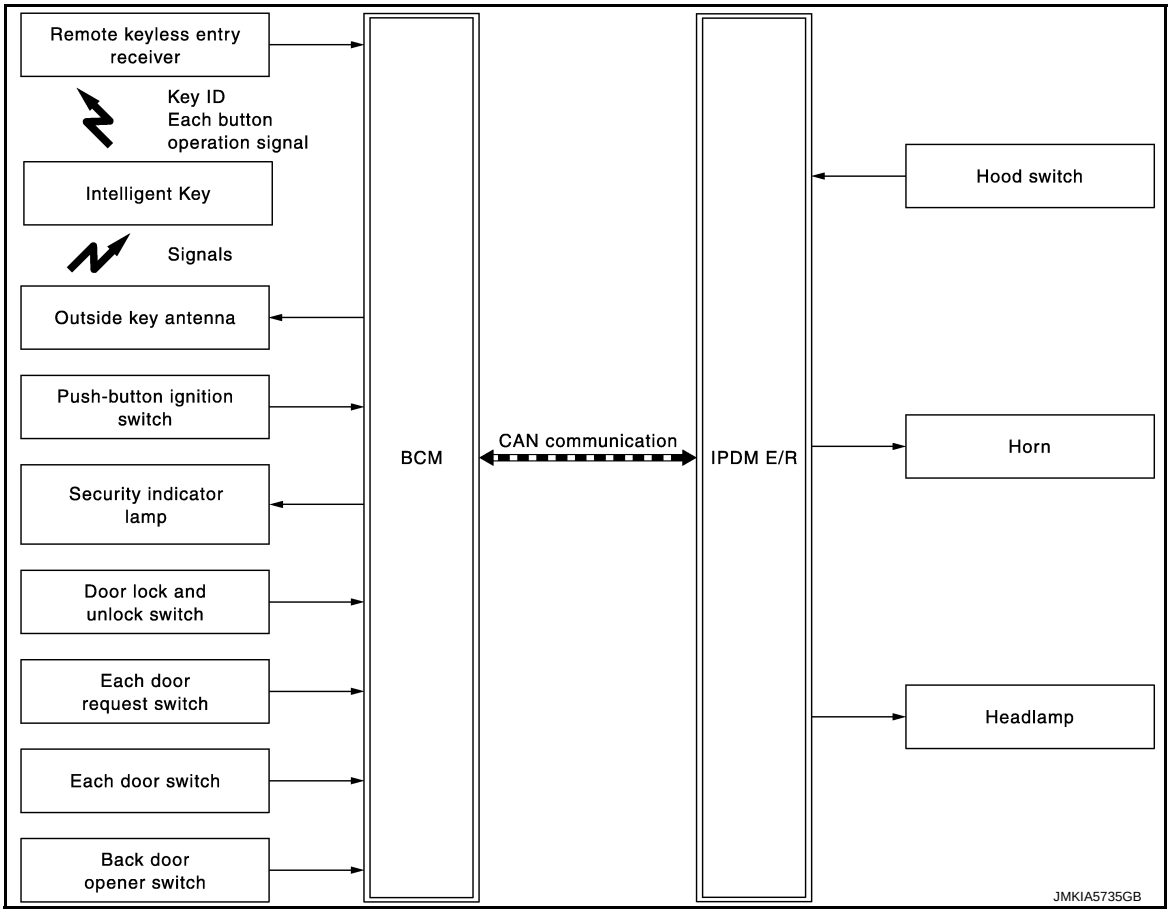
Emergency stop operation

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

VEHICLE SECURITY SYSTEM

VEHICLE SECURITY SYSTEM : System Diagram

INFOID:0000000006226184



VEHICLE SECURITY SYSTEM : System Description

INFOID:0000000006226185

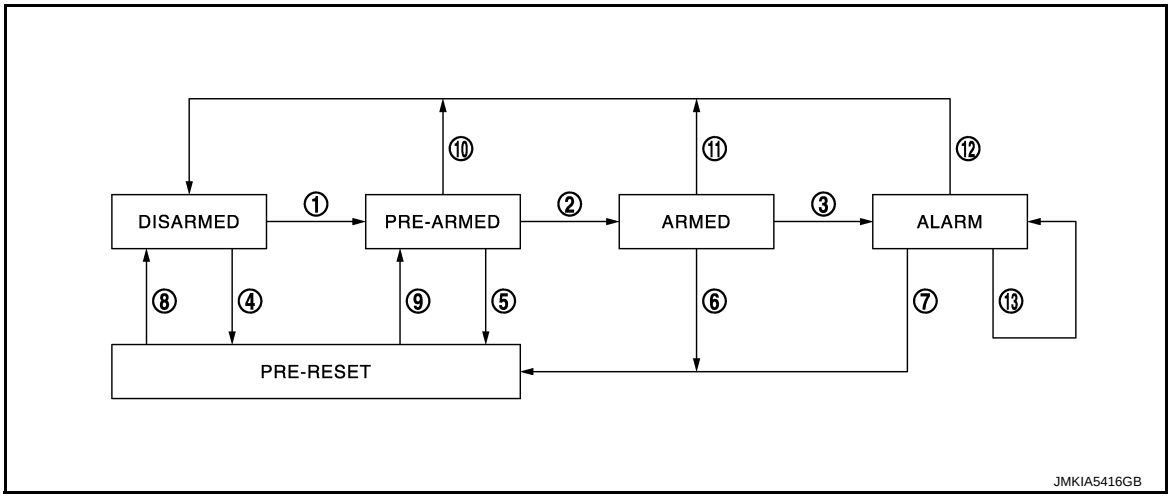
- The vehicle security system has two alarm functions (theft warning alarm and panic alarm), and reduces the possibility of a theft or mischief by activating horns and headlamps intermittently.
- The panic alarm does not start when the theft warning alarm is activating, and the panic alarm stops when the theft warning alarm is activated.
  The priority of the functions are as per the following.

Priority	Function
1	Theft warning alarm
2	Panic alarm

THEFT WARNING ALARM

- The theft warning alarm function activates horns and headlamps intermittently when BCM detects that any door or hood is opened by unauthorized means, while the system is in the ARMED state.
- Security indicator lamp on combination meter always blinks when power supply position is any position other than ON. Security indicator lamp blinking warns that the vehicle is equipped with a vehicle security system.

Operation Flow



No.	System state	Switching condition		
1	DISARMED to PRE-ARMED	When all conditions of A and one condition of B is satisfied.	A	B
			• Power supply position: OFF/LOCK • All doors: Closed • Hood: Closed	All doors are locked by: • Door key cylinder LOCK switch • LOCK button of Intelligent Key • Door request switch
2	PRE-ARMED to ARMED	When all of the following conditions are satisfied for 30 seconds.	• Power supply position: OFF/LOCK • All doors: Locked • Hood: Closed	
3	ARMED to ALARM	When one condition of A and one condition of B are satisfied.	A	B
			Intelligent Key: Not used	• Any door: Open • Hood: Open
4	DISARMED to PRE-RESET	When all conditions of A and one condition of B is satisfied.	A	B
			• Power supply position: OFF/LOCK • All doors: Closed • Hood: Open	All doors are locked by: • Door key cylinder LOCK switch • LOCK button of Intelligent Key • Door request switch
5	PRE-ARMED to PRE-RESET	When one of the following conditions is satisfied.	• Hood: Open	

No.	System state	Switching condition	
6	ARMED to PRE-RESET	No conditions.	
7	ALARM to PRE-RESET		
8	PRE-RESET to DISARMED	When one of the following conditions is satisfied.	• Power supply position: ACC/ON/CRANKING/RUN • Door key cylinder UNLOCK switch: ON • UNLOCK button of Intelligent Key: ON • Door request switch: ON • Back door opener switch: ON • UNLOCK switch of door lock and unlock switch: ON • Any door: Open
9	PRE-RESET to PRE-ARMED	When all of the following conditions are satisfied.	• Power supply position: OFF/LOCK • All doors: Closed • Hood: Closed
10	PRE-ARMED to DISARMED	When one of the following condition is satisfied.	• Power supply position: ACC/ON/CRANKING/RUN • Door key cylinder UNLOCK switch: ON • UNLOCK button of Intelligent Key: ON • AUTO BACK DOOR button of Intelligent Key: ON • Door request switch: ON • Back door opener switch: ON • Any door: Open
11	ARMED to DISARMED	When one of the following condition is satisfied.	• Power supply position: ACC/ON/CRANKING/RUN • Door key cylinder UNLOCK switch: ON • UNLOCK button of Intelligent Key: ON • AUTO BACK DOOR button of Intelligent Key: ON • Door request switch: ON • Back door opener switch: ON
12	ALARM to DISARMED		
13	RE-ALARM	When one of the following condition is satisfied after the ALARM operation is finished.	• Any door: Open • Hood: Open

NOTE:

- BCM ignores the door key cylinder UNLOCK switch signal input for 1 second after the door key cylinder LOCK switch signal input.
- To lock/unlock all doors by operating remote controller button of Intelligent Key or door request switch, Intelligent Key must be within the detection area of outside key antenna. For details, refer to DLK-18, "INTELLIGENT KEY SYSTEM : System Description".
- To open back door by operating back door opener switch, Intelligent Key must be within the detection area of outside key antenna. For details, refer to DLK-18, "INTELLIGENT KEY SYSTEM : System Description".

DISARMED Phase

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

PRE-ARMED Phase

The PRE-ARMED phase is the transient state between the DISARMED phase and the ARMED phase. This phase is maintained for 30 seconds, so that the owner can reset the setting due to a mis-operation. This phase switches to the ARMED phase when vehicle conditions are not changed for 30 seconds. Security indicator lamp illuminates while being in this phase.
To reset the PRE-ARMED phase, refer to the switching condition of No. 10 in the table above.

ARMED Phase

The vehicle security system is set, and BCM monitors all necessary inputs. If any door or hood is opened without using Intelligent Key, vehicle security system switches to the ALARM phase. Security indicator lamp blinks every 2.4 seconds.
To reset the ARMED phase, refer to the switching condition of No. 11 in the table above.

ALARM Phase

BCM transmits “Theft Warning Horn Request” signal and “High Beam Request” signal intermittently to IPDM E/R via CAN communication. In this phase, horns and headlamps are activated intermittently for approximately 50 seconds to warn that the vehicle is accessed by unauthorized means. ON/OFF timing of horns and headlamps are synchronized. After 50 seconds, the vehicle security system returns to the ARMED phase. At

this time, if BCM still detects unauthorized access to the vehicle, the system is switched to the ALARM phase again. This RE-ALARM operation is carried out a maximum of 2 times.
To cancel the ALARM operation, refer to the switching condition of No. 12 in the table above.

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

PRE-RESET Phase

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

PANIC ALARM

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

- LOCK button of Intelligent Key: ON
- UNLOCK button of Intelligent Key: ON
- PANIC ALARM button of Intelligent Key: Long pressed
- Any door request switch: ON

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

INFOID:0000000006365349

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. Refer to BCS-57, "DTC Index".
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	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×

*: This item is indicated, but 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:0000000006365350

WORK SUPPORT

Monitor item	Description
INSIDE ANT DIAGNOSIS	This function allows inside key antenna self-diagnosis
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch mode can be changed to operation in this mode • On: Operate • Off: Non-operation

Monitor item	Description
ENGINE START BY I-KEY	Engine start function mode can be changed to operation with this mode • On: Operate • Off: Non-operation
TRUNK/GLASS HATCH OPEN	Buzzer reminder function mode by back door opener switch can be changed to operation with this mode • On: Operate • Off: Non-operation
PANIC ALARM SET	Panic alarm button pressing time on Intelligent Key button can be selected from the following with this mode • MODE 1: 0.5 sec • MODE 2: Non-operation • MODE 3: 1.5 sec
TRUNK OPEN DELAY	Back door open button pressing to Intelligent Key button can be selected as per the following in this mode • MODE 1: Press and hold • MODE 2: Press twice • MODE 3: Press and hold, or press twice
LO- BATT OF KEY FOB WARN	Intelligent Key low battery warning mode can be changed to operation with this mode • On: Operate • Off: Non-operation
ANTI KEY LOCK IN FUNCTI	Key reminder function mode can be changed to operation with this mode • On: Operate • Off: Non-operation
HAZARD ANSWER BACK	Hazard reminder function mode by door request switch and Intelligent Key button can be selected from the following with this mode • Lock Only: Door lock operation only • Unlock Only: Door unlock operation only • Lock/Unlock: Lock and unlock operation • Off: Non-operation
ANS BACK I-KEY LOCK	Buzzer reminder function (lock operation) mode by door request switch can be selected from the following with this mode • Horn Chirp: Sound horn • Buzzer: Sound Intelligent Key warning buzzer • Off: Non-operation
ANS BACK I-KEY UNLOCK	Buzzer reminder function (unlock operation) mode by door request switch can be changed to operation with this mode • On: Operate • Off: Non-operation
SHORT CRANKING OUTPUT	Starter motor can operate during the times below • 70 msec • 100 msec • 200 msec
CONFIRM KEY FOB ID	It can be checked whether Intelligent Key ID code is registered or not in this mode
AUTO LOCK SET	Auto door lock operation time can be changed in this mode • MODE 1: OFF • MODE 2: 30 sec • MODE 3: 1 minute • MODE 4: 2 minutes • MODE 5: 3 minutes • MODE 6: 4 minutes • MODE 7: 5 minutes
HORN WITH KEYLESS LOCK	Horn reminder function mode by Intelligent Key button can be selected from the following with this mode • On: Operate • Off: Non-operation

Monitor item	Description
PW DOWN SET	Unlock button pressing time on Intelligent Key button can be selected from the following with this mode • MODE 1: 3 sec • MODE 2: Non-operation • MODE 3: 5 sec
WELCOME LIGHT SELECT	Welcome light function mode can be selected from the following with this mode • Puddle/Outside Handle • Room lamp • Head & Tail Lamps (this item is displayed, but cannot be used) • Heart Beat
WELCOME LIGHT OP SET	Welcome light function mode can be changed to operation with this mode • On: Operate • Off: Non-operation

SELF-DIAG RESULT

Refer to BCS-57, "DTC Index".

DATA MONITOR

Monitor Item	Condition
REQ SW -DR	Indicates [On/Off] condition of door request switch (driver side)
REQ SW -AS	Indicates [On/Off] condition of door request switch (passenger side)
REQ SW -BD/TR	Indicates [On/Off] condition of back door request switch
PUSH SW	Indicates [On/Off] condition of push-button ignition switch
CLUTCH SW	**NOTE:** This item is displayed, but cannot be monitored
BRAKE SW 1	Indicates [On/Off]* condition of stop lamp switch power supply
BRAKE SW 2	Indicates [On/Off] condition of stop lamp switch
DETE/CANCL SW	Indicates [On/Off] condition of P position
SFT PN/N SW	Indicates [On/Off] condition of P or N position
S/L -LOCK	Indicates [On/Off] condition of steering lock unit (LOCK)
S/L -UNLOCK	Indicates [On/Off] condition of steering lock unit (UNLOCK)
S/L RELAY -F/B	Indicates [On/Off] condition of steering lock relay
UNLK SEN -DR	Indicates [On/Off] condition of driver door UNLOCK status
PUSH SW -IPDM	Indicates [On/Off] condition of push-button ignition switch
IGN RLY1 -F/B	Indicates [On/Off] condition of ignition relay 1
DETE SW -IPDM	Indicates [On/Off] condition of P position
SFT PN -IPDM	Indicates [On/Off] condition of P or N position
SFT P -MET	Indicates [On/Off] condition of P position
SFT N -MET	Indicates [On/Off] condition of N position
ENGINE STATE	Indicates [Stop/Stall/Crank/Run] condition of engine states
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	Display the vehicle speed signal received from combination meter by numerical value [Km/h]
VEH SPEED 2	Display the vehicle speed signal received from ABS or VDC or TCM by numerical value [Km/h]
DOOR STAT-DR	Indicates [LOCK/READY/UNLK] condition of unlock sensor
DOOR STAT-AS	Indicates [LOCK/READY/UNLK] condition of passenger side door status
ID OK FLAG	Indicates [Set/Reset] condition of key ID
PRMT ENG STRT	Indicates [Set/Reset] condition of engine start possibility

Monitor Item	Condition
PRMT RKE STRT	**NOTE:** This item is displayed, but cannot be monitored
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-MODE CHG	Indicates [On/Off] condition of MODE CHANGE signal from Intelligent Key
RKE OPE COUN1	When remote keyless entry receiver receives the signal transmitted while operating on Intelligent Key, the numerical value start changing
RKE OPE COUN2	**NOTE:** This item is displayed, but cannot be monitored

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

ACTIVE TEST

Test item	Description
BATTERY SAVER	This test is able to check interior room lamp operation • On: Operate • Off: Non-operation
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation • On: Operate • Off: Non-operation
INSIDE BUZZER	This test is able to check warning chime in combination meter operation • Take Out: Take away warning chime sounds when CONSULT-III screen is touched • Key: Key warning chime sounds when CONSULT-III screen is touched • Knob: OFF position warning chime sounds when CONSULT-III screen is touched • Off: Non-operation
INDICATOR	This test is able to check warning lamp operation • KEY ON: “KEY” Warning lamp illuminates when CONSULT-III screen is touched • KEY IND: “KEY” Warning lamp blinks when CONSULT-III screen is touched • Off: Non-operation
INT LAMP	This test is able to check interior room lamp operation • On: Operate • Off: Non-operation
LCD	This test is able to check meter display information • Engine start information displays when “BP N” on CONSULT-III screen is touched • Engine start information displays when “BP I” on CONSULT-III screen is touched • Key ID warning displays when “ID NG” on CONSULT-III screen is touched • Steering lock information displays when “ROTAT” on CONSULT-III screen is touched • P position warning displays when “SFT P” on CONSULT-III screen is touched • INSRT: This item is displayed, but cannot be monitored • BATT: This item is displayed, but cannot be monitored • Take away through window warning displays when “NO KY” on CONSULT-III screen is touched • Take away warning display when “OUTKEY” on CONSULT-III screen is touched • OFF position warning display when “LK WN” on CONSULT-III screen is touched
FLASHER	This test is able to check security hazard lamp operation The hazard lamps are activated after “LH/RH/Off” on CONSULT-III screen is touched
P RANGE	This test is able to check A/T shift selector power supply • On: Operate • Off: Non-operation
ENGINE SW ILLUMI	This test is able to check push-button ignition switch illumination operation Push-ignition switch illumination illuminates when “ON” on CONSULT-III screen is touched

Test item	Description
LOCK INDICATOR	This test is able to check LOCK indicator (push-button ignition switch) operation • On: Operate • Off: Non-operation
ACC INDICATOR	This test is able to check ACC indicator (push-button ignition switch) operation • On: Operate • Off: Non-operation
IGNITION ON IND	This test is able to check ON indicator (push-button ignition switch) operation • On: Operate • Off: Non-operation
HORN	This test is able to check horn operation • On: Operate • Off: Non-operation
TRUNK/BACK DOOR	**NOTE:** This item is displayed, but cannot be used

THEFT ALM

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

INFOID:0000000006226189

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 item is displayed, but cannot be monitored.
REQ SW -RL	**NOTE:** This item is displayed, but cannot be monitored.
REQ SW -BD/TR	Indicates [ON/OFF] condition of back door request switch.
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch
UNLK SEN -DR	Indicates [ON/OFF] condition of driver door UNLOCK status.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch (driver side).
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch (passenger side).
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
DOOR SW-BK	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 door key cylinder.
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from door key cylinder.
TR/BD OPEN SW	Indicates [ON/OFF] condition of back door opener switch.
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.

WORK SUPPORT

Service 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. Security indicator lamp is turned on when “ON” on CONSULT-III screen is touched.
VEHICLE SECURITY HORN	This test is able to check horn operation. Horn is activated for 0.5 seconds after “ON” on CONSULT-III screen is touched.
HEADLAMP(HI)	This test is able to check headlamp operation. Headlamps are activated for 0.5 seconds after “ON” on CONSULT-III screen is touched.
FLASHER	This test is able to check hazard warning lamp operation. Hazard warning lamps are activated after “ON” on CONSULT-III screen is touched.

IMMU

IMMU : CONSULT-III Function (BCM - IMMU)

INFOID:0000000006226190

DATA MONITOR

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

ACTIVE TEST

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

WORK SUPPORT

Service item	Description
CONFIRM DONGLE ID	It is possible to check that dongle unit is applied to the vehicle.

DIAGNOSIS SYSTEM (IPDM E/R)

CONSULT-III Function (IPDM E/R)

INFOID:0000000006365348

APPLICATION ITEM

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

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

SELF DIAGNOSTIC RESULT

Refer to PCS-22, "DTC Index".

DATA MONITOR

Monitor item

Monitor Item [Unit]	MAIN SIGNALS	Description
RAD FAN REQ [1/2/3/4]	×	Displays the value of the cooling fan speed request signal received from ECM via CAN communication.
AC COMP REQ [Off/On]	×	Displays the status of the A/C compressor request signal received from ECM via CAN communication.
TAIL&CLR REQ [Off/On]	×	Displays the status of the position light request signal received from BCM via CAN communication.
HL LO REQ [Off/On]	×	Displays the status of the low beam request signal received from BCM via CAN communication.
HL HI REQ [Off/On]	×	Displays the status of the high beam request signal received from BCM via CAN communication.
FR FOG REQ [Off/On]	×	Displays the status of the front fog light request signal received from BCM via CAN communication.
FR WIP REQ [Stop/1LOW/Low/Hi]	×	Displays the status of the front wiper request signal received from BCM via CAN communication.
WIP AUTO STOP [STOP P/ACT P]	×	Displays the status of the front wiper auto stop signal judged by IPDM E/R.
WIP PROT [Off/BLOCK]	×	Displays the status of the front wiper fail-safe operation judged by IPDM E/R.
IGN RLY1 -REQ [Off/On]		Displays the status of the ignition switch ON signal received from BCM via CAN communication.
IGN RLY [Off/On]	×	Displays the status of the ignition relay judged by IPDM E/R.
PUSH SW [Off/On]		Displays the status of the push-button ignition switch judged by IPDM E/R.
INTER/NP SW [Off/On]		Displays the status of the shift position judged by IPDM E/R.
ST RLY CONT [Off/On]		Displays the status of the starter relay status signal received from BCM via CAN communication.
IHBT RLY -REQ [Off/On]		Displays the status of the starter control relay signal received from BCM via CAN communication.
ST/INHI RLY [Off/ ST ON/INHI ON/UNKWN]		Displays the status of the starter relay and starter control relay judged by IPDM E/R.

Monitor Item [Unit]	MAIN SIGNALS	Description
DETENT SW [Off/On]		Displays the status of the A/T shift selector (detention switch) judged by IPDM E/R.
S/L RLY -REQ [Off/On]		Displays the status of the steering lock relay signal received from BCM via CAN communication.
S/L STATE [LOCK/UNLK/UNKWN]		Displays the status of the steering lock judged by IPDM E/R.
OIL P SW [Open/Close]		Displays the status of the oil pressure switch judged by IPDM E/R.
HOOD SW [Off/On]		Displays the status of the hood switch judged by IPDM E/R.
HL WASHER REQ [Off/On]		Displays the status of the headlamp washer request signal received from BCM via CAN communication.
THFT HRN REQ [Off/On]		Displays the status of the theft warning horn request signal received from BCM via CAN communication.
HORN CHIRP [Off/On]		Displays the status of the horn reminder signal received from BCM via CAN communication.

ACTIVE TEST

Test item

Test item	Operation	Description
CORNERING LAMP	LH	**NOTE:** This item is indicated, but cannot be tested.
	RH	
HORN	On	Operates horn relay for 20 ms.
REAR DEFOGGER	Off	OFF
	On	Operates the rear window defogger relay.
FRONT WIPER	Off	OFF
	Lo	Operates the front wiper relay.
	Hi	Operates the front wiper relay and front wiper high relay.
MOTOR FAN*	1	OFF
	2	Transmits 50% pulse duty signal (PWM signal) to the cooling fan control module.
	3	Transmits 75% pulse duty signal (PWM signal) to the cooling fan control module.
	4	Transmits 100% pulse duty signal (PWM signal) to the cooling fan control module.
HEAD LAMP WASHER	On	Operates the headlamp washer relay for 1 second.
EXTERNAL LAMPS	Off	OFF
	TAIL	Operates the tail lamp relay.
	Lo	Operates the headlamp low relay.
	Hi	Operates the headlamp low relay and ON/OFF the headlamp high relay at 1 second intervals.
	Fog	Operates the front fog lamp relay.

*: Operates while the engine is running.

ECU DIAGNOSIS INFORMATION

ECM, IPDM E/R, BCM

List of ECU Reference

INFOID:0000000006226193

ECU		Reference
ECM	Reference Value	EC-72, "Reference Value"
	Fail-safe	EC-93, "Fail-safe"
	DTC Inspection Priority Chart	EC-96, "DTC Inspection Priority Chart"
	DTC Index	EC-98, "DTC Index"
IPDM E/R	Reference Value	PCS-15, "Reference Value"
	Fail-safe	PCS-21, "Fail-Safe"
	DTC Index	PCS-22, "DTC Index"
BCM	Reference Value	BCS-33, "Reference Value"
	Fail-safe	BCS-54, "Fail-safe"
	DTC Inspection Priority Chart	BCS-56, "DTC Inspection Priority Chart"
	DTC Index	BCS-57, "DTC Index"

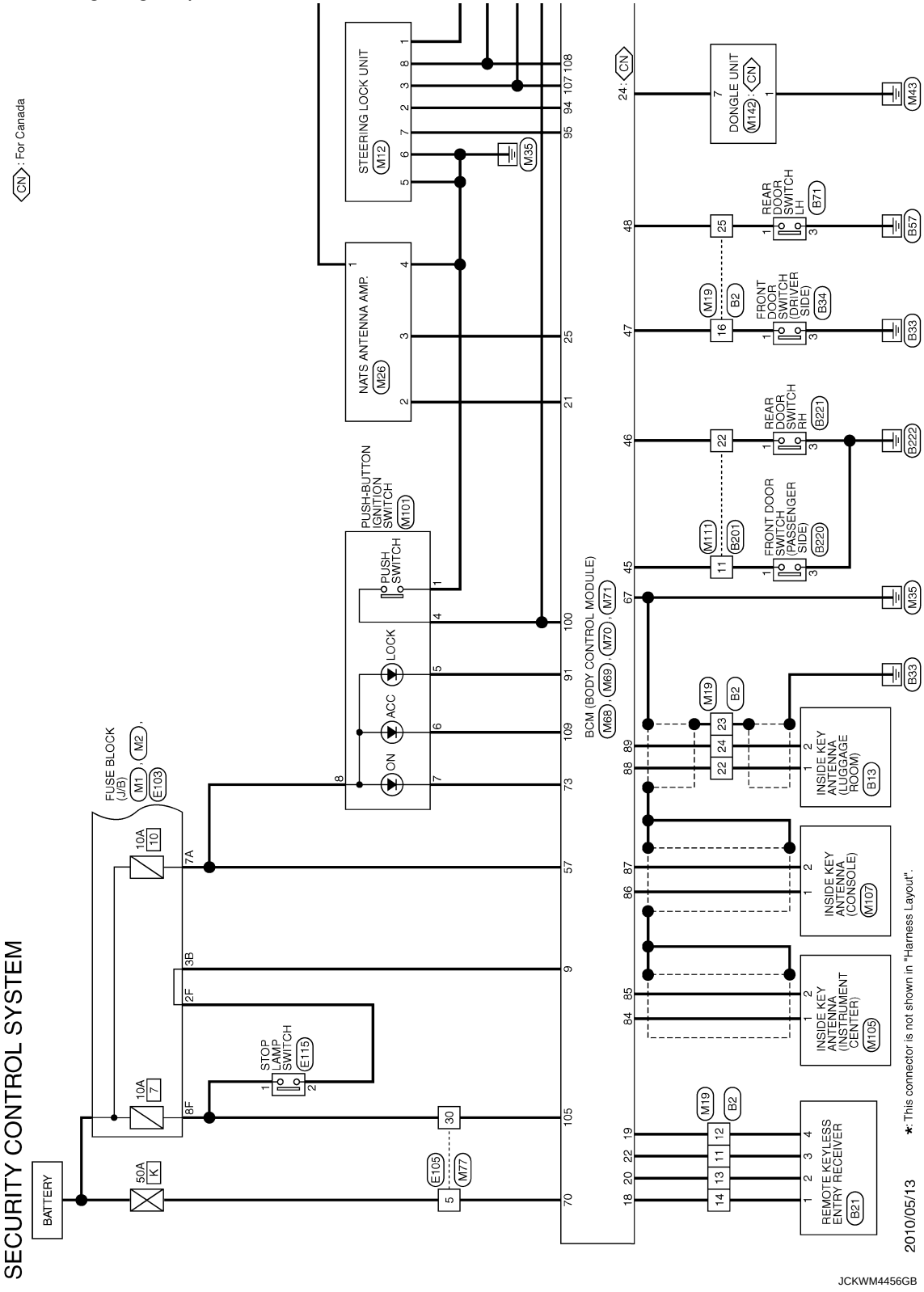
WIRING DIAGRAM

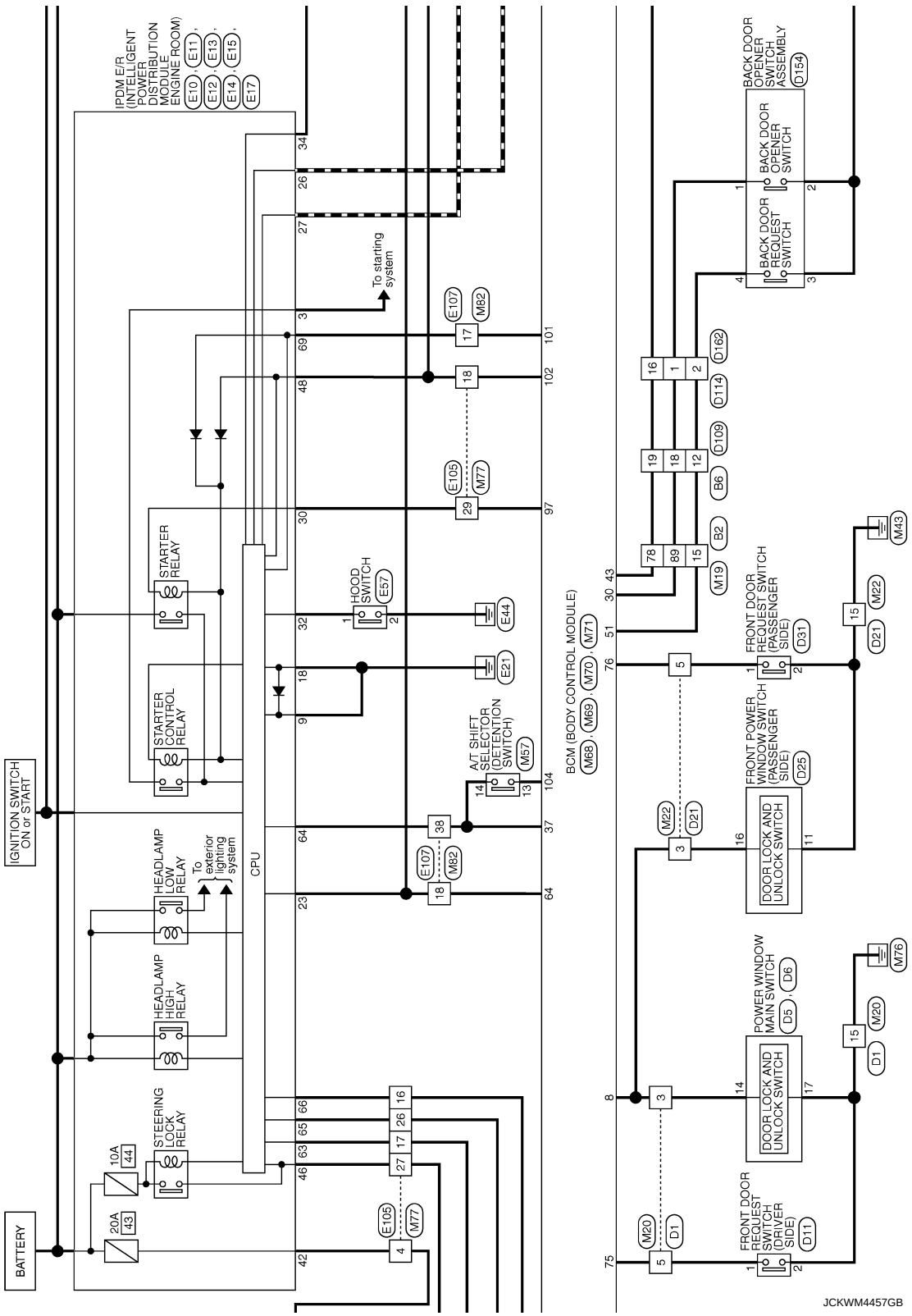
SECURITY CONTROL SYSTEM

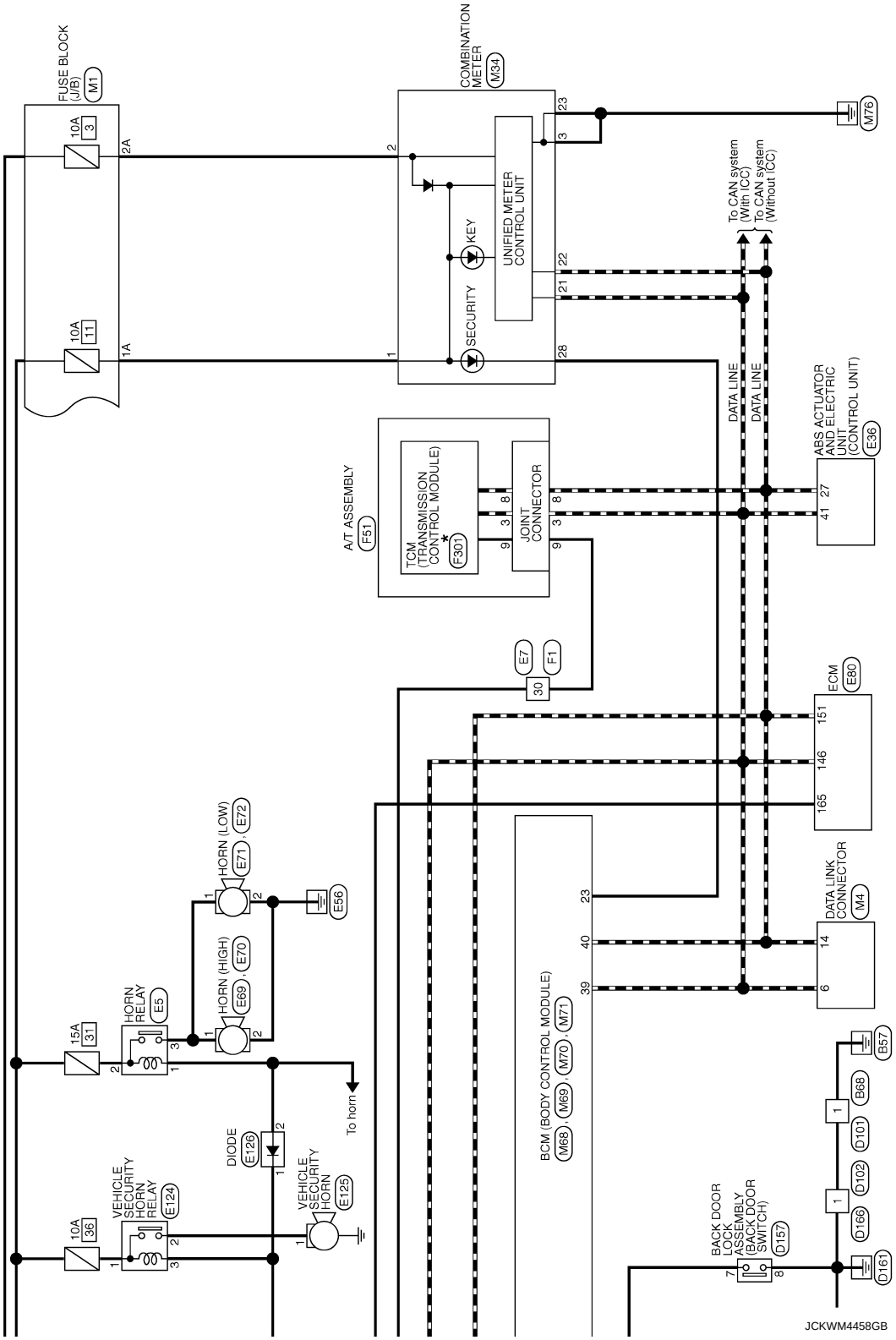
Wiring Diagram

INFOID:0000000006226195

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




IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E10, E11, E12, E13, E14, E15, E17
IGNITION SWITCH ON or START
BATTERY
10A 44
20A 43
STEERING LOCK RELAY
HEADLAMP HIGH RELAY
HEADLAMP LOW RELAY
STARTER CONTROL RELAY
STARTER RELAY
CPU
To exterior lighting system
To starting system
HOOD SWITCH E57
A/T SHIFT SELECTOR (DETENTION SWITCH) M57
BCM (BODY CONTROL MODULE) M68, M69, M70, M71
BACK DOOR OPENER SWITCH ASSEMBLY D154
BACK DOOR OPENER SWITCH
BACK DOOR REQUEST SWITCH
FRONT DOOR REQUEST SWITCH (PASSENGER SIDE) D31
FRONT POWER WINDOW SWITCH (PASSENGER SIDE) D25
DOOR LOCK AND UNLOCK SWITCH
POWER WINDOW MAIN SWITCH D5 D6
FRONT DOOR REQUEST SWITCH (DRIVER SIDE) D11
JCKWM4457GB


FUSE BLOCK (J/B) M1
10A 3
10A 11
2A
1A
COMBINATION METER M34
UNIFIED METER CONTROL UNIT
KEY
SECURITY
M76
To CAN system (With ICC)
To CAN system (Without ICC)
DATA LINE
DATA LINE
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) E36
A/T ASSEMBLY F51
TCM (TRANSMISSION CONTROL MODULE) *F301
JOINT CONNECTOR
E7
F1
ECM E80
HORN (LOW) E71, E72
HORN (HIGH) E69, E70
HORN RELAY E5
15A 31
10A 36
VEHICLE SECURITY HORN RELAY E124
DIODE E126
VEHICLE SECURITY HORN E125
To horn
E56
BCM (BODY CONTROL MODULE) M68, M69, M70, M71
DATA LINK CONNECTOR M4
BACK DOOR LOCK ASSEMBLY (BACK DOOR SWITCH) D157
B57
B68
D101
D102
D166
D161
JCKWM4458GB

SECURITY CONTROL SYSTEM

Connector No.	B2
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
2	L	–
3	BR	–
5	R/W	–
6	L	–
7	V	–
9	G	–
11	W/B	–
12	BR	–
13	G/R	–
14	B/Y	–
15	W/R	–
16	GR/R	–
18	G/W	–
19	V	–
20	W/G	–
21	B/W	–
22	V	–
23	SHIELD	–
24	G	–
25	O	–
26	Y	–
27	L/O	–
28	Y/R	–
29	L	–
30	R	–
31	G/Y	–
32	B/SB	–
33	LG/R	–
34	BR/W	–
35	GR/R	–
36	SB	–
37	LG	–
38	L	–
39	P	–
40	W/G	–
42	G/R	–
43	V/W	–
44	LG/B	–
45	R/Y	–
46	B	–
49	GR	–
50	R/B	–
51	W/R	–
52	BR/Y	–
53	O/B	–
54	G/O	–
55	R/B	–
56	LG/R	–
57	GR/R	–
58	Y/G	–
59	V/W	–
60	R	–
63	Y	–
64	R	–
65	W	–
66	G	–
67	B	–
68	SHIELD	–
69	LG/B	–
70	P/L	–
71	L	–
72	R	–
77	Y/B	–
78	Y/L	–
79	Y	–
80	W/R	–
81	Y/L	–
83	BR	–
84	L/O	–
86	O	–
87	W/R	–
88	O	–
89	W/L	–
90	GR/L	–
91	W	–
92	G	–
94	W/R	–
96	L/W	–
97	R	–
98	V	–
99	L/W	–
100	P/B	–

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
1	W	–
2	R	–
3	Y	–
5	LG	–
6	GR	–
7	L/O	–
8	Y	–
9	L	–
10	B/W	–
11	W/G	–
12	W/R	–
13	B	–
14	G	–
15	SHIELD	–
17	BR/Y	–
18	W/L	–
19	Y/L	–
20	G/Y	–
21	L/Y	–
22	L/W	–
23	G/W	–
24	L/R	–

Connector No.	B13
Connector Name	INSIDE KEY ANTENNA (LUGGAGE ROOM)
Connector Type	RKI02FL

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

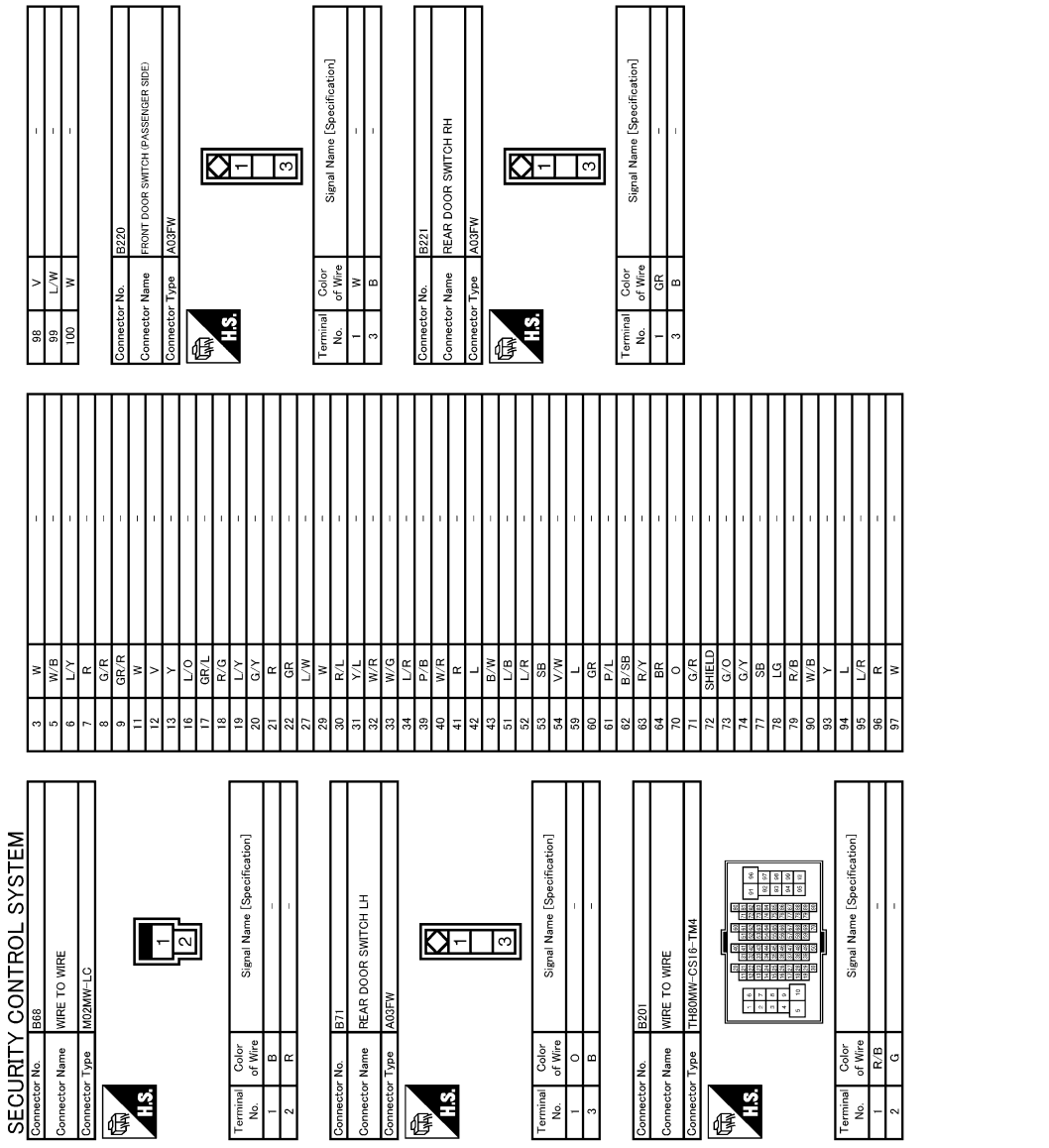
Connector No.	B21
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Type	TH04FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
1	B/Y	GND
2	G/R	SIGNAL OUTPUT
3	W/B	RSSI
4	BR	BATTERY

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

Terminal No.	Color of Wire	Signal Name [Specification]
1	GR/R	–
3	B	–

JCKWM4459GB



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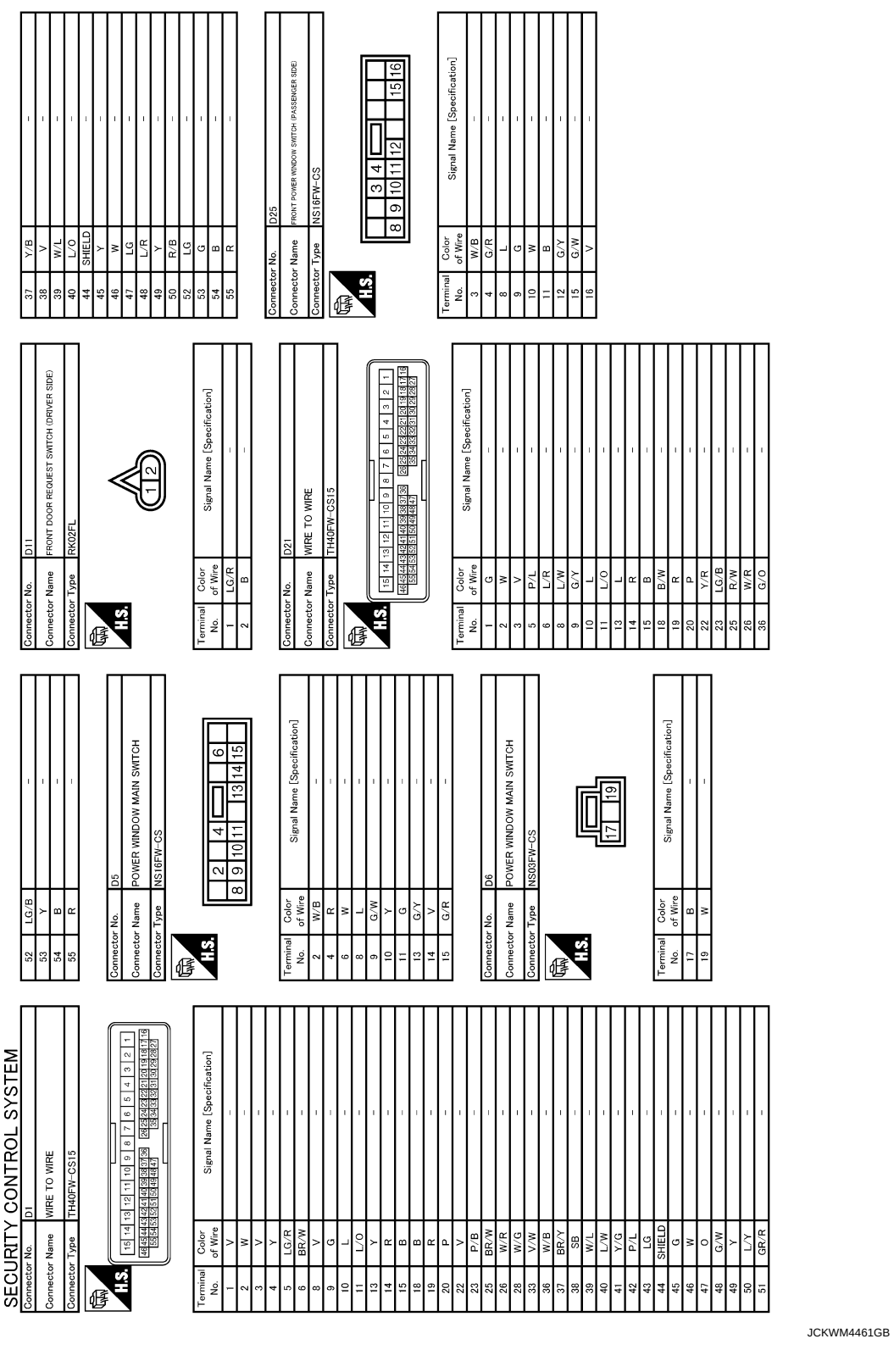

SECURITY CONTROL SYSTEM
Connector No. D1
Connector Name WIRE TO WIRE
Connector Type TH40FW-CS15
Terminal No. | Color of Wire | Signal Name [Specification]
1 V –
2 W –
3 V –
4 Y –
5 LG/R –
6 BR/W –
8 V –
9 G –
10 L –
11 L/O –
13 Y –
14 R –
15 B –
18 B –
19 R –
20 P –
22 V –
23 P/B –
25 BR/W –
26 W/R –
28 W/G –
33 V/W –
36 W/B –
37 BR/Y –
38 SB –
39 W/L –
40 L/W –
41 Y/G –
42 P/L –
43 LG –
44 SHIELD –
45 G –
46 W –
47 O –
48 G/W –
49 Y –
50 L/Y –
51 GR/R –
52 LG/B –
53 Y –
54 B –
55 R –
Connector No. D5
Connector Name POWER WINDOW MAIN SWITCH
Connector Type NS16FW-CS
Terminal No. | Color of Wire | Signal Name [Specification]
2 W/B –
4 R –
6 W –
8 L –
9 G/W –
10 Y –
11 G –
13 G/Y –
14 V –
15 G/R –
Connector No. D6
Connector Name POWER WINDOW MAIN SWITCH
Connector Type NS03FW-CS
Terminal No. | Color of Wire | Signal Name [Specification]
17 B –
19 W –
Connector No. D11
Connector Name FRONT DOOR REQUEST SWITCH (DRIVER SIDE)
Connector Type RK02FL
Terminal No. | Color of Wire | Signal Name [Specification]
1 LG/R –
2 B –
Connector No. D21
Connector Name WIRE TO WIRE
Connector Type TH40FW-CS15
Terminal No. | Color of Wire | Signal Name [Specification]
1 G –
2 W –
3 V –
5 P/L –
6 L/R –
8 L/W –
9 G/Y –
10 L –
11 L/O –
13 L –
14 R –
15 B –
18 B/W –
19 R –
20 P –
22 Y/R –
23 LG/B –
25 R/W –
26 W/R –
36 G/O –
37 Y/B –
38 V –
39 W/L –
40 L/O –
44 SHIELD –
45 Y –
46 W –
47 LG –
48 L/R –
49 Y –
50 R/B –
52 LG –
53 G –
54 B –
55 R –
Connector No. D25
Connector Name FRONT POWER WINDOW SWITCH (PASSENGER SIDE)
Connector Type NS16FW-CS
Terminal No. | Color of Wire | Signal Name [Specification]
3 W/B –
4 G/R –
8 L –
9 G –
10 W –
11 B –
12 G/Y –
15 G/W –
16 V –
JCKWM4461GB

SECURITY CONTROL SYSTEM

Connector No.	D31
Connector Name	FRONT DOOR REQUEST SWITCH (PASSENGER SIDE)
Connector Type	RK02FL

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	P/L	–
2	B	–

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Type	M02FW-LC

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	–
2	L	–

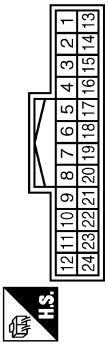
Connector No.	D102
Connector Name	WIRE TO WIRE
Connector Type	M01FBR-S-LC

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	–

Connector No.	D109
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH

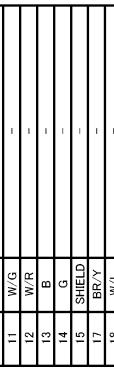
H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
1	W	–
2	R	–
3	Y	–
5	LG	–
6	GR	–
7	L/O	–
8	Y	–
9	L	–
10	B/W	–
11	W/G	–
12	W/R	–
13	B	–
14	G	–
15	SHIELD	–
17	BR/Y	–
18	W/L	–
19	Y/L	–
20	G/Y	–
21	L/Y	–
22	L/W	–
23	G/W	–
24	L/R	–

Connector No.	D114
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH

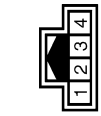
H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
1	W/L	–
2	R	–
3	Y	–
4	GR	–
5	BR/Y	–
6	B/W	–
7	W/G	–
10	Y	–
11	R	–
12	W	–
13	L/W	–
14	L/Y	–
15	G/Y	–
16	Y/L	–
17	Y	–
18	L	–
22	SHIELD	–
23	G	–
24	B	–

Connector No.	D154
Connector Name	BACK DOOR OPENER SWITCH ASSEMBLY
Connector Type	TH04MW-NH

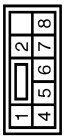
H.S.



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

Connector No.	D157
Connector Name	BACK DOOR LOCK ASSEMBLY
Connector Type	NS08FW-CS

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
1	R	–
2	V	–
4	G/Y	–
5	L/Y	–
6	L/W	–
7	Y/L	–
8	B	–

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SECURITY CONTROL SYSTEM

Connector No.	D162
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH

H.S.

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

Terminal No.	Color of Wire	Signal Name [Specification]
1	W/L	–
2	W/R	–
3	L/B	–
4	GR	–
5	BR/Y	–
6	B/W	–
7	W/G	–
10	Y	–
11	R	–
12	W	–
13	L/W	–
14	L/Y	–
15	G/Y	–
16	Y/L	–
17	Y	–
18	L	–
22	SHIELD	–
23	G	–
24	B	–

Connector No.	E5
Connector Name	HORN RELAY
Connector Type	–

H.S.

2
3 1

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

Connector No.	E7
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

Terminal No.	Color of Wire	Signal Name [Specification]
1	W	–
2	G	–
3	L/O	–
4	LG	–
5	W/L	–
6	G/O	–
7	L/R	–
8	LG/R	–
14	R	–
16	SB	–
17	R/W	–
18	Y/G	–
19	BR/Y	–
20	P/B	–
21	R/B	–
22	Y	–
23	BR	–
24	P/L	–
29	P	–

Connector No.	D166
Connector Name	WIRE TO WIRE
Connector Type	M01MBR-PS-LC

H.S.

1

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	–

30	BR	–
31	L	–
32	P	–

Connector No.	E10
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	M06FW-LC

H.S.

5	4	3
8	7	6

Terminal No.	Color of Wire	Signal Name [Specification]
3	R	–
4	L	–
5	P/L	–
7	W/G	–
8	W	–

Connector No.	E11
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	M06FB-LC

H.S.

11	10	9
14	13	12

Terminal No.	Color of Wire	Signal Name [Specification]
9	B	–
14	L	–

Connector No.	E12
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	NS08FBR-CS

H.S.

17		16	15
22	21	20	19	18

Terminal No.	Color of Wire	Signal Name [Specification]
17	B	–
18	B	–
19	V	–
20	W	–
21	L	–

Connector No.	E13
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH12FW-NH

H.S.

28	27	26	25	24	23
34	33	32	31	30	29

Terminal No.	Color of Wire	Signal Name [Specification]
23	GR/R	–
24	W/G	–
25	L/Y	–
26	P	–
27	L	–
30	R/W	–
31	B	–
32	LG	–
33	R	–
34	P/B	–

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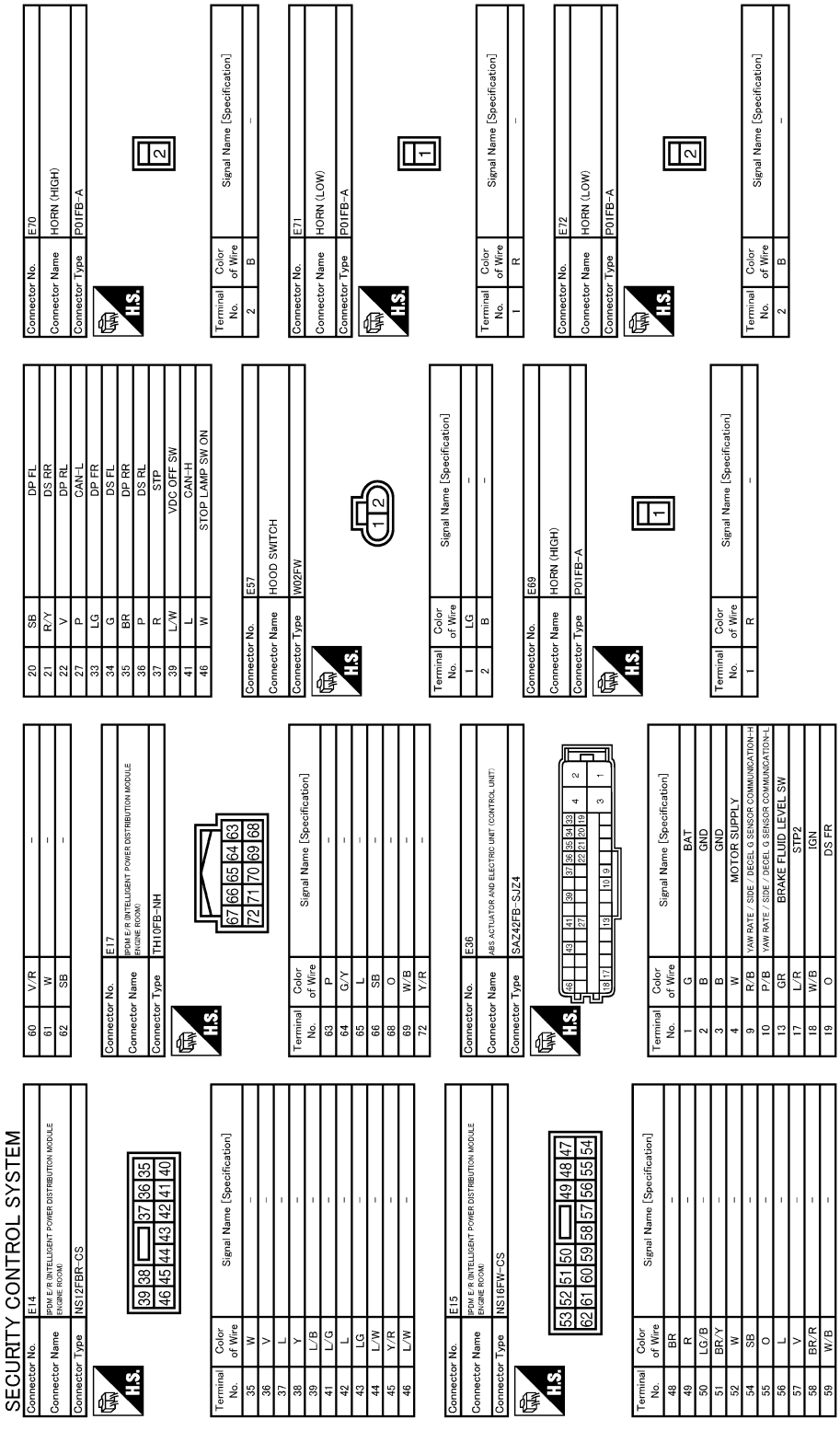

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SECURITY CONTROL SYSTEM

Connector No.	E80
Connector Name	ECM
Connector Type	MAB55FB-MEB10-LH

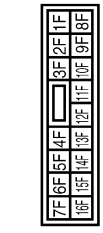
H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
111	R	FUEL INJECTOR DRIVER POWER SUPPLY
112	SB	FUEL INJECTOR DRIVER POWER SUPPLY
113	G	FUEL RETURN VALVE
114	B	ECM GROUND
115	B	ECM GROUND
120	Y	EVAP CANISTER VENT CONTROL VALVE
122	BR/W	VVEL ACTUATOR MOTOR RELAY ASSIST SIGNAL (VVEL CONTROL MODULE)
123	V/R	THROTTLE CONTROL MOTOR RELAY
125	GR	FUEL PUMP CONTROL MODULE (FPCM)
126	O	ACCELERATOR PEDAL POSITION SENSOR 2
128	Y	ICC STEERING SWITCH
129	P/L	SENSOR GROUND (APP SENSOR 2)
130	R	SENSOR GROUND
131	L/W	SENSOR POWER SUPPLY
133	SB	SENSOR POWER SUPPLY
134	V/W	TF
136	W/R	ACCELERATOR PEDAL POSITION SENSOR 1
137	W/G	SENSOR POWER SUPPLY (APP SENSOR 1)
138	V	BATTERY CURRENT SENSOR
139	G	BATTERY TEMPERATURE SENSOR
140	R/Y	SENSOR GROUND
141	SB	IGNITION SWITCH
142	R/W	FUEL PUMP CONTROL MODULE (FPCM) CHECK
143	L/Y	EVAP CONTROL SYSTEM PRESSURE SENSOR
144	O/B	REFRIGERANT PRESSURE SENSOR
146	L	CAN COMMUNICATION LINE
147	G/Y	IGC BRAKE SWITCH
150	R	SENSOR GROUND
151	P	CAN COMMUNICATION LINE
156	L	POWER SUPPLY FOR ECM (BACK-UP)
158	W/B	STOP LAMP SWITCH
161	R/W	ECM COMMUNICATION LINE
163	L/G	ECM RELAY (SELF SHUT-OFF)
165	GR/R	-
166	W	ECM COMMUNICATION LINE
169	G/B	ENGINE SPEED SIGNAL OUTPUT
171	W	POWER SUPPLY FOR ECM
172	W	POWER SUPPLY FOR ECM

173	O	THROTTLE CONTROL MOTOR POWER SUPPLY
174	B	ECM GROUND
175	B	ECM GROUND

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

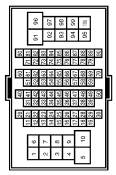
H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
1F	W/B	-
2F	R	-
4F	GR	-
6F	Y/G	-
8F	L/B	-
9F	Y	-
10F	G	-
14F	Y	-
15F	L	-

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
1	L/W	-
2	L/W	-
3	R/B	-
4	L	-
5	Y	-
7	W/G	-
8	P/B	-
9	W/B	-
10	L	-
11	L	-
12	P	-
13	P/B	-
14	BR	-
15	L/B	-
16	SB	-
17	P	-
18	BR	-
19	Y/G	-
20	BR/Y	-
21	Y/V	-
22	L	-
23	Y	-
24	L/W	-
26	L	-
27	L/W	-
28	O	-
29	R/W	-
30	L/B	-
31	Y	-
32	GR/R	-
34	Y	-
35	R	-
36	B/R	-
37	G/Y	-
38	G	-
40	SB	-
41	W/R	-
42	R	-
43	V	-
51	L/O	-
52	BR/W	-
53	BR/Y	-
54	GR/L	-
60	W	-
61	B	-
62	R	-
63	G	-
64	SHIELD	-
91	BR	-
92	L/W	-
94	Y/B	-
95	G/R	-
97	R	-
98	G/B	-
100	W/R	-

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SECURITY CONTROL SYSTEM

Connector No.	E107
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
4	V/W	–
5	G/R	–
6	P	–
9	GR/L	–
10	Y/R	–
11	L/R	–
12	W/G	–
13	BR/Y	–
14	LG	–
15	BR/W	–
17	W/B	–
18	GR/R	–
20	W/R	–
21	B	–
22	R/L	–
23	G/R	–
24	R/W	–
25	W/L	–
26	R	–
27	L	–
28	G/B	–
37	G/Y	–
38	G/Y	–
39	O	–
40	W	–
41	R	–
42	B	–
43	Y	–
44	G	–
45	SHIELD	–
46	G/O	–
47	G/R	–
48	SHIELD	–
49	W	–
50	SHIELD	–
51	Y/R	–
52	GR	–
53	LG/B	–
54	LG/R	–
55	R/G	–
56	B/R	–
57	SB	–
60	G	–
61	B	–
62	W	–
63	R	–
64	SHIELD	–
65	L/Y	–
66	V	–
67	B/W	–
91	G/R	–
95	SB	–
96	G/R	–
97	GR/L	–
98	G/W	–
99	R/Y	–
100	L	–

Connector No.	E115
Connector Name	STOP LAMP SWITCH
Connector Type	M04FW-LC

Terminal No.	Color of Wire	Signal Name [Specification]
1	L/B	–
2	R	–
3	G	–
4	L/R	–

Connector No.	E124
Connector Name	VEHICLE SECURITY HORN RELAY
Connector Type	M03FW-R-LC

Terminal No.	Color of Wire	Signal Name [Specification]
1	L/R	–
2	R	–
3	P/B	–

Connector No.	E125
Connector Name	VEHICLE SECURITY HORN
Connector Type	P01FB-A

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

Connector No.	E126
Connector Name	DIODE
Connector Type	24335 C9900

Terminal No.	Color of Wire	Signal Name [Specification]
1	G	–
2	P/B	–

Connector No.	F1
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
1	W	–
2	G	–
3	L/O	–
4	LG	–
5	W/L	–
6	G/O	–
7	L/R	–
8	LG/R	–
14	R	–
16	SB	–
17	R/W	–
18	Y/G	–
19	BR/Y	–
20	P/B	–
21	R/B	–
22	Y	–
23	BR/W	–
24	P/L	–
29	P	–
30	BR	–
31	L	–
32	P	–

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SECURITY CONTROL SYSTEM

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

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	–
2	P	–
3	L	–
4	SB	–
5	B	–
6	V	–
7	R	–
8	P	–
9	BR	–
10	B	–

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

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	–	VIGN
2	–	BATT
3	–	CAN-H
4	–	K LINE
5	–	GND
6	–	VIGN
7	–	REV LAMP RLY
8	–	CAN-L
9	–	START RLY
10	–	GND

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

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1A	Y	–
2A	GR	–
3A	W	–
4A	Y/G	–
5A	V	–
6A	L/W	–
7A	LG	–
8A	W	–

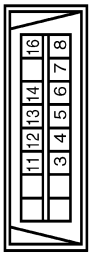
Connector No.	M2
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS10FW-CS

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1B	R	–
3B	R	–
4B	B	–
5B	BR	–
6B	Y	–
7B	G	–
8B	L/O	–
10B	W/B	–

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

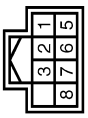
H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
3	LG	–
4	B	–
5	B	–
6	L	–
7	SB	–
8	GR	–
11	SB	–
12	R	–
13	L	–
14	P	–
16	Y	–

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

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
1	L/W	S/L 12V (MECHANICAL)
2	Y/G	S/L (K LINE)
3	L	S/L CONDITION1
5	B	GND
6	B	GND
7	W	S/L 12V (GPU)
8	P	S/L CONDITION2

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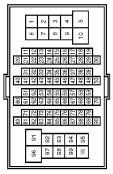
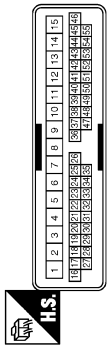
SECURITY CONTROL SYSTEM

Connector No.	M19
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
2	L	–
3	BR	–
5	R/W	–
6	L	–
7	V	–
9	G	–
11	W/B	–
12	BR	–
13	G/R	–
14	B/Y	–
15	W/R	–
16	GR/R	–
18	G/W	–
19	V	–
20	W/G	–
21	B/W	–
22	V	–
23	SHIELD	–
24	G	–
25	O	–
26	Y	–
27	L/O	–
28	Y/R	–
29	L	–
30	R	– [With ICC]
30	P	– [Without ICC]
31	G/Y	–
32	B/SB	–
33	LG/R	–
34	BR/W	–
35	GR/R	–
36	SB	–
37	LG	–
38	L	–
39	P	–
40	W/G	–
42	G/R	–
43	V/W	–
44	LG/B	–
45	R/Y	–
46	B	–
49	GR	–
50	R/B	–
51	W/R	–
52	BR/Y	–
53	O/B	–
54	G/O	–
55	R/B	–
56	LG/R	–
57	GR/R	–
58	Y/G	–
59	V/W	–
60	R	–
63	Y	–
64	R	–
65	W	–
66	G	–
67	B	–
68	SHIELD	–
69	LG/B	–
70	P/L	–
71	L	–
72	R	–
77	Y/B	–
78	Y/L	–
79	Y	–
80	W/R	–
81	Y/L	–
83	BR/W	–
84	L/O	–
86	O	–
87	W/R	–
88	O	–
89	W/L	–
90	GR/L	–
91	W	–
92	G	–
94	W/R	–
96	L/W	–
97	R	–
98	V	–
99	L/W	–
100	P/B	–

Connector No.	M20
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS15



Terminal No.	Color of Wire	Signal Name [Specification]
1	V	–
2	W	–
3	V	–
4	Y	–
5	LG/R	–
6	BR/W	–
8	V	–
9	G	–
10	L	–
11	L/O	–
13	Y	–
14	R	–
15	B	–
18	B	–
19	R	–
20	P	–
22	V	–
23	P/B	–
25	BR/W	–
26	W/R	–
28	W/G	–
33	V/W	–
36	W/B	–
37	BR/Y	–
38	SB	–
39	W/L	–
40	L/W	–
41	Y/G	–
42	P/L	–
43	LG	–
44	SHIELD	–
45	G	–
46	W	–
47	O	–
48	G/W	–
49	Y	–
50	L/Y	–
51	GR/R	–
52	LG/B	–
53	Y	–
54	B	–
55	R	–

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SECURITY CONTROL SYSTEM

Connector No.	M22
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS15

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
46	47	48	49	50	51	52	53	54	55					

Terminal No.	Color of Wire	Signal Name [Specification]
1	G	–
2	W	–
3	V	–
5	P/L	–
6	L/R	–
8	L/W	–
9	G/Y	–
10	L	–
11	L/W	–
13	L	–
14	R	–
15	B	–
18	B/W	–
19	R	–
20	P	–
22	Y/R	–
23	LG/B	–
25	W/R	–
26	W/R	–
36	G/O	–
37	Y/B	–
38	V	–
39	W/L	–
40	L/O	–
44	SHIELD	–
45	Y	–
46	W	–
47	LG	–
48	L/R	–
49	Y	–
50	R/B	–
52	LG	–
53	G	–
54	B	–
55	R	–

Connector No.	M26
Connector Name	NATS ANTENNA AMP.
Connector Type	TH04FW-NH

H.S.

1	2	3	4

Terminal No.	Color of Wire	Signal Name [Specification]
1	L	BAT
2	P	CLK
3	LG/R	DATA
4	B	GND

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

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color of Wire	Signal Name [Specification]
1	Y	BATTERY POWER SUPPLY
2	GR	IGNITION SIGNAL
3	B	GROUND
4	B	GROUND
5	B	ILL GND
7	R	TOW MODE SIGNAL
8	P/L	TRIP RESET SWITCH SIGNAL
11	G	ENTER SWITCH SIGNAL
12	O	SELECT SWITCH SIGNAL
13	W/R	ILLUMINATION CONTROL SWITCH SIGNAL (+)
14	R	ILLUMINATION CONTROL SWITCH SIGNAL (–)
15	R/W	AIR BAG SIGNAL
18	W/R	AMBIENT SENSOR SIGNAL
19	V/W	A/C AUTO AMP. CONNECTION RECOGNITION SIGNAL
20	B	AMBIENT SENSOR GROUND
21	L	CAN-H
22	P	CAN-L
23	B	GROUND

24	V	FUEL LEVEL SENSOR GROUND
25	O/L	ALTERNATOR SIGNAL
26	W	PARKING BRAKE SWITCH SIGNAL
28	GR/R	SECURITY SIGNAL
29	BR	WASHER LEVEL SWITCH SIGNAL
30	SB	VEHICLE SPEED SIGNAL (2-PULSE)
31	BR/W	VEHICLE SPEED SIGNAL (8-PULSE)
33	W	SNOW MODE SIGNAL
34	BR/Y	FUEL LEVEL SENSOR SIGNAL
35	O/B	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)
36	G/Y	PASSENGER SEAT BELT WARNING SIGNAL
37	R/Y	NON-MANUAL MODE SIGNAL
38	L/W	MANUAL MODE SHIFT DOWN SIGNAL
39	Y/B	MANUAL MODE SHIFT UP SIGNAL
40	G/W	MANUAL MODE SIGNAL

Connector No.	M57
Connector Name	A/T SHIFT SELECTOR
Connector Type	TH16FW-NH

H.S.

1	2	3	4	5		
9	10	11	12	13	14	

Terminal No.	Color of Wire	Signal Name [Specification]
1	G/W	–
2	L/W	–
3	Y/B	–
4	B/SB	–
5	R/Y	–
9	L/W	–
10	B	–
11	L/R	–
12	B	–
13	R/B	–
14	G/Y	–

Connector No.	M68
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color of Wire	Signal Name [Specification]
2	BR/Y	COMBI SW INPUT 5
3	GR	COMBI SW INPUT 4
4	L	COMBI SW INPUT 3
5	G	COMBI SW INPUT 2
6	V	COMBI SW INPUT 1
8	V	POWER WINDOW SW COMM
9	R	STOP LAMP SW 1
11	R	L&R SENSOR SERIAL LINK
14	P/B	OPTICAL SENSOR
16	L/O	DIMMER SIGNAL
17	Y/G	SENSOR PWR SPLY
18	B/Y	RECEIVER/SENSOR GND
19	BR	RECEIVER PWR SPLY
20	G/R	KYLS ENT RECEIVER COMM
21	P	NATS ANT AMP.
22	W/B	KYLS ENT RECEIVER RSSI
23	GR/R	SECURITY IND CONT
24	SB	DONGLE LINK
25	LG/R	NATS ANT AMP.
29	W	HAZARD SW
30	W/L	BK DOOR OPNR SW
31	W/G	DR DOOR UNLOCK SENSOR
32	LG	COMBI SW OUTPUT 5
33	Y	COMBI SW OUTPUT 4
34	W	COMBI SW OUTPUT 3
35	R/W	COMBI SW OUTPUT 2
36	SB	COMBI SW OUTPUT 1
37	G/Y	SHIFT P
39	L	CAN-H
40	P	CAN-L

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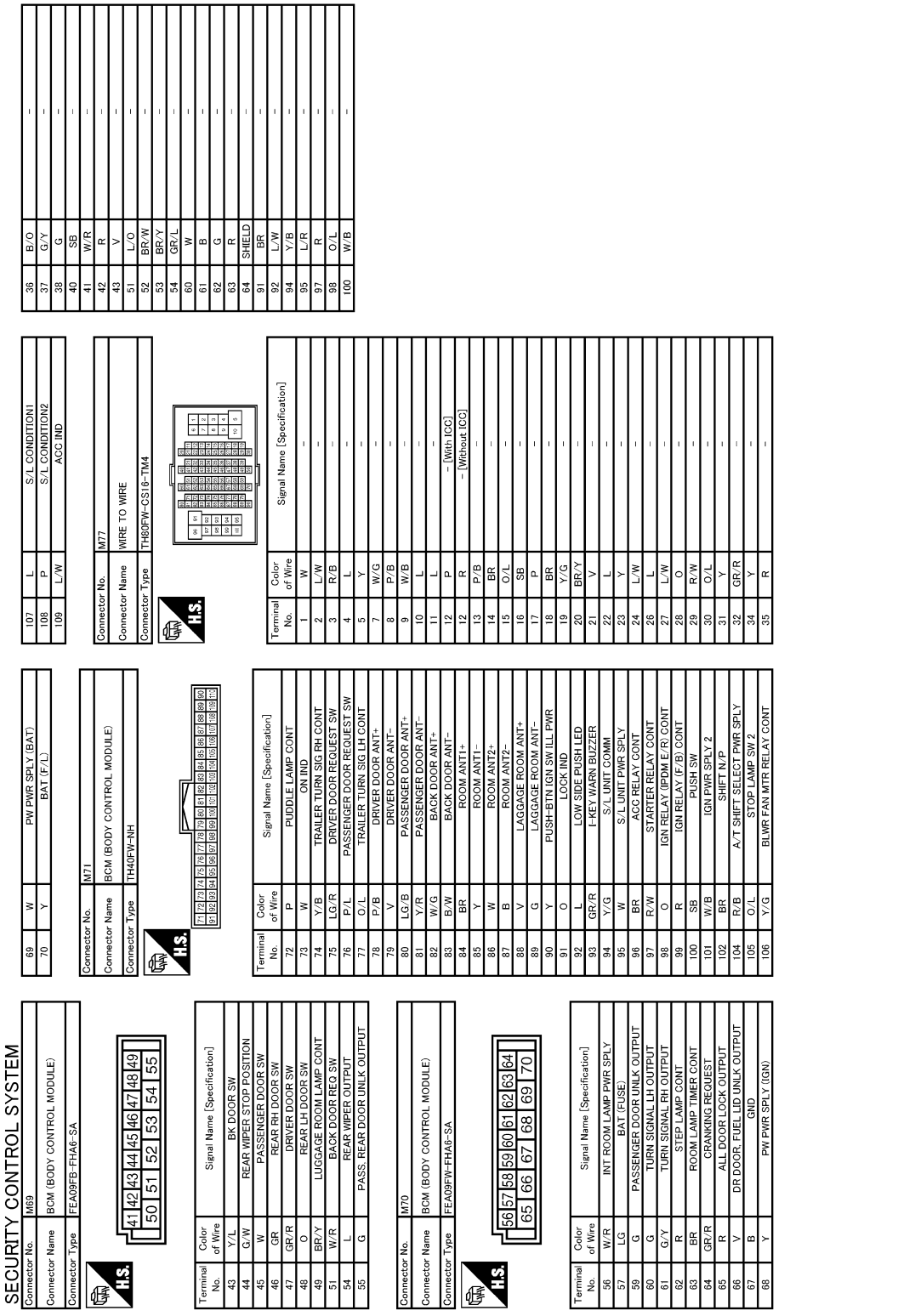
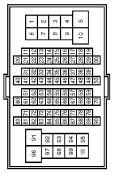


JCKWM4470GB

SECURITY CONTROL SYSTEM

Connector No.	M82
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
4	V/W	–
5	G/R	–
6	P	–
9	GR/L	–
10	Y/R	–
11	L/R	–
12	W/G	–
13	BR/Y	–
14	LG	–
15	BR/W	–
17	W/B	–
18	GR/R	–
20	W/R	–
21	B	–
22	R/L	–
23	G/R	–
24	R/W	–
25	W/L	–
26	R	–
27	L	–
28	B/SB	–
37	G/Y	–
38	G/Y	–
39	O	–
40	W	–
41	R	–
42	B	–
43	Y	–
44	G	–
45	SHIELD	–
46	G/O	–
47	G/R	–
48	SHIELD	–
49	W	–
50	SHIELD	–
51	Y/R	–
52	GR	–
53	LG/B	–
54	LG/R	–
55	R/G	–
56	B/O	–
57	SB	–
60	G	–
61	B	–
62	W	–
63	R	–
64	SHIELD	–
65	L/Y	–
66	V	–
67	B/W	–
91	G/R	–
95	SB	–
96	G/R	–
97	GR/L	–
98	G/W	–
99	P	–
100	L	–

Connector No.	M101
Connector Name	PUSH-BUTTON IGNITION SWITCH
Connector Type	TK08FBR

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	–
2	B	–
3	Y	–
4	SB	–
5	O	–
6	L/W	–
7	W	–
8	LG	–

Connector No.	M105
Connector Name	INSIDE KEY ANTENNA (INSTRUMENT CENTER)
Connector Type	RK02FL

H.S.

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

Connector No.	M107
Connector Name	INSIDE KEY ANTENNA (CONSOLE)
Connector Type	RK02FL

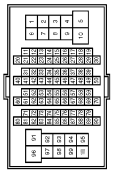
H.S.

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

JCKWM4471GB

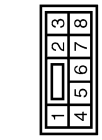
SECURITY CONTROL SYSTEM

Connector No.	M111
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
1	R/B	–
2	G	–
3	W/R	–
5	W/B	–
6	L/Y	–
7	R	–
8	G/R	–
9	GR/R	–
11	W	–
12	V	–
13	Y	–
16	L/O	–
17	GR/L	–
18	R/G	–
19	L/Y	–
20	G/Y	–
21	R	–
22	GR	–
27	L/O	–
29	SB	–
30	R/L	–
31	Y/L	–
32	W/R	–
33	W/G	–
34	L/R	–
39	P/B	–
40	W/R	–
41	R	–
42	L/W	–
43	B/W	–
51	O/L	–
52	L/R	–
53	SB	–
54	V/W	–
59	L	–
60	GR	–
61	P/L	–
62	B/SB	–
63	R/Y	–
64	BR	–
70	O	–
71	G/R	–
72	SHIELD	–
73	G/O	–
74	G/Y	–
77	SB	–
78	LG	–
79	R/B	–
90	W/B	–
93	Y	–
94	L	–
95	L/R	–
96	R	–
97	W	–
98	V	–
99	L/W	–
100	W	–

Connector No.	M142
Connector Name	DONGLE UNIT
Connector Type	NS06FBR-CS



Terminal No.	Color of Wire	Signal Name [Specification]
1	B	GND
7	SB	INTERFACE

JCKWM4472GB

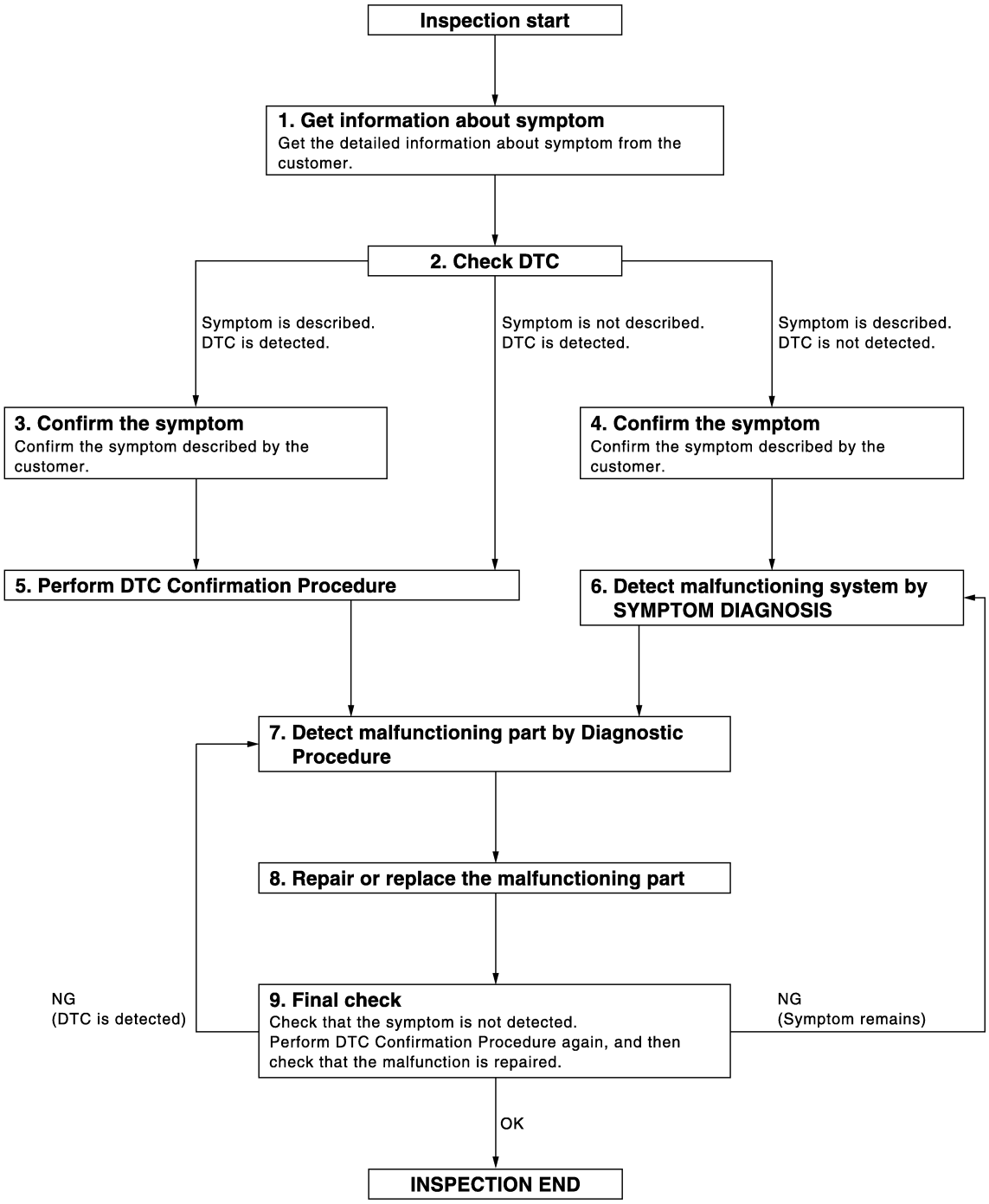
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000006226196

OVERALL SEQUENCE



JMKIA3449GB

DETAILED FLOW

1.GET INFORMATION ABOUT SYMPTOM

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

>> GO TO 2.

2.CHECK DTC

1. Check DTC of “ENGINE”, “BCM” and “IPDM E/R” using CONSULT-III.
2. Perform the following procedure if DTC is detected.
- Record DTC and freeze frame data (Print them out using CONSULT-III.)
- Erase DTC.
- Study the relationship between the cause detected by DTC and the symptom described by the customer.
3. Check related service bulletins for information.

Are any symptoms described and any DTC detected?

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

3.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.
Connect CONSULT-III to the vehicle, and check self diagnostic results in real time.
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, and check self diagnostic results in real time.
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 self diagnostic results in real time.
If two or more DTCs are detected, refer to BCS-56, "DTC Inspection Priority Chart" (BCM) or PCS-22, "DTC Index" (IPDM E/R), and determine trouble diagnosis order.

Is DTC detected?

YES >> GO TO 7.
NO >> Refer to GI-40, "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 is described based on open and short circuit inspection.

Is malfunctioning part detected?

YES >> GO TO 8.
NO >> Check voltage of related BCM terminals or IPDM E/R 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 again, and then check that the malfunction is repaired securely.
When symptom is described by the customer, refer to confirmed symptom in step 3 or 4, and check that the symptom is not detected.

Does the symptom reappear?

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

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ECM

ECM : Description

INFOID:0000000006226197

Performing the following procedure can automatically activate recommunication of ECM and BCM, but only when the ECM is replaced with a new one*.
*: New one means a virgin ECM that has never been energized on-board.
(In this step, initialization procedure 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 : Work Procedure

INFOID:0000000006226198

1.PERFORM ECM RECOMMUNICATING FUNCTION

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

>> GO TO 2.

2.PERFORM ADDITIONAL SERVICE WHEN REPLACING ECM

Perform EC-143, "Work Procedure".

>> END

BCM

BCM : Description

INFOID:0000000006397657

BEFORE REPLACEMENT
When replacing BCM, save or print current vehicle specification with CONSULT-III configuration before replacement.
NOTE:
If “READ CONFIGURATION” can not be used, use the “WRITE CONFIGURATION - Manual selection” after replacing BCM.

AFTER REPLACEMENT
CAUTION:
- **When replacing BCM, you must perform “WRITE CONFIGURATION” with CONSULT-III.**
- **Complete the procedure of “WRITE CONFIGURATION” in order.**
- **If you set incorrect “WRITE CONFIGURATION”, incidents might occur.**
- **Configuration is different for each vehicle model. Confirm configuration of each vehicle model.**
- **When replacing BCM, perform the system initialization (NATS).**

BCM : Work Procedure

INFOID:0000000006397658

1.SAVING VEHICLE SPECIFICATION

CONSULT-III Configuration
Perform “READ CONFIGURATION” to save or print current vehicle specification. Refer to BCS-67, "CONFIGURATION (BCM) : Description".
NOTE:

If “READ CONFIGURATION” can not be used, use the “WRITE CONFIGURATION - Manual selection” after replacing BCM.

>> GO TO 2.

2. REPLACE BCM

Replace BCM. Refer to BCS-81, "Removal and Installation".

>> GO TO 3.

3. WRITING VEHICLE SPECIFICATION

CONSULT-III Configuration

Perform “WRITE CONFIGURATION - Config file” or “WRITE CONFIGURATION - Manual selection” to write vehicle specification. Refer to BCS-69, "CONFIGURATION (BCM) : Configuration list".

>> GO TO 4.

4. INITIALIZE BCM (NATS)

Perform BCM initialization. (NATS)

>> WORK END

DTC/CIRCUIT DIAGNOSIS

P1610 LOCK MODE

Description

INFOID:0000000006226201

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

DTC Logic

INFOID:0000000006226202

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1610	LOCK MODE	When ECM detects a communication malfunction between ECM and BCM 5 times or more.	—

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000006226203

1. CHECK ENGINE START FUNCTION

1. Check that DTC except for DTC P1610 is not detected.
   If detected, erase the DTC after fixing.
2. Turn ignition switch OFF.
3. Contact the registered Intelligent Key backside to push-button ignition switch and wait 5 seconds.
4. Turn ignition switch ON.
5. Turn ignition switch OFF and wait 5 seconds.
6. Repeat steps 3 and 5 twice (a total of 3 times).
7. Check that engine can start.

>> INSPECTION END

P1611 ID DISCORD, IMMU-ECM

DTC Logic

INFOID:0000000006226204

DTC DETECTION LOGIC

NOTE:

- If DTC P1611 is displayed with DTC U1000 (for BCM), first perform the trouble diagnosis for DTC U1000. Refer to BCS-70, "DTC Logic".
- If DTC P1611 is displayed with DTC U1010 (for BCM), first perform the trouble diagnosis for DTC U1010. Refer to BCS-71, "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.	• 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.
2. Check DTC in “Self Diagnostic Result” mode of “ENGINE” using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000006226205

1.PERFORM INITIALIZATION

Perform initialization of BCM and reregistration of all Intelligent Keys using CONSULT-III.
For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

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

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

2.CHECK SELF DIAGNOSTIC RESULT

1. Select “Self Diagnostic Result” mode of “ENGINE” using CONSULT-III.
2. Erase DTC.
3. Perform DTC CONFIRMATION PROCEDURE for DTC P1611. Refer to SEC-54, "DTC Logic".

Is DTC detected?

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

3.REPLACE BCM

1. Replace BCM. Refer to BCS-81, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT-III.
   For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

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

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

4.REPLACE ECM

1. Replace ECM. Refer to EC-535, "Removal and Installation".
2. Perform “ADDITIONAL SERVICE WHEN REPLACING ECM”. Refer to EC-143, "Work Procedure".

>> INSPECTION END

P1612 CHAIN OF ECM-IMMU

DTC Logic

INFOID:0000000006226206

DTC DETECTION LOGIC

NOTE:

- If DTC P1612 is displayed with DTC U1000 (for BCM), first perform the trouble diagnosis for DTC U1000. Refer to BCS-70, "DTC Logic".
- If DTC P1612 is displayed with DTC U1010 (for BCM), first perform the trouble diagnosis for DTC U1010. Refer to BCS-71, "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.
2. Check DTC in “Self Diagnostic Result” mode of “ENGINE” using CONSULT-III.

Is DTC detected?

YES >> Go to SEC-55, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006226207

1.REPLACE BCM

1. Replace BCM. Refer to BCS-81, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT-III.
   For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

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

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

2.REPLACE ECM

1. Replace ECM. Refer to EC-535, "Removal and Installation".
2. Perform “ADDITIONAL SERVICE WHEN REPLACING ECM”. Refer to EC-143, "Work Procedure".

>> INSPECTION END

P1614 CHAIN OF IMMU-KEY

DTC Logic

INFOID:0000000006226208

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1614	CHAIN OF IMMU-KEY	Inactive communication between NATS antenna amp. and BCM	• Harness or connectors (NATS antenna amp. circuit is open or shorted.) • NATS antenna amp. • IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

1. Contact Intelligent Key backside to push-button ignition switch.
2. Check DTC in “Self Diagnostic Result” mode of “ENGINE” using CONSULT-III.

Is DTC detected?

YES >> Go to SEC-56, "Diagnosis Procedure".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE 2

1. Press the push-button ignition switch.
2. Check DTC in “Self Diagnostic Result” mode of “ENGINE” using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000006226209

1.CHECK FUSE

1. Turn ignition switch OFF.
2. Check that the following fuse in IPDM E/R is not blown.

Signal name	Fuse No.
Battery power supply	43

Is the fuse fusing?

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

2.CHECK NATS ANTENNA AMP. POWER SUPPLY

1. Disconnect NATS antenna amp. connector.
2. Check voltage between NATS antenna amp. harness connector and ground.

(+)		(–)	Voltage (V) (Approx.)
NATS antenna amp.			
Connector	Terminal		
M26	1	Ground	Battery voltage

Is the inspection result normal?

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

3.CHECK NATS ANTENNA AMP. POWER SUPPLY CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector and NATS antenna amp. connector.

IPDM E/R		NATS antenna amp.		Continuity
Connector	Terminal	Connector	Terminal	
E14	42	M26	1	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E14	42		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".
NO >> Repair or replace harness.

4. CHECK NATS ANTENNA AMP. OUTPUT SIGNAL 1

1. Connect NATS antenna amp. connector.
2. Disconnect BCM connector.
3. Check voltage between BCM harness connector and ground.

(+)		(–)	Voltage (V) (Approx.)
BCM			
Connector	Terminal		
M68	21	Ground	12

Is the inspection result normal?

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

5. CHECK NATS ANTENNA AMP. OUTPUT SIGNAL CIRCUIT 1

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

BCM		NATS antenna amp.		Continuity
Connector	Terminal	Connector	Terminal	
M68	21	M26	2	Existed

3. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M68	21		Not existed

Is the inspection result normal?

YES >> Replace NATS antenna amp. Refer to SEC-155, "Removal and Installation".
NO >> Repair or replace harness.

6. CHECK NATS ANTENNA AMP. COMMUNICATION SIGNAL 1

1. Connect BCM connector.
2. Check voltage between BCM harness connector and ground using analog tester.

(+)		(–)	Condition	Voltage (V) (Approx.)
BCM				
Connector	Terminal			
M68	21	Ground	Contact Intelligent Key backside to push-button ignition switch, then turn ignition switch ON.	Just after pressing push-button ignition switch, pointer of analog tester should move.

Is the inspection result normal?

YES >> GO TO 7.
NO >> Replace NATS antenna amp. Refer to SEC-155, "Removal and Installation".

7. CHECK NATS ANTENNA AMP. OUTPUT SIGNAL 2

1. Disconnect BCM connector.
2. Check voltage between BCM harness connector and ground.

(+)		(–)	Voltage (V) (Approx.)
BCM			
Connector	Terminal		
M68	25	Ground	12

Is the inspection result normal?

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

8. CHECK NATS ANTENNA AMP. OUTPUT SIGNAL CIRCUIT 2

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

BCM		NATS antenna amp.		Continuity
Connector	Terminal	Connector	Terminal	
M68	25	M26	3	Existed

3. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M68	25		Not existed

Is the inspection result normal?

YES >> Replace NATS antenna amp. Refer to SEC-155, "Removal and Installation".
NO >> Repair or replace harness.

9. CHECK NATS ANTENNA AMP. COMMUNICATION SIGNAL 2

1. Connect BCM connector.
2. Check voltage between BCM harness connector and ground using analog tester.

(+)		(–)	Condition	Voltage (V) (Approx.)
BCM				
Connector	Terminal			
M68	25	Ground	Contact Intelligent Key backside to push-button ignition switch, then turn ignition switch ON.	Just after pressing push-button ignition switch, pointer of analog tester should move.

Is the inspection result normal?

YES >> GO TO 10.
NO >> Replace NATS antenna amp. Refer to SEC-155, "Removal and Installation".

10. CHECK NATS ANTENNA AMP. GROUND CIRCUIT

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

NATS antenna amp.		Ground	Continuity
Connector	Terminal		
M26	4		Existed

Is the inspection result normal?

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

11. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

B2192 ID DISCORD, IMMU-ECM

DTC Logic

INFOID:0000000006226210

DTC DETECTION LOGIC

NOTE:

- If DTC B2192 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-70, "DTC Logic".
- If DTC B2192 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-71, "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.	• 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.
2. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000006226211

1.PERFORM INITIALIZATION

Perform initialization of BCM and reregistration of all Intelligent Keys using CONSULT-III.
For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

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

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

2.CHECK SELF-DIAGNOSIS RESULT

1. Select “Self Diagnostic Result” mode of “BCM” using CONSULT-III.
2. Erase DTC.
3. Perform DTC CONFIRMATION PROCEDURE for DTC B2192. Refer to SEC-60, "DTC Logic".

Is DTC detected?

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

3.REPLACE BCM

1. Replace BCM. Refer to BCS-81, "Removal and Installation".
2. Perform initialization of BCM and reregistration of all Intelligent Keys using CONSULT-III.
   For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

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

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

4.REPLACE ECM

1. Replace ECM. Refer to EC-535, "Removal and Installation".
2. Perform “ADDITIONAL SERVICE WHEN REPLACING ECM”. Refer to EC-143, "Work Procedure".

>> INSPECTION END

B2193 CHAIN OF ECM-IMMU

DTC Logic

INFOID:0000000006226212

DTC DETECTION LOGIC

NOTE:

- If DTC B2193 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-70, "DTC Logic".
- If DTC B2193 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-71, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2193	CHAIN OF BCM-ECM	Inactive communication between BCM and ECM	• 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.
2. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT-III.

Is DTC detected?

YES >> Go to SEC-61, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006226213

1.REPLACE BCM

1. Replace BCM. Refer to BCS-81, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT-III.
   For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

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

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

2.REPLACE ECM

1. Replace ECM. Refer to EC-535, "Removal and Installation".
2. Perform “ADDITIONAL SERVICE WHEN REPLACING ECM”. Refer to EC-143, "Work Procedure".

>> INSPECTION END

B2195 ANTI-SCANNING

DTC Logic

INFOID:0000000006226214

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.
2. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000006226215

1.CHECK SELF DIAGNOSTIC RESULT 1

1. Select “Self Diagnostic Result” mode of “BCM” using CONSULT-III.
2. Erase DTC.
3. Perform DTC CONFIRMATION PROCEDURE for DTC B2195. Refer to SEC-62, "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 >> GO TO 4.

3.CHECK SELF DIAGNOSTIC RESULT 2

1. Obtain the customers approval to remove unspecified accessory part related to engine start, and then remove it.
2. Select “Self Diagnostic Result” of “BCM” using CONSULT-III.
3. Erase DTC.
4. Perform DTC CONFIRMATION PROCEDURE for DTC B2195. Refer to SEC-62, "DTC Logic".

Is DTC detected?

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

4.REPLACE BCM

1. Replace BCM. Refer to BCS-81, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT-III.
   For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

B2196 DONGLE UNIT

Description

INFOID:0000000006226660

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

DTC Logic

INFOID:0000000006226661

DTC DETECTION LOGIC

NOTE:

- If DTC B2196 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-70, "DTC Logic".
- If DTC B2196 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-71, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2196	DONGLE NG	The ID verification results between BCM and dongle unit is NG.	• Harness or connectors (Dongle unit circuit is open or shorted.) • Dongle unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is the DTC detected?

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

Diagnosis Procedure

INFOID:0000000006226662

1.PERFORM INITIALIZATION

1. Perform initialization of BCM and reregistration of all Intelligent Keys using CONSULT-III.
   For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.
2. Start the engine.

Dose the engine start?

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

2.CHECK DONGLE UNIT CIRCUIT

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

BCM		Dongle unit		Continuity
Connector	Terminal	Connector	Terminal	
M68	24	M142	7	Existed

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M68	24		Not existed

Is the inspection result normal?

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

3.CHECK DONGLE UNIT GROUND CIRCUIT

Check continuity between dongle unit harness connector and ground.

Dongle unit		Ground	Continuity
Connector	Terminal		
M142	1		Existed

Is the inspection result normal?

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

B2198 NATS ANTENNA AMP.

DTC Logic

INFOID:0000000006226216

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2198	NATS ANTENNA AMP.	Inactive communication between NATS antenna amp. and BCM	• Harness or connectors (NATS antenna amp. circuit is open or shorted.) • NATS antenna amp. • IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

1. Contact Intelligent Key backside to push-button ignition switch.
2. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT-III.

Is DTC detected?

YES >> Go to SEC-65, "Diagnosis Procedure".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE 2

1. Press the push-button ignition switch.
2. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000006226217

1.CHECK FUSE

1. Turn ignition switch OFF.
2. Check that the following fuse in IPDM E/R is not blown.

Signal name	Fuse No.
Battery power supply	43

Is the fuse fusing?

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

2.CHECK NATS ANTENNA AMP. POWER SUPPLY

1. Disconnect NATS antenna amp. connector.
2. Check voltage between NATS antenna amp. harness connector and ground.

(+)		(–)	Voltage (V) (Approx.)
NATS antenna amp.			
Connector	Terminal		
M26	1	Ground	Battery voltage

Is the inspection result normal?

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

3.CHECK NATS ANTENNA AMP. POWER SUPPLY CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector and NATS antenna amp. connector.

IPDM E/R		NATS antenna amp.		Continuity
Connector	Terminal	Connector	Terminal	
E14	42	M26	1	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E14	42		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".
NO >> Repair or replace harness.

4. CHECK NATS ANTENNA AMP. OUTPUT SIGNAL 1

1. Connect NATS antenna amp. connector.
2. Disconnect BCM connector.
3. Check voltage between BCM harness connector and ground.

(+)		(–)	Voltage (V) (Approx.)
BCM			
Connector	Terminal		
M68	21	Ground	12

Is the inspection result normal?

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

5. CHECK NATS ANTENNA AMP. OUTPUT SIGNAL CIRCUIT 1

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

BCM		NATS antenna amp.		Continuity
Connector	Terminal	Connector	Terminal	
M68	21	M26	2	Existed

3. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M68	21		Not existed

Is the inspection result normal?

YES >> Replace NATS antenna amp. Refer to SEC-155, "Removal and Installation".
NO >> Repair or replace harness.

6. CHECK NATS ANTENNA AMP. COMMUNICATION SIGNAL 1

1. Connect BCM connector.
2. Check voltage between BCM harness connector and ground using analog tester.

(+)		(–)	Condition	Voltage (V) (Approx.)
BCM				
Connector	Terminal			
M68	21	Ground	Contact Intelligent Key backside to push-button ignition switch, then turn ignition switch ON.	Just after pressing push-button ignition switch, pointer of analog tester should move.

Is the inspection result normal?

YES >> GO TO 7.
NO >> Replace NATS antenna amp. Refer to SEC-155, "Removal and Installation".

7. CHECK NATS ANTENNA AMP. OUTPUT SIGNAL 2

1. Disconnect BCM connector.
2. Check voltage between BCM harness connector and ground.

(+)		(–)	Voltage (V) (Approx.)
BCM			
Connector	Terminal		
M68	25	Ground	12

Is the inspection result normal?

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

8. CHECK NATS ANTENNA AMP. OUTPUT SIGNAL CIRCUIT 2

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

BCM		NATS antenna amp.		Continuity
Connector	Terminal	Connector	Terminal	
M68	25	M26	3	Existed

3. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M68	25		Not existed

Is the inspection result normal?

YES >> Replace NATS antenna amp. Refer to SEC-155, "Removal and Installation".
NO >> Repair or replace harness.

9. CHECK NATS ANTENNA AMP. COMMUNICATION SIGNAL 2

1. Connect BCM connector.
2. Check voltage between BCM harness connector and ground using analog tester.

(+)		(–)	Condition	Voltage (V) (Approx.)
BCM				
Connector	Terminal			
M68	25	Ground	Contact Intelligent Key backside to push-button ignition switch, then turn ignition switch ON.	Just after pressing push-button ignition switch, pointer of analog tester should move.

Is the inspection result normal?

YES >> GO TO 10.
NO >> Replace NATS antenna amp. Refer to SEC-155, "Removal and Installation".

10. CHECK NATS ANTENNA AMP. GROUND CIRCUIT

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

NATS antenna amp.		Ground	Continuity
Connector	Terminal		
M26	4		Existed

Is the inspection result normal?

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

11. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

B2013 STEERING LOCK UNIT

DTC Logic

INFOID:0000000006226218

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.	Steering lock unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Lock the steering.
NOTE:

To lock the steering	1. Set the selector lever in the P position. 2. Turn the power supply position to the OFF position. 3. Press any door switch.
To unlock the steering	1. Set the selector lever in the P position. 2. Press the push-button ignition switch with brake pedal not depressed.

3. Press the push-button ignition switch.
4. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000006226219

1.PERFORM INITIALIZATION

Perform initialization of BCM and reregistration of all Intelligent Keys using CONSULT-III.
For initialization and registration procedures, 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 the service procedure for steering lock unit replacement. Refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

B2014 CHAIN OF STRG-IMMU

DTC Logic

INFOID:0000000006226220

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.
NOTE:

To lock the steering	1. Set the selector lever in the P position. 2. Turn the power supply position to the OFF position. 3. Press any door switch.
To unlock the steering	1. Set the selector lever in the P position. 2. Press the push-button ignition switch with brake pedal not depressed.

3. Press the push-button ignition switch.
4. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000006226221

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				
M12	7	Ground	Ignition switch	OFF or ACC	12
				ON	0

Is the inspection result normal?

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

2.CHECK STEERING LOCK UNIT POWER SUPPLY CIRCUIT

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

Steering lock unit		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M12	7	M71	95	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M12	7		Not existed

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace harness.

3. CHECK STEERING LOCK UNIT GROUND CIRCUIT

Check continuity between steering lock unit and ground.

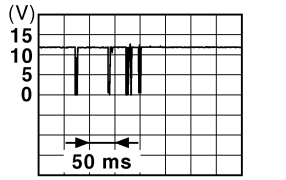
Steering lock unit		Ground	Continuity
Connector	Terminal		
M12	5		Existed
	6		

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

(+) Steering lock unit		(–)	Condition		Voltage (V) (Approx.)
Connector	Terminal				
M12	2	Ground	Steering lock unit	Lock status	12
				Lock or unlock	
				For 15 seconds after unlock	12
				15 seconds or later after unlock.	0

JMKIA0066GB

NOTE:

To lock the steering	1. Set the selector lever in the P position. 2. Turn the power supply position to the OFF position. 3. Press any door switch.
To unlock the steering	1. Set the selector lever in the P position. 2. Press the push-button ignition switch with brake pedal not depressed.

Is the inspection result normal?

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

5. REPLACE STEERING LOCK UNIT

1. Replace steering lock unit.
2. Perform the service procedure for steering lock unit replacement. Refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

6. CHECK STEERING LOCK UNIT COMMUNICATION CIRCUIT

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

Steering lock unit		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M12	2	M71	94	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M12	2		Not existed

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace harness.

7. REPLACE BCM

1. Replace BCM. Refer to BCS-81, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT-III.
   For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

B2555 STOP LAMP

DTC Logic

INFOID:0000000006226222

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 • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000006226223

1.CHECK STOP LAMP SWITCH INPUT SIGNAL 1

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

(+)		(–)	Voltage (V) (Approx.)
BCM			
Connector	Terminal		
M71	105	Ground	Battery voltage

Is the inspection normal?

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

2.CHECK STOP LAMP SWITCH POWER SUPPLY CIRCUIT

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

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

Is the inspection result normal?

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

3.CHECK STOP LAMP SWITCH INPUT SIGNAL 2

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

(+)		(–)	Condition		Voltage (V) (Approx.)
BCM					
Connector	Terminal				
M68	9	Ground	Brake pedal	Depressed	Battery voltage
				Not depressed	0

Is the inspecting result normal?

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

4.REPLACE BCM

1. Replace BCM. Refer to BCS-81, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT-III.
   For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

5.CHECK STOP LAMP SWITCH CIRCUIT

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

Stop lamp switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E115	2	M68	9	Existed

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

Stop lamp switch		Ground	Continuity
Connector	Terminal		
E115	2		Not existed

Is the inspection result normal?

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

6.CHECK STOP LAMP SWITCH

Refer to SEC-74, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 7.
NO >> Replace stop lamp switch. Refer to BR-20, "Removal and Installation".

7.CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000006226224

1.CHECK STOP LAMP SWITCH

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

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

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace stop lamp switch. Refer to BR-20, "Removal and Installation".

B2556 PUSH-BUTTON IGNITION SWITCH

DTC Logic

INFOID:0000000006226225

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2556	PUSH-BTN IGN SW	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. Press push-button ignition switch under the following condition.
- Brake pedal: Not depressed
2. Release push-button ignition switch and wait 100 seconds or more.
3. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000006226226

1.CHECK PUSH-BUTTON IGNITION SWITCH INPUT SIGNAL

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

(+)		(–)	Voltage (V) (Approx.)
Push-button ignition switch			
Connector	Terminal		
M101	4	Ground	12

Is the inspection result normal?

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

2.CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT

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

Push-button ignition switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M101	4	M71	100	Existed

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

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

Is the inspection result normal?

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

3.REPLACE BCM

1. Replace BCM. Refer to BCS-81, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT-III.
   For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

4.CHECK PUSH-BUTTON IGNITION SWITCH GROUND CIRCUIT

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

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

Is the inspection result normal?

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

5.CHECK PUSH-BUTTON IGNITION SWITCH

Refer to SEC-77, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Replace push-button ignition switch. Refer to SEC-156, "Removal and Installation".

6.CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000006226227

1.CHECK PUSH-BUTTON IGNITION SWITCH

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

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

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace push-button ignition switch. Refer to SEC-156, "Removal and Installation".

B2557 VEHICLE SPEED

DTC Logic

INFOID:0000000006226228

DTC DETECTION LOGIC

NOTE:

- If DTC B2557 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-70, "DTC Logic".
- If DTC B2557 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-71, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible causes
B2557	VEHICLE SPEED	BCM detects one of the following conditions for 10 seconds continuously. • Vehicle speed signal from combination meter is 10 km/h (6.2 MPH) or more, and vehicle speed signal from ABS actuator and electric unit (control unit) is 4 km/h (2.5 MPH) or less. • Vehicle speed signal from combination meter is 4 km/h (2.5 MPH) or less, and vehicle speed signal from ABS actuator and electric unit (control unit) is 10 km/h (6.2 MPH) or more.	• Harness or connectors (The CAN communication line is open or shorted.) • Combination meter • ABS actuator and electric unit (control unit)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000006226229

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

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

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to BRC-51, "DTC Index".
NO >> GO TO 2.

2.CHECK DTC OF “COMBINATION METER”

Check DTC in “Self Diagnostic Result” mode of “METER/M&A” using CONSULT-III.

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to MWI-43, "DTC Index".
NO >> GO TO 3.

3.CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

B2601 SHIFT POSITION

DTC Logic

INFOID:0000000006226230

DTC DETECTION LOGIC

NOTE:

- If DTC B2601 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-70, "DTC Logic".
- If DTC B2601 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-71, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2601	SHIFT POSITION	When there is a difference between P range signal from A/T shift selector (detention switch) and P position signal from IPDM E/R (CAN).	• Harness or connectors (CAN communication line is open or shorted.) • Harness or connectors [A/T shift selector (detention switch) circuit is open or shorted.] • A/T shift selector (detention switch) • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-79, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006226231

1.CHECK A/T SHIFT SELECTOR POWER SUPPLY

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

(+)		(–)	Voltage (V) (Approx.)
A/T shift selector (detention switch)			
Connector	Terminal		
M57	13	Ground	12

Is the inspection result normal?

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

2.CHECK A/T SHIFT SELECTOR POWER SUPPLY CIRCUIT

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

A/T shift selector (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M57	13	M71	104	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		
M57	13		Not existed

Is the inspection result normal?

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

3. REPLACE BCM

1. Replace BCM. Refer to BCS-81, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT-III.
   For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

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

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

A/T shift selector (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M57	14	M68	37	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		
M57	14		Not existed

Is the inspection result normal?

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

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

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

A/T shift selector (detention switch)		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M57	14	E17	64	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-81, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 7.
NO >> Replace A/T shift selector. Refer to TM-176, "Removal and Installation".

7. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000006226232

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

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

A/T shift selector (detention switch)		Condition		Continuity
Terminal				
13	14	Selector lever	P position	Not existed
			Other than above	Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace A/T shift selector. Refer to TM-176, "Removal and Installation".

B2602 SHIFT POSITION

DTC Logic

INFOID:0000000006226233

DTC DETECTION LOGIC

NOTE:

- If DTC B2602 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-70, "DTC Logic".
- If DTC B2602 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-71, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2602	SHIFT POSITION	BCM detects the following status for 10 seconds. • Selector lever is in the P position • Vehicle speed is 4 km/h (2.5 MPH) or more • Ignition switch is in the ON position	• Harness or connectors (CAN communication line is open or shorted.) • Harness or connectors [A/T shift selector (detention switch) circuit is open or shorted.] • A/T shift selector (detention switch) • Combination meter • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000006226234

1.CHECK DTC OF COMBINATION METER

Check DTC in “Self Diagnostic Result” mode of “METER/M&A” using CONSULT-III.

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to MWI-43, "DTC Index".
NO >> GO TO 2.

2.CHECK A/T SHIFT SELECTOR POWER SUPPLY

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

(+)		(–)	Voltage (V) (Approx.)
A/T shift selector (detention switch)			
Connector	Terminal		
M57	13	Ground	12

Is the inspection result normal?

YES >> GO TO 5.
NO >> GO TO 3.

3.CHECK A/T SHIFT SELECTOR POWER SUPPLY CIRCUIT

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

A/T shift selector (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M57	13	M71	104	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		
M57	13		Not existed

Is the inspection result normal?

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

4. REPLACE BCM

1. Replace BCM. Refer to BCS-81, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT-III.
   For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

5. CHECK A/T SHIFT SELECTOR CIRCUIT

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

A/T shift selector (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M57	14	M68	37	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		
M57	14		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-83, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 7.
NO >> Replace A/T shift selector. Refer to TM-176, "Removal and Installation".

7. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000006226235

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

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

A/T shift selector (detention switch) Terminal		Condition		Continuity
13	14	Selector lever	P position	Not existed
			Other than above	Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace A/T shift selector. Refer to TM-176, "Removal and Installation".

B2603 SHIFT POSITION

DTC Logic

INFOID:0000000006226236

DTC DETECTION LOGIC

NOTE:

- If DTC B2603 is displayed with DTC B2601, first perform the trouble diagnosis for DTC B2601. Refer to SEC-79, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible causes
B2603	SHIFT POSI STATUS	BCM detects the following status when ignition switch is in the ON position. • P position signal from TCM: approx. 0 V • A/T shift selector (detention switch) signal: approx. 0 V	• Harness or connector [A/T shift selector (detention switch) circuit is open or shorted.] • Harness or connectors (TCM circuit is open or shorted.) • A/T shift selector (detention switch) • A/T assembly (TCM) • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

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

Is DTC detected?

YES >> Go to SEC-85, "Diagnosis Procedure".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE 2

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000006226237

1.INSPECTION START

Perform inspection in accordance with procedure that confirms DTC.

Which procedure confirms DTC?

DTC confirmation procedure 1>>GO TO 2.
DTC confirmation procedure 2>>GO TO 6.

2.CHECK DTC OF TCM

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

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to TM-78, "DTC Index".
NO >> GO TO 3.

3.CHECK BCM INPUT SIGNAL

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

(+)		(–)	Condition		Voltage (V) (Approx.)
BCM					
Connector	Terminal				
M71	102	Ground	Selector lever	P or N position	12
				Other than above	0

Is the inspection result normal?

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

4. REPLACE BCM

1. Replace BCM. Refer to BCS-81, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT-III.
   For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

5. CHECK BCM INPUT SIGNAL CIRCUIT

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

A/T assembly		BCM		Continuity
Connector	Terminal	Connector	Terminal	
F51	9	M71	102	Existed

5. 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 11.
NO >> Repair or replace harness.

6. CHECK A/T SHIFT SELECTOR POWER SUPPLY

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

(+)		(–)	Voltage (V) (Approx.)
A/T shift selector (detention switch)			
Connector	Terminal		
M57	13	Ground	12

Is the inspection result normal?

YES >> GO TO 9.
NO >> GO TO 7.

7. CHECK A/T SHIFT SELECTOR POWER SUPPLY CIRCUIT

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

A/T shift selector (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M57	13	M71	104	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		
M57	13		Not existed

Is the inspection result normal?

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

8.REPLACE BCM

1. Replace BCM. Refer to BCS-81, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT-III.
   For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

9.CHECK A/T SHIFT SELECTOR CIRCUIT

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

A/T shift selector (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M57	14	M68	37	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		
M57	14		Not existed

Is the inspection result normal?

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

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

Refer to SEC-87, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 11.
NO >> Replace A/T shift selector. Refer to TM-176, "Removal and Installation".

11.CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000006226238

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

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

A/T shift selector (detention switch) Terminal		Condition		Continuity
13	14	Selector lever	P position	Not existed
			Other than above	Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace A/T shift selector. Refer to TM-176, "Removal and Installation".

B2604 SHIFT POSITION

DTC Logic

INFOID:0000000006226239

DTC DETECTION LOGIC

NOTE:

- If DTC B2604 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-70, "DTC Logic".
- If DTC B2604 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-71, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2604	PNP/CLUTCH SW	The following states are detected for 5 seconds while ignition switch is ON. • P/N position signal is sent from TCM but shift position signal input (CAN) from TCM is other than P and N • P/N position signal is not sent from TCM but shift position signal input (CAN) from TCM is P or N	• Harness or connectors (CAN communication line is open or shorted.) • Harness or connectors (TCM circuit is open or shorted.) • TCM • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-89, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006226240

1.CHECK DTC OF TCM

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

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to TM-78, "DTC Index".
NO >> GO TO 2.

2.CHECK BCM INPUT SIGNAL

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

(+)		(–)	Condition		Voltage (V) (Approx.)
BCM					
Connector	Terminal				
M71	102	Ground	Selector lever	P or N position	12
				Other than above	0

Is the inspection result normal?

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

3.REPLACE BCM

1. Replace BCM. Refer to BCS-81, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT-III.

For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

4. CHECK BCM INPUT SIGNAL CIRCUIT

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

A/T assembly		BCM		Continuity
Connector	Terminal	Connector	Terminal	
F51	9	M71	102	Existed

5. 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 5.
NO >> Repair or replace harness.

5. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

B2605 SHIFT POSITION

DTC Logic

INFOID:0000000006226241

DTC DETECTION LOGIC

NOTE:

- If DTC B2605 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-70, "DTC Logic".
- If DTC B2605 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-71, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2605	PNP/CLUTCH SW	When ignition switch is ON, P/N position signal input from TCM and P/N position signal (CAN) input from IPDM E/R do not match.	• Harness or connectors (CAN communication line is open or shorted.) • Harness or connectors (TCM circuit is open or shorted.) • IPDM E/R • BCM

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-91, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006226242

1. CHECK IPDM E/R INPUT SIGNAL

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

(+)		(–)	Condition		Voltage (V) (Approx.)
IPDM E/R					
Connector	Terminal				
E15	48	Ground	Selector lever	P or N position	12
				Other than above	0

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".
NO >> GO TO 2.

2. CHECK IPDM E/R INPUT SIGNAL CIRCUIT

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

IPDM E/R		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E15	48	M71	102	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E15	48		Not existed

Is the inspection result normal?

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

3. REPLACE BCM

1. Replace BCM. Refer to BCS-81, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT-III.
   For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

B2608 STARTER RELAY

DTC Logic

INFOID:0000000006226243

DTC DETECTION LOGIC

NOTE:

- If DTC B2608 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-70, "DTC Logic".
- If DTC B2608 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-71, "DTC Logic".

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press push-button ignition switch under the following conditions to start engine.
- Selector lever: In the P position
- Brake pedal: Depressed
2. Wait 1 second after engine started.
3. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000006226244

1.CHECK DTC OF IPDM E/R

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

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to PCS-22, "DTC Index".
NO >> GO TO 2.

2.CHECK BCM POWER SUPPLY CIRCUIT

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

(+) BCM Connector	(+) BCM Terminal	(–)	Condition		Voltage (V) (Approx.)
M71	97	Ground	Selector lever	N or P position	12
				Other than above	0

Is the inspection result normal?

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

3.CHECK STARTER RELAY CIRCUIT

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

IPDM E/R		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E13	30	M71	97	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E13	30		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".
NO >> Repair or replace harness.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

B2609 STEERING STATUS

DTC Logic

INFOID:0000000006226245

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2609	S/L STATUS	BCM detects one of the following status. • Combination of steering lock state switch and steering unlock state switch is not normal. • Combination of steering lock state switch and steering unlock state switch is different from steering lock/unlock state that BCM recognizes.	• Harness or connectors (Steering lock unit circuit is open or shorted.) • Steering lock unit • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

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

Is DTC detected?

YES >> Go to SEC-95, "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 1 second or more.
4. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000006226246

1.CHECK IPDM E/R INPUT SIGNAL

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

(+)		(–)	Condition		Voltage (V) (Approx.)
IPDM E/R					
Connector	Terminal				
E17	63	Ground	Steering lock unit	Lock	12
				Unlock	0
	65			Lock	0
				Unlock	12

NOTE:

To lock the steering	1. Set the selector lever in the P position. 2. Turn the power supply position to the OFF position. 3. Press any door switch.
To unlock the steering	1. Set the selector lever in the P position. 2. Press the push-button ignition switch with brake pedal not depressed.

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

2.CHECK IPDM E/R INPUT SIGNAL CIRCUIT

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

IPDM E/R		Steering lock unit		Continuity
Connector	Terminal	Connector	Terminal	
E17	63	M12	8	Existed
	65		3	

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E17	63		Not existed
	65		

Is the inspection result normal?

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

3.REPLACE STEERING LOCK UNIT

1. Replace steering lock unit.
2. Perform the service procedure for steering lock unit replacement. Refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

4.CHECK BCM INPUT SIGNAL

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

(+)		(–)	Condition		Voltage (V) (Approx.)
BCM					
Connector	Terminal				
M71	107	Ground	Steering lock unit	Lock	0
				Unlock	12
	108			Lock	12
				Unlock	0

NOTE:

To lock the steering	1. Set the selector lever in the P position. 2. Turn the power supply position to the OFF position. 3. Press any door switch.
To unlock the steering	1. Set the selector lever in the P position. 2. Press the push-button ignition switch with brake pedal not depressed.

Is the inspection result normal?

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

5.REPLACE BCM

1. Replace BCM. Refer to BCS-81, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT-III.
   For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

6. CHECK BCM INPUT SIGNAL CIRCUIT

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

BCM		Steering lock unit		Continuity
Connector	Terminal	Connector	Terminal	
M71	107	M12	3	Existed
	108		8	

3. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M71	107		Not existed
	108		

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace harness.

7. REPLACE STEERING LOCK UNIT

1. Replace steering lock unit.
2. Perform the service procedure for steering lock unit replacement. Refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

B260B STEERING LOCK UNIT

DTC Logic

INFOID:0000000006226247

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. Turn ignition switch ON.
2. Turn ignition switch OFF.
3. Press driver side door switch.
4. Shift selector lever to the P position.
5. Press push-button ignition switch under the following condition.

- Brake pedal: Not depressed

6. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000006226248

1.INSPECTION START

1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “BCM” using CONSULT-III.
3. Touch “ERASE”.
4. Perform DTC CONFIRMATION PROCEDURE for DTC B260B. Refer to SEC-98, "DTC Logic".

Is DTC detected?

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

2.REPLACE STEERING LOCK UNIT

1. Replace steering lock unit.
2. Perform the service procedure for steering lock unit replacement. Refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

B260C STEERING LOCK UNIT

DTC Logic

INFOID:0000000006226249

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. Shift selector lever to the P position.
2. Press push-button ignition switch under the following condition.

- Brake pedal: Not depressed

3. Turn ignition switch ON.
4. Turn ignition switch OFF.
5. Press driver side door switch.
6. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000006226250

1.INSPECTION START

1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “BCM” using CONSULT-III.
3. Touch “ERASE”.
4. Perform DTC CONFIRMATION PROCEDURE for DTC B260C. Refer to SEC-99, "DTC Logic".

Is DTC detected?

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

2.REPLACE STEERING LOCK UNIT

1. Replace steering lock unit.
2. Perform the service procedure for steering lock unit replacement. Refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

B260D STEERING LOCK UNIT

DTC Logic

INFOID:0000000006226251

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. Shift selector lever to the P position.
2. Press push-button ignition switch under the following condition.
- Brake pedal: Not depressed
3. Turn ignition switch ON.
4. Turn ignition switch OFF.
5. Press driver side door switch.
6. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000006226252

1.INSPECTION START

1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “BCM” using CONSULT-III.
3. Touch “ERASE”.
4. Perform DTC Confirmation Procedure for DTC B260D. Refer to SEC-100, "DTC Logic".

Is DTC detected?

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

2.REPLACE STEERING LOCK UNIT

1. Replace steering lock unit.
2. Perform the service procedure for steering lock unit replacement. Refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

B260F ENGINE STATUS

Description

INFOID:0000000006226253

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

DTC Logic

INFOID:0000000006226254

DTC DETECTION LOGIC

NOTE:

- If DTC B260F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-70, "DTC Logic".
- If DTC B260F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-71, "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.	• Harness or connectors (CAN communication line is open or shorted.) • ECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000006226255

1.INSPECTION START

1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “BCM” using CONSULT-III.
3. Touch “ERASE”.
4. Perform DTC CONFIRMATION PROCEDURE for DTC B260F. Refer to SEC-101, "DTC Logic".

Is DTC detected?

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

2.REPLACE ECM

1. Replace ECM. Refer to EC-535, "Removal and Installation".
2. Perform “ADDITIONAL SERVICE WHEN REPLACING ECM”. Refer to EC-143, "Work Procedure".

>> INSPECTION END

B2612 STEERING STATUS

DTC Logic

INFOID:0000000006226256

DTC DETECTION LOGIC

NOTE:

- If DTC B2612 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-70, "DTC Logic".
- If DTC B2612 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-71, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible causes
B2612	S/L STATUS	The following 2 state signals are different. • Steering lock state recognition of BCM • Steering lock state signal from IPDM E/R	• Harness or connectors (CAN communication line is open or shorted.) • Harness or connectors (Steering lock unit circuit is open or shorted.) • Steering lock unit • IPDM E/R • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

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

Is DTC detected?

YES >> Go to SEC-102, "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 1 second or more.
4. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT-III.

Is DTC detected?

YES >> Go to SEC-102, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006226257

1.CHECK IPDM E/R INPUT SIGNAL

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

(+)		(–)	Condition		Voltage (V) (Approx.)
IPDM E/R					
Connector	Terminal				
E17	63	Ground	Steering lock unit	Lock	12
				Unlock	0
	65			Lock	0
				Unlock	12

NOTE:

To lock the steering	1. Set the selector lever in the P position. 2. Turn the power supply position to the OFF position. 3. Press any door switch.
To unlock the steering	1. Set the selector lever in the P position. 2. Press the push-button ignition switch with brake pedal not depressed.

Is the inspection result normal?

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

2.CHECK IPDM E/R INPUT SIGNAL CIRCUIT

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

IPDM E/R		Steering lock unit		Continuity
Connector	Terminal	Connector	Terminal	
E17	63	M12	8	Existed
	65		3	

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E17	63		Not existed
	65		

Is the inspection result normal?

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

3.REPLACE STEERING LOCK UNIT

1. Replace steering lock unit.
2. Perform the service procedure for steering lock unit replacement. Refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

4.CHECK BCM INPUT SIGNAL

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

(+)		(–)	Condition		Voltage (V) (Approx.)
BCM					
Connector	Terminal				
M71	107	Ground	Steering lock unit	Lock	0
				Unlock	12
	108			Lock	12
				Unlock	0

NOTE:

To lock the steering	1. Set the selector lever in the P position. 2. Turn the power supply position to the OFF position. 3. Press any door switch.
To unlock the steering	1. Set the selector lever in the P position. 2. Press the push-button ignition switch with brake pedal not depressed.

Is the inspection result normal?

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

5. REPLACE BCM

1. Replace BCM. Refer to BCS-81, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT-III.
   For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

6. CHECK BCM INPUT SIGNAL CIRCUIT

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

BCM		Steering lock unit		Continuity
Connector	Terminal	Connector	Terminal	
M71	107	M12	3	Existed
	108		8	

3. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M71	107		Not existed
	108		

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace harness.

7. REPLACE STEERING LOCK UNIT

1. Replace steering lock unit.
2. Perform the service procedure for steering lock unit replacement. Refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

B2619 BCM

DTC Logic

INFOID:0000000006226258

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2619	BCM	There is a difference between power supply output to steering lock unit and steering lock unit F/B result.	BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000006226259

1.INSPECTION START

1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “BCM” using CONSULT-III.
3. Touch “ERASE”.
4. Perform DTC CONFIRMATION PROCEDURE for DTC B2619. Refer to SEC-105, "DTC Logic".

Is DTC detected?

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

2.REPLACE BCM

1. Replace BCM. Refer to BCS-81, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT-III.
For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

B26E9 STEERING STATUS

DTC Logic

INFOID:0000000006226260

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26E9	LOCK MALFUNCTION	BCM activates steering lock but steering state that BCM recognizes is unlock.	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. Turn ignition switch ON.
5. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000006226261

1.INSPECTION START

1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “BCM” using CONSULT-III.
3. Touch “ERASE”.
4. Perform DTC CONFIRMATION PROCEDURE for DTC B26E9. Refer to SEC-106, "DTC Logic".

Is DTC detected?

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

2.REPLACE STEERING LOCK UNIT

1. Replace steering lock unit.
2. Perform the service procedure for steering lock unit replacement. Refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

B26EF STEERING LOCK RELAY

DTC Logic

INFOID:0000000006226262

DTC DETECTION LOGIC

NOTE:

- If DTC B26EF is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-70, "DTC Logic".
- If DTC B26EF is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-71, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26EF	STRG LCK RELAY OFF	BCM requests IPDM E/R to turn steering lock relay ON, but BCM cannot receive steering lock relay ON state signal from IPDM E/R (CAN) within 2 seconds.	• Harness or connectors (CAN communication line is open or shorted.) • Harness or connector (Steering lock unit circuit is open or shorted.) • Steering lock unit • IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Shift selector lever to the P position.
2. Turn ignition switch ON.
3. Turn ignition switch OFF.
4. Press driver side door switch and wait 2 seconds or more.
5. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000006226263

1.CHECK DTC OF IPDM E/R

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

Is DTC detected?

YES >> Perform the diagnosis procedure related to the detected DTC. Refer to PCS-22, "DTC Index".
NO >> GO TO 2.

2.CHECK STEERING LOCK UNIT POWER SUPPLY

Check voltage between steering lock unit harness connector and ground.

(+)		(–)	Condition		Voltage (V) (Approx.)
Steering lock unit					
Connector	Terminal				
M12	1	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

NOTE:

To lock the steering	1. Set the selector lever in the P position. 2. Turn the power supply position to the OFF position. 3. Press any door switch.
To unlock the steering	1. Set the selector lever in the P position. 2. Press the push-button ignition switch with brake pedal not depressed.

Is the inspection normal?

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

3. REPLACE STEERING LOCK UNIT

1. Replace steering lock unit.
2. Perform the service procedure for steering lock unit replacement. Refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

4. CHECK STEERING LOCK RELAY CIRCUIT

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

IPDM E/R		Steering lock unit		Continuity
Connector	Terminal	Connector	Terminal	
E14	46	M12	1	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E14	46		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".
NO >> Repair or replace harness.

B26F0 STEERING LOCK RELAY

DTC Logic

INFOID:0000000006226264

DTC DETECTION LOGIC

NOTE:

- If DTC B26F0 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-70, "DTC Logic".
- If DTC B26F0 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-71, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26F0	STRG LCK RELAY ON	BCM requests IPDM E/R to turn steering lock relay OFF, but BCM cannot receive steering lock relay OFF state signal from IPDM E/R (CAN) within 2 seconds.	• Harness or connectors (CAN communication line is open or shorted.) • Harness or connector (Steering lock unit circuit is open or shorted.) • Steering lock unit • IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Shift selector lever to the P position.
2. Turn ignition switch ON.
3. Turn ignition switch OFF.
4. Press driver side door switch and wait 2 seconds or more.
5. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT-III.

Is DTC detected?

YES >> Go to SEC-109, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006226265

1.CHECK DTC OF IPDM E/R

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

Is DTC detected?

YES >> Perform the diagnosis procedure related to the detected DTC. Refer to PCS-22, "DTC Index".
NO >> GO TO 2.

2.CHECK STEERING LOCK UNIT POWER SUPPLY

Check voltage between steering lock unit harness connector and ground.

(+) Steering lock unit		(–)	Condition		Voltage (V) (Approx.)
Connector	Terminal				
M12	1	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

NOTE:

To lock the steering	1. Set the selector lever in the P position. 2. Turn the power supply position to the OFF position. 3. Press any door switch.
To unlock the steering	1. Set the selector lever in the P position. 2. Press the push-button ignition switch with brake pedal not depressed.

Is the inspection normal?

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

3. REPLACE STEERING LOCK UNIT

1. Replace steering lock unit.
2. Perform the service procedure for steering lock unit replacement. Refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

4. CHECK STEERING LOCK RELAY CIRCUIT

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

IPDM E/R		Steering lock unit		Continuity
Connector	Terminal	Connector	Terminal	
E14	46	M12	1	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E14	46		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".
NO >> Repair or replace harness.

B26F3 STARTER CONTROL RELAY

DTC Logic

INFOID:0000000006226266

DTC DETECTION LOGIC

NOTE:

- If DTC B26F3 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-70, "DTC Logic".
- If DTC B26F3 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-71, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26F3	START CONT RLY ON	BCM requests IPDM E/R to turn starter control relay OFF, but BCM cannot receive starter control relay OFF state signal from IPDM E/R (CAN).	• Harness or connectors (CAN communication line is open or shorted.) • IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press push-button ignition switch under the following conditions to start engine.
- Selector lever: In the P position
- Brake pedal: Depressed
2. Wait 2 seconds after engine started.
3. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT-III.

Is DTC detected?

YES >> Go to SEC-111, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006226267

1.CHECK DTC OF IPDM E/R

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

Is DTC detected?

YES >> Perform the diagnosis procedure related to the detected DTC. Refer to PCS-22, "DTC Index".
NO >> GO TO 2.

2.CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

B26F4 STARTER CONTROL RELAY

DTC Logic

INFOID:0000000006226268

DTC DETECTION LOGIC

NOTE:

- If DTC B26F4 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-70, "DTC Logic".
- If DTC B26F4 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-71, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26F4	START CONT RELAY OFF	BCM requests IPDM E/R to turn starter control relay ON, but BCM cannot receive starter control relay ON state signal from IPDM E/R.	• Harness or connectors (CAN communication line is open or shorted.) • IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press push-button ignition switch under the following conditions to start engine, and wait 1 second or more.

- Selector lever: In the P position
- Brake pedal: Depressed

2. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000006226269

1.CHECK DTC OF IPDM E/R

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

Is DTC detected?

YES >> Perform the diagnosis procedure related to the detected DTC. Refer to PCS-22, "DTC Index".
NO >> GO TO 2.

2.CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

B26F5 STEERING LOCK STATUS SWITCH

DTC Logic

INFOID:0000000006226270

DTC DETECTION LOGIC

NOTE:

- If DTC B26F5 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-70, "DTC Logic".
- If DTC B26F5 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-71, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26F5	STRG LCK STS SW	When BCM performs steering lock request to IPDM E/R, steering lock state signal from IPDM E/R is already lock state.	• Harness or connectors (CAN communication line is open or shorted.) • Harness or connectors (Steering lock unit circuit is open or shorted.) • Steering lock unit • IPDM E/R • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Shift selector lever to the P position.
2. Turn ignition switch ON.
3. Turn ignition switch OFF.
4. Press driver side door switch.
5. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT-III.

Is DTC detected?

YES >> Go to SEC-113, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006226271

1.CHECK IPDM E/R INPUT SIGNAL

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

(+)		(–)	Condition		Voltage (V) (Approx.)
IPDM E/R					
Connector	Terminal				
E17	63	Ground	Steering lock unit	Lock	12
				Unlock	0
	65			Lock	0
				Unlock	12

NOTE:

To lock the steering	1. Set the selector lever in the P position. 2. Turn the power supply position to the OFF position. 3. Press any door switch.
To unlock the steering	1. Set the selector lever in the P position. 2. Press the push-button ignition switch with brake pedal not depressed.

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

2.CHECK IPDM E/R INPUT SIGNAL CIRCUIT

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

IPDM E/R		Steering lock unit		Continuity
Connector	Terminal	Connector	Terminal	
E17	63	M12	8	Existed
	65		3	

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E17	63		Not existed
	65		

Is the inspection result normal?

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

3.REPLACE STEERING LOCK UNIT

1. Replace steering lock unit.
2. Perform the service procedure for steering lock unit replacement. Refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

4.CHECK BCM INPUT SIGNAL

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

(+)		(–)	Condition		Voltage (V) (Approx.)
BCM					
Connector	Terminal				
M71	107	Ground	Steering lock unit	Lock	0
				Unlock	12
	108			Lock	12
				Unlock	0

NOTE:

To lock the steering	1. Set the selector lever in the P position. 2. Turn the power supply position to the OFF position. 3. Press any door switch.
To unlock the steering	1. Set the selector lever in the P position. 2. Press the push-button ignition switch with brake pedal not depressed.

Is the inspection result normal?

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

5.REPLACE BCM

1. Replace BCM. Refer to BCS-81, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT-III.
   For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

6. CHECK BCM INPUT SIGNAL CIRCUIT

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

BCM		Steering lock unit		Continuity
Connector	Terminal	Connector	Terminal	
M71	107	M12	3	Existed
	108		8	

3. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M71	107		Not existed
	108		

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace harness.

7. REPLACE STEERING LOCK UNIT

1. Replace steering lock unit.
2. Perform the service procedure for steering lock unit replacement. Refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

B26F7 BCM

DTC Logic

INFOID:0000000006226272

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26F7	BCM	Inside key antenna output circuit in BCM is malfunctioning.	BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000006226273

1.INSPECTION START

1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “BCM” using CONSULT-III.
3. Touch “ERASE”.
4. Perform DTC CONFIRMATION PROCEDURE for DTC B26F7. Refer to SEC-116, "DTC Logic".

Is DTC detected?

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

2.REPLACE BCM

1. Replace BCM. Refer to BCS-81, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT-III.
   For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

B26F8 BCM

DTC Logic

INFOID:0000000006226274

DTC DETECTION LOGIC

NOTE:
DTC B26F8 can be detected even though the related circuit is not used in this vehicle.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26F8	BCM	Starter control replay control signal and feedback circuit signal (inside BCM) does not match.	BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000006226275

1.INSPECTION START

1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of ”BCM” using CONSULT-III.
3. Touch “ERASE”.
4. Perform DTC CONFIRMATION PROCEDURE for DTC B26F8.
   Refer to SEC-117, "DTC Logic".

Is DTC detected?

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

2.REPLACE BCM

1. Replace BCM. Refer to BCS-81, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT-III.
   For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

B26F9 CRANKING REQUEST CIRCUIT

DTC Logic

INFOID:0000000006226276

DTC DETECTION LOGIC

NOTE:

- DTC B26F9 can be detected even though the related circuit is not used in this vehicle.
- If DTC B26F9 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-70, "DTC Logic".
- If DTC B26F9 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-71, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26F9	CRANK REQ CIR SHORT	BCM detects that the status of the following signals does not match. • Cranking request signal from ECM • Starter control relay control signal from ECM (CAN)	• Harness or connectors (Can communication line is open or shorted.) • Harness or connectors (Cranking request signal circuit is open or shorted.) • ECM • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION

1. Start engine and wait 2 seconds or more at idle speed.
2. Drive vehicle for 2 seconds or more.
3. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT-III.

Is DTC detected?

YES >> Go to SEC-118, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006226277

1.CHECK CRANKING REQUEST SIGNAL

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

(+) BCM Connector	(+) BCM Terminal	(–)	Condition		Voltage (V) (Approx.)
M69	64	Ground	Ignition switch ON	• Engine: Stopped • Selector lever position: P	0
				• Engine: Stopped • Selector lever position: Other than P	12
				Engine running	12

Is the inspection result normal?

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

2.CHECK CRANKING REQUEST SIGNAL CIRCUIT

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

BCM		ECM		Continuity
Connector	Terminal	Connector	Terminal	
M69	64	E80	165	Existed

5. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M69	64		Not existed

Is the inspection result normal?

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

3.REPLACE BCM

1. Replace BCM. Refer to BCS-81, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT-III.
   For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.
3. Perform DTC CONFIRMATION PROCEDURE for DTC B26F9. Refer to SEC-118, "DTC Logic".

Is DTC detected?

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

4.REPLACE ECM

1. Replace ECM. Refer to EC-535, "Removal and Installation".
2. Perform “ADDITIONAL SERVICE WHEN REPLACING ECM”. Refer to EC-143, "Work Procedure".

>> INSPECTION END

B26FA CRANKING REQUEST CIRCUIT

DTC Logic

INFOID:0000000006226278

DTC DETECTION LOGIC

NOTE:

- DTC B26FA can be detected even though the related circuit is not used in this vehicle.
- If DTC B26FA is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-70, "DTC Logic".
- If DTC B26FA is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-71, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26FA	CRANK REQ CIR OPEN	BCM detects that the status of the following signals does not match. • Cranking request signal from ECM • Starter control relay control signal from ECM (CAN)	• Harness or connectors (Can communication line is open or shorted.) • Harness or connectors (Cranking request signal circuit is open or shorted.) • BCM • ECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION

1. Start engine and wait 2 seconds or more at idle speed.
2. Drive vehicle for 2 seconds or more.
3. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT-III.

Is DTC detected?

YES >> Go to SEC-120, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006226279

1.CHECK CRANKING REQUEST SIGNAL

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

(+) BCM Connector	(+) BCM Terminal	(–)	Condition		Voltage (V) (Approx.)
M69	64	Ground	Ignition switch ON	• Engine: Stopped • Selector lever position: P	0
				• Engine: Stopped • Selector lever position: Other than P	12
				Engine running	12

Is the inspection result normal?

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

2.CHECK CRANKING REQUEST SIGNAL CIRCUIT

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

BCM		ECM		Continuity
Connector	Terminal	Connector	Terminal	
M69	64	E80	165	Existed

5. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M69	64		Not existed

Is the inspection result normal?

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

3.REPLACE BCM

1. Replace BCM. Refer to BCS-81, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT-III.
   For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.
3. Perform DTC CONFIRMATION PROCEDURE for DTC B26FA. Refer to SEC-120, "DTC Logic".

Is DTC detected?

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

4.REPLACE ECM

1. Replace ECM. Refer to EC-535, "Removal and Installation".
2. Perform “ADDITIONAL SERVICE WHEN REPLACING ECM”. Refer to EC-143, "Work Procedure".

>> INSPECTION END

B26FC KEY REGISTRATION

DTC Logic

INFOID:0000000006226280

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26FC	KEY REGISTRATION	Intelligent Key that does not match the vehicle is registered.	• Improper registration operation • Intelligent Key • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Perform initialization of BCM and reregistration of all Intelligent Keys using CONSULT-III.
   For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.
2. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT-III.

Is DTC detected?

YES >> Go to SEC-122, "Diagnosis Procedure"
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006226281

1.REPLACE INTELLIGENT KEY

1. Prepare Intelligent Key that matches the vehicle.
2. Perform initialization of BCM and registration of Intelligent Key using CONSULT-III.
   For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.
3. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT-III.

Is DTC detected?

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

2.REPLACE BCM

1. Replace BCM. Refer to BCS-81, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT-III.
   For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

B209F CRANKING REQUEST CIRCUIT

DTC Logic

INFOID:0000000006226282

DTC DETECTION LOGIC

NOTE:

- DTC B209F can be detected even though the related circuit is not used in this vehicle.
- If DTC B209F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to PCS-28, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B209F	CRANK REQ CIR OPEN	When the following items do not match, a malfunction is detected. • Cranking request signal from ECM • Starter control relay control signal from ECM (CAN)	• Harness or connectors (CAN communication line is open or shorted.) • Harness or connectors (Cranking request signal circuit is open or shorted.) • IPDM E/R • ECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start engine and wait 1 second or more at idle speed.
2. Drive vehicle for 1 second or more.
3. Check DTC in “Self Diagnostic Result” mode of “IPDM E/R” using CONSULT-III.

Is DTC detected?

YES >> Refer to SEC-123, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006226283

1.CHECK CRANKING REQUEST SIGNAL

1. Turn ignition switch ON.
2. Check voltage between IPDM E/R harness connector and ground under the following conditions.

(+)		(–)	Condition		Voltage (V) (Approx.)
IPDM E/R					
Connector	Terminal				
E13	23	Ground	Ignition switch ON	• Engine: Stopped • Selector lever position: P	0
				• Engine: Stopped • Selector lever position: Other than P	12
				Engine running	12

Is the inspection result normal?

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

2.CHECK CRANKING REQUEST SIGNAL CIRCUIT

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

IPDM E/R		ECM		Continuity
Connector	Terminal	Connector	Terminal	
E13	23	E80	165	Existed

5. Check continuity between BCM harness connector and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E13	23		Not existed

Is the inspection result normal?

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

3. REPLACE IPDM E/R

1. Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".
2. Perform DTC CONFIRMATION PROCEDURE for DTC B209F. Refer to SEC-123, "DTC Logic".

Is DTC detected?

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

4. REPLACE ECM

1. Replace ECM. Refer to EC-535, "Removal and Installation".
2. Perform “ADDITIONAL SERVICE WHEN REPLACING ECM”. Refer to EC-143, "Work Procedure".

>> INSPECTION END

B20A0 CRANKING REQUEST CIRCUIT

DTC Logic

INFOID:0000000006226284

DTC DETECTION LOGIC

NOTE:

- DTC B20A0 can be detected although the related circuit is not used in this vehicle.
- If DTC B20A0 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to PCS-28, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B20A0	CRANK REQ CIR SHORT	When the following items do not match, a malfunction is detected. • Cranking request signal from ECM • Starter control relay control signal from ECM (CAN)	• Harness or connectors (CAN communication line is open or shorted.) • Harness or connectors (Cranking request signal circuit is open or shorted.) • IPDM E/R • ECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start engine and wait 1 second or more at idle speed.
2. Drive vehicle for 1 second or more.
3. Check DTC in “Self Diagnostic Result” mode of “IPDM E/R” using CONSULT-III.

Is DTC detected?

YES >> Refer to SEC-125, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006226285

1.CHECK CRANKING REQUEST SIGNAL

1. Turn ignition switch ON.
2. Check voltage between IPDM E/R harness connector and ground under the following conditions.

(+) IPDM E/R Connector	(+) IPDM E/R Terminal	(–)	Condition		Voltage (V) (Approx.)
E13	23	Ground	Ignition switch ON	• Engine: Stopped • Selector lever position: P	0
				• Engine: Stopped • Selector lever position: Other than P	12
				Engine running	12

Is the inspection result normal?

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

2.CHECK CRANKING REQUEST SIGNAL CIRCUIT

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

IPDM E/R		ECM		Continuity
Connector	Terminal	Connector	Terminal	
E13	23	E80	165	Existed

5. Check continuity between BCM harness connector and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E13	23		Not existed

Is the inspection result normal?

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

3. REPLACE IPDM E/R

1. Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".
2. Perform DTC CONFIRMATION PROCEDURE for DTC B20A0. Refer to SEC-125, "DTC Logic".

Is DTC detected?

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

4. REPLACE ECM

1. Replace ECM. Refer to EC-535, "Removal and Installation".
2. Perform “ADDITIONAL SERVICE WHEN REPLACING ECM”. Refer to EC-143, "Work Procedure".

>> INSPECTION END

B2108 STEERING LOCK RELAY

DTC Logic

INFOID:0000000006226286

DTC DETECTION LOGIC

NOTE:

- If DTC B2108 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to PCS-22, "DTC Index".
- If DTC B2108 is displayed with other DTC, first perform the trouble diagnosis for the other DTC.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2108	STRG LCK RELAY ON	IPDM E/R detects that steering lock relay is stuck in the ON position for approximately 1 second even if IPDM E/R receives steering lock relay OFF signal from BCM.	• Harness or connectors (CAN communication line is open or shorted.) • IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-127, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006226287

1.CHECK STEERING LOCK RELAY

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

(+)		(–)	Condition		Voltage (V) (Approx.)
IPDM E/R					
Connector	Terminal				
E14	46	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 result normal?

YES >> GO TO 2.
NO >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".

2.CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

B2109 STEERING LOCK RELAY

DTC Logic

INFOID:0000000006226288

DTC DETECTION LOGIC

NOTE:

- If DTC B2109 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to PCS-32, "Removal and Installation".
- If DTC B2109 is displayed with other DTC, first perform the trouble diagnosis for the other DTC.
- 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 steering lock relay is stuck in the OFF position for approximately 1 second even if IPDM E/R receives steering lock relay ON/OFF signal from BCM.	• Harness or connector (CAN communication line is open or shorted.) • Harness or connector (Power supply circuit for steering lock relay is open or shorted.) • IPDM E/R • Battery

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-128, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006226289

1.CHECK POWER SUPPLY CIRCUIT

Check IPDM E/R power supply circuit. Refer to PCS-31, "Diagnosis Procedure".

Is the inspection result normal?

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

2.CHECK FUSE

1. Turn ignition switch OFF.
2. Check 10 A fuse (No. 44, located in IPDM E/R).

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".
NO >> Replace the blown fuse after repairing the cause of ffected circuit if a fuse is blown.

B210A STEERING LOCK UNIT

DTC Logic

INFOID:0000000006226290

DTC DETECTION 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 signals for 1 second.	• Harness or connectors (Steering lock unit circuit is open or shorted.) • Steering lock unit • IPDM E/R • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

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

Is DTC detected?

YES >> Go to SEC-129, "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 1 second or more.
4. CCheck DTC in “Self Diagnostic Result” mode of “IPDM E/R” using CONSULT-III.

Is DTC detected?

YES >> Go to SEC-129, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006226291

1.CHECK IPDM E/R INPUT SIGNAL

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

(+)		(–)	Condition		Voltage (V) (Approx.)
IPDM E/R					
Connector	Terminal				
E17	63	Ground	Steering lock unit	Lock	12
				Unlock	0
	65			Lock	0
				Unlock	12

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".
NO >> GO TO 2.

2.CHECK IPDM E/R INPUT SIGNAL CIRCUIT

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

IPDM E/R		Steering lock unit		Continuity
Connector	Terminal	Connector	Terminal	
E17	63	M12	8	Existed
	65		3	

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E17	63		Not existed
	65		

Is the inspection result normal?

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

3.REPLACE STEERING LOCK UNIT

1. Replace steering lock unit.
2. Perform the service procedure for steering lock unit replacement. Refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

B210B STARTER CONTROL RELAY

DTC Logic

INFOID:0000000006226292

DTC DETECTION LOGIC

NOTE:
If DTC B210B is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to PCS-28, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210B	START CONT RLY ON	When comparing the following items, IPDM E/R detects that starter control relay is stuck in the ON position for 1 second or more. • Starter control relay signal (CAN) from BCM • Starter relay status signal (CAN) from BCM • Starter control relay and starter relay status signal (IPDM E/R input) • Starter control relay control signal (IPDM E/R output) • P/N position signal input	• Harness or connectors (CAN communication line is open or shorted. • IPDM E/R • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-131, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006226293

1.CHECK DTC OF BCM

Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT-III.

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to BCS-57, "DTC Index".
NO >> GO TO 2.

2.INSPECTION START

1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “IPDM E/R” using CONSULT-III.
3. Touch “ERASE”.
4. Perform DTC CONFIRMATION PROCEDURE for DTC B210B. Refer to PCS-22, "DTC Index".

Is DTC detected?

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

3.REPLACE BCM

1. Replace BCM. Refer to BCS-81, "Removal and Installation".
2. Perform DTC CONFIRMATION PROCEDURE for DTC B210B. Refer to SEC-131, "DTC Logic".

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".

B210C STARTER CONTROL RELAY

DTC Logic

INFOID:0000000006226294

DTC DETECTION LOGIC

NOTE:

- If DTC B210C is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to PCS-28, "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	When comparing the following items, IPDM E/R detects that starter control relay is stuck in the OFF position for 1 second or more. • Starter control relay signal (CAN) from BCM • Starter relay status signal (CAN) from BCM • Starter control relay and starter relay status signal (IPDM E/R input) • Starter control relay control signal (IPDM E/R output) • P/N position signal input	• Harness or connectors (CAN communication line is open or shorted. • IPDM E/R • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press push-button ignition switch under the following conditions to start engine, and wait 1 second or more.

- Selector lever: In the P position
- Brake pedal: Depressed

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

Is DTC detected?

YES >> Go to SEC-132, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006226295

1.CHECK DTC OF BCM

Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT-III.

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to BCS-57, "DTC Index".
NO >> GO TO 2.

2.INSPECTION START

1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “IPDM E/R” using CONSULT-III.
3. Touch “ERASE”.
4. Perform DTC CONFIRMATION PROCEDURE for DTC B210C. Refer to SEC-132, "DTC Logic".

Is DTC detected?

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

3.REPLACE BCM

1. Replace BCM. Refer to BCS-81, "Removal and Installation".
2. Perform DTC CONFIRMATION PROCEDURE for DTC B210C. Refer to SEC-132, "DTC Logic".

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".

B210D STARTER RELAY

DTC Logic

INFOID:0000000006226296

DTC DETECTION LOGIC

NOTE:
If DTC B210D is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to PCS-28, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210D	STARTER RELAY ON	When comparing the following items, IPDM E/R detects that starter relay is stuck in the ON position for 1 second or more. • Starter control relay signal (CAN) from BCM • Starter relay status signal (CAN) from BCM • Starter control relay and starter relay status signal (IPDM E/R input) • Starter control relay control signal (IPDM E/R output) • P/N position signal input	• Harness or connectors (CAN communication line is open or shorted. • IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-133, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006226297

1.INSPECTION START

1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “IPDM E/R” using CONSULT-III.
3. Touch “ERASE”.
4. Perform DTC CONFIRMATION PROCEDURE for DTC B210D. Refer to SEC-133, "DTC Logic".

Is DTC detected?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".
NO >> INSPECTION END

B210E STARTER RELAY

DTC Logic

INFOID:0000000006226298

DTC DETECTION LOGIC

NOTE:

- If DTC B210E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to PCS-28, "DTC Logic".
- If DTC B210E is displayed with DTC B2605, first perform the trouble diagnosis for DTC B2605. Refer to SEC-91, "DTC Logic".
- When IPDM E/R power supply voltage is low (Approx. 7 - 8 V for about 1 second), the DTC B210E may be detected.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210E	STARTER RELAY OFF	When comparing the following items, IPDM E/R detects that starter relay is stuck in the OFF position for 1 second or more. • Starter control relay signal (CAN) from BCM • Starter relay status signal (CAN) from BCM • Starter control relay and starter relay status signal (IPDM E/R input) • Starter control relay control signal (IPDM E/R output) • P/N position signal input	• Harness or connector (CAN communication line is open or shorted.) • Harness or connector (Starter relay circuit is open or shorted.) • IPDM E/R • BCM • Battery

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Press push-button ignition switch under the following conditions to start engine, and wait 1 second or more.

- Selector lever: In the P position
- Brake pedal: Depressed

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

Is DTC detected?

YES >> Go to SEC-134, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006226299

1. CHECK STARTER RELAY OUTPUT SIGNAL

1. Check voltage between BCM harness connector and ground.

(+) BCM		(–)	Condition			Voltage (V) (Approx.)
Connector	Terminal		Ignition switch	Brake pedal	Selector lever	
M71	97	Ground	ON	Depressed	P or N	12
					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. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Disconnect IPDM E/R connector.
4. Check continuity between BCM harness connector and IPDM E/R harness connector.

BCM		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M71	97	E13	30	Existed

5. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M71	97		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".
NO >> Repair or replace harness.

3.CHECK STARTER RELAY CIRCUIT

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

(+)		(–)	Voltage (V) (Approx.)
IPDM E/R			
Connector	Terminal		
E10	4	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4.
NO >> Check harness for open or short between IPDM E/R and battery. Refer to STR-7, "Wiring Diagram".

4.REPLACE BCM

1. Replace BCM. Refer to BCS-81, "Removal and Installation".
2. Perform DTC CONFIRMATION PROCEDIURE for DTC B210E. Refer to SEC-134, "DTC Logic".

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".

B210F SHIFT POSITION/CLUTCH INTERLOCK SWITCH

DTC Logic

INFOID:0000000006226300

DTC DETECTION LOGIC

NOTE:
If DTC B210F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to PCS-28, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210F	INTER LOCK/PNP SW ON	There is a difference between P/N position signal from TCM and P/N position signal from BCM (CAN).	• Harness or connectors (CAN communication line is open or shorted.) • Harness or connectors (TCM circuit is open or shorted.) • A/T assembly (TCM) • IPDM E/R • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-136, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006226301

1.CHECK DTC OF BCM

Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT-III.

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to BCS-57, "DTC Index".
NO >> GO TO 2.

2.CHECK DTC OF TCM

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

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to TM-78, "DTC Index".
NO >> GO TO 3.

3.CHECK IPDM E/R SIGNAL CIRCUIT OPEN AND SHORT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Disconnect A/T assembly connector.
4. 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	
E15	48	F51	9	Existed

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

(+)		(–)	Continuity
IPDM E/R			
Connector	Terminal		
E15	48	Ground	Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".
NO >> Repair or replace harness.

B2110 SHIFT POSITION/CLUTCH INTERLOCK SWITCH

DTC Logic

INFOID:0000000006226302

DTC DETECTION LOGIC

NOTE:
If DTC B2110 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to PCS-28, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2110	INTER LOCK/PNP SW OFF	There is a difference between P/N position signal from TCM and P/N position signal from BCM (CAN).	• Harness or connectors (CAN communication line is open or shorted.) • Harness or connectors (TCM circuit is open or shorted.) • A/T assembly (TCM) • IPDM E/R • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-138, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000006226303

1.CHECK DTC OF BCM

Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT-III.

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to BCS-57, "DTC Index".
NO >> GO TO 2.

2.CHECK DTC OF TCM

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

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to TM-78, "DTC Index".
NO >> GO TO 3.

3.CHECK IPDM E/R SIGNAL CIRCUIT OPEN AND SHORT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Disconnect A/T assembly connector.
4. 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	
E15	48	F51	9	Existed

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

(+)		(–)	Continuity
IPDM E/R			
Connector	Terminal		
E15	48	Ground	Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".
NO >> Repair or replace harness.

HEADLAMP FUNCTION

Component Function Check

INFOID:0000000006226719

1.CHECK FUNCTION

1. Perform “HEAD LAMP(HI)” in “ACTIVE TEST” mode of “THEFT ALM” of “BCM” using CONSULT-III.
2. Check headlamps operation.

Test item		Description	
HEAD LAMP (HI)	ON	Headlamps (Hi)	Light
	OFF		Do not light

Is the inspection result normal?

YES >> INSPECTION END
NO >> Refer to SEC-140, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000006226720

1.CHECK HEADLAMP FUNCTION

Refer to EXL-86, "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-40, "Intermittent Incident".

>> INSPECTION END

HOOD SWITCH

Component Function Check

INFOID:0000000006226305

1.CHECK FUNCTION

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

Monitor item	Condition		Indication
HOOD SW	Hood	Open	ON
		Close	OFF

Is the indication normal?

YES >> Hood switch is OK.
NO >> Go to SEC-141, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000006226306

1.CHECK HOOD SWITCH SIGNAL CIRCUIT 1

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

(+)		(–)	Voltage (V) (Approx.)
Hood switch			
Connector	Terminal		
E57	1	Ground	12

Is the inspection result normal?

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

2.CHECK HOOD SWITCH SIGNAL CIRCUIT 2

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

IPDM E/R		Hood switch		Continuity
Connector	Terminal	Connector	Terminal	
E13	32	E57	1	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E13	32		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".
NO >> Repair or replace harness.

3.CHECK HOOD SWITCH GROUND CIRCUIT

Check continuity between hood switch harness connector and ground.

Hood switch		Ground	Continuity
Connector	Terminal		
E57	2		Existed

Is the inspection result normal?

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

4.CHECK HOOD SWITCH

Refer to SEC-142, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace hood switch.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000006226307

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.

HORN FUNCTION

Component Function Check

INFOID:0000000006226308

1.CHECK FUNCTION 1

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

Test item		Description	
VEHICLE SECURITY HORN	ON	Horn	Sounds (for 0.5 sec)

Is the operation normal?

YES >> GO TO 2.
NO >> Go to SEC-143, "Diagnosis Procedure".

2.CHECK FUNCTION 2

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

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

Is the operation normal?

YES >> INSPECTION END
NO >> Go to SEC-143, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000006226309

1.INSPECTION START

Perform inspection in accordance with procedure that confirms malfunction.

Which procedure confirms malfunction?

Component Function Check 1>>GO TO 2.
Component Function Check 2>>GO TO 4.

2.CHECK HORN FUNCTION

Check that horns function properly using horn switch.

Do horns sound?

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

3.CHECK HORN CONTROL CIRCUIT

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

IPDM E/R		Horn relay		Continuity
Connector	Terminal	Connector	Terminal	
E13	34	E5	1	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E13	34		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".
NO >> Repair or replace harness.

4. CHECK VEHICLE SECURITY HORN RELAY POWER SUPPLY

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

(+)		(–)	Voltage (V) (Approx.)
Vehicle security horn relay			
Connector	Terminal		
E124	1	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 5.
NO-1 >> Check 10 A fuse [No. 36 located in the fuse block (J/B)].
NO-2 >> Check harness for open or short between vehicle security horn relay and fuse.

5. CHECK VEHICLE SECURITY HORN CONTROL CIRCUIT

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

IPDM E/R		Vehicle security horn relay		Continuity
Connector	Terminal	Connector	Terminal	
E13	34	E124	3	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E13	34		Not existed

Is the inspection result normal?

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

6. CHECK VEHICLE SECURITY HORN CIRCUIT

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

Vehicle security horn relay		Vehicle security horn		Continuity
Connector	Terminal	Connector	Terminal	
E124	2	E125	1	Existed

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

Vehicle security horn relay		Ground	Continuity
Connector	Terminal		
E124	2		Not existed

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness.

7. CHECK VEHICLE SECURITY HORN RELAY

Refer to SEC-145, "Component Inspection".

Is the inspection result normal?

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

Component Inspection

INFOID:0000000006248777

1. CHECK VEHICLE SECURITY HORN RELAY

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

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

Is the inspection result normal?

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

SECURITY INDICATOR LAMP

Component Function Check

INFOID:0000000006226312

1.CHECK FUNCTION

1. Perform “THEFT IND” in “ACTIVE TEST” mode of “IMMU” of “BCM” using CONSULT-III.
2. Check security indicator lamp operation.

Test item		Description	
THEFT IND	ON	Security indicator lamp	Illuminates
	OFF		Does not illuminate

Is the inspection result normal?

YES >> INSPECTION END
NO >> Go to SEC-146, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000006226313

1.CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT

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

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

Is the inspection result normal?

YES >> GO TO 2.
NO-1 >> Check 10 A fuse [No. 11, located in the fuse block (J/B)].
NO-2 >> Check harness for open or short between combination meter and fuse.

2.CHECK SECURITY INDICATOR LAMP SIGNAL

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

(+)		(–)	Voltage (V) (Approx.)
BCM			
Connector	Terminal		
M68	23	Ground	Battery voltage

Is the inspection result normal?

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

3.REPLACE BCM

1. Replace BCM. Refer to BCS-81, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT-III.
   For initialization and registration procedures, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> INSPECTION END

4.CHECK SECURITY INDICATOR LAMP CIRCUIT

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

Combination meter		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M34	28	M68	23	Existed

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

Combination meter		Ground	Continuity
Connector	Terminal		
M34	28		Not existed

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-85, "Removal and Installation".
NO >> Repair or replace harness.

SYMPTOM DIAGNOSIS

ENGINE DOES NOT START WHEN INTELLIGENT KEY IS INSIDE OF VEHICLE

Description

INFOID:0000000006226323

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

NOTE:

- Check that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- The engine start function, door lock function, power distribution system, and NATS-IVIS/NVIS in the Intelligent Key system are closely related to each other regarding control. The vehicle security function can operate only when the door lock and power distribution system are operating normally.

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:0000000006226324

1.PERFORM WORK SUPPORT

Perform “INSIDE ANT DIAGNOSIS” on Work Support in “INTELLIGENT KEY”.
Refer to SEC-22, "INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY)".

>> GO TO 2.

2.PERFORM SELF-DIAGNOSIS RESULT

Perform Self-Diagnosis Result in “BCM”, and check whether or not DTC of inside key antenna is detected.

Is DTC detected?

YES >> Refer to BCS-57, "DTC Index".
NO >> GO TO 3.

3.CHECK PUSH-BUTTON IGNITION SWITCH

Check push-button ignition switch.
Refer to PCS-71, "Component Function Check".

Is the operation normal?

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

4.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection normal?

YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".
NO >> GO TO 1.

STEERING DOES NOT LOCK

Description

INFOID:0000000006226325

Steering does not lock when door is open while ignition switch is OFF.

NOTE:

Before performing the diagnosis, check “Work Flow”. Refer to SEC-48, "Work Flow".

Diagnosis Procedure

INFOID:0000000006226326

1.CHECK DOOR SWITCH

Check door switch.

Refer to DLK-117, "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-40, "Intermittent Incident".

NO >> GO TO 1.

SECURITY INDICATOR LAMP DOES NOT TURN ON OR BLINK

Description

INFOID:0000000006226327

Security indicator lamp does not blink when ignition switch is in a position other than ON

NOTE:

- Before performing the diagnosis, check “Work Flow”. Refer to SEC-48, "Work Flow".
- Check that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.

Conditions of Vehicle (Operating Conditions)

Ignition switch is not in the ON position.

Diagnosis Procedure

INFOID:0000000006226328

1.CHECK SECURITY INDICATOR LAMP

Check security indicator lamp.

Refer to SEC-146, "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-40, "Intermittent Incident".

NO >> GO TO 1.

VEHICLE SECURITY SYSTEM CANNOT BE SET

INTELLIGENT KEY

INTELLIGENT KEY : Description

INFOID:0000000006226329

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

NOTE:

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

CONDITION OF VEHICLE (OPERATING CONDITION)

Confirm the setting of “SECUTIRY ALARM SET” is ON in “WORK SUPPORT” mode of “THEFT ALM” of “BCM” using CONSULT-III.

INTELLIGENT KEY : Diagnosis Procedure

INFOID:0000000006226330

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

Lock/unlock door with Intelligent Key.

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check Intelligent Key system (remote keyless entry function). Refer to DLK-175, "Diagnosis Procedure".

2.CHECK HOOD SWITCH

Check hood swiwtch.

Refer to SEC-141, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace hood switch.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

NO >> GO TO 1.

DOOR REQUEST SWITCH

DOOR REQUEST SWITCH : Description

INFOID:0000000006226331

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

NOTE:

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

CONDITION OF VEHICLE (OPERATING CONDITION)

Confirm the setting of “SECURITY ALARM SET” is ON in “WORK SUPPORT” mode of “THEFT ALM” of “BCM” using CONSULT-III.

DOOR REQUEST SWITCH : Diagnosis Procedure

INFOID:0000000006226332

1.CHECK INTELLIGENT KEY SYSTEM (DOOR LOCK FUNCTION)

Lock/unlock door with door request switch.

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check Intelligent Key system (door lock function). Refer to DLK-172, "ALL DOOR REQUEST SWITCHES : Diagnosis Procedure".

2.CHECK HOOD SWITCH

Check hood swiwtch.
Refer to SEC-141, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace hood switch.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".
NO >> GO TO 1.

DOOR KEY CYLINDER

DOOR KEY CYLINDER : Description

INFOID:0000000006375072

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

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

CONDITION OF VEHICLE (OPERATING CONDITION)

Confirm the setting of “SECURITY ALARM SET” is ON in “WORK SUPPORT” mode of “THEFT ALM” of “BCM” using CONSULT-III.

DOOR KEY CYLINDER : Diagnosis Procedure

INFOID:0000000006375073

1.CHECK POWER DOOR LOCK SYSTEM

Lock/unlock door with mechanical key.
Refer to DLK-16, "System Description".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Check power door lock system. Refer to DLK-171, "Diagnosis Procedure".

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".
NO >> GO TO 1.

VEHICLE SECURITY ALARM DOES NOT ACTIVATE

Description

INFOID:0000000006226333

Alarm does not operate when alarm operating condition is satisfied.

NOTE:

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

CONDITIONS OF VEHICLE (OPERATING CONDITIONS)

Confirm the setting of “SECURITY ALARM SET” is ON in “WORK SUPPORT” mode of “THEFT ALM” of “BCM” using CONSULT-III.

Diagnosis Procedure

INFOID:0000000006226334

1.CHECK DOOR SWITCH

Check door switch.

Refer to DLK-117, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the malfunctioning door switch

2.CHECK HOOD SWITCH

Check hood swiwtch.

Refer to SEC-141, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace hood switch.

3.CHECK HORN FUNCTION

Check horn function.

Refer to SEC-143, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunctioning parts.

4.CHECK HEADLAMP FUNCTION

Check headlamp function.

Refer to SEC-140, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace the malfunctioning parts.

5.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

NO >> GO TO 1.

PANIC ALARM FUNCTION DOES NOT OPERATE

Description

INFOID:0000000006226336

NOTE:
- Before performing the diagnosis following procedure, check “Work Flow”. Refer to SEC-48, "Work Flow".
- Check that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.

CONDITIONS OF VEHICLE (OPERATION CONDITIONS)
- Ignition switch is in OFF or LOCK position.
- Intelligent Key is removed from key slot.

Diagnosis Procedure

INFOID:0000000006226337

1.CHECK REMOTE KEYLESS ENTRY FUNCTION

Check remote keyless entry function.

Does door lock/unlock with Intelligent key button?

YES >> GO TO 2.
NO >> Go to DLK-175, "Diagnosis Procedure".

2.CHECK VEHICLE SECURITY ALARM OPERATION

Check vehicle security alarm operation.

Does alarm (headlamps and horns) active?

YES >> GO TO 3.
NO >> Go to SEC-18, "VEHICLE SECURITY SYSTEM : System Description".

3.CHECK “PANIC ALARM SET” SETTING IN “WORK SUPPORT”

Check “PANIC ALARM SET” setting in “WORK SUPPORT”.
Refer to SEC-22, "INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY)".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Set “PANIC ALARM SET” setting in “WORK SUPPORT”.

4.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".
NO >> GO TO 1.

REMOVAL AND INSTALLATION

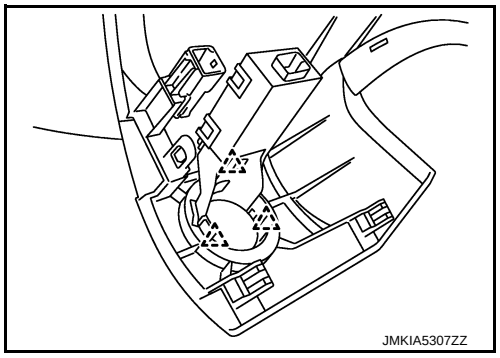
NATS ANTENNA AMP.

Removal and Installation

INFOID:0000000006226338

REMOVAL

1. Remove the push-button ignition switch. Refer to SEC-156, "Removal and Installation".
2. Disengage the NATS antenna amp. pawl, and then remove NATS antenna amp.



: Pawl

INSTALLATION

Install in the reverse order of removal.

PUSH-BUTTON IGNITION SWITCH

Exploded View

INFOID:0000000006226339

Refer to IP-13, "Exploded View".

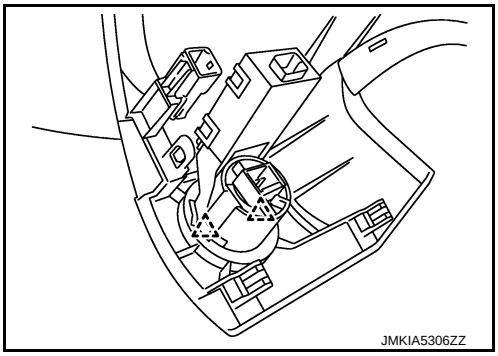
Removal and Installation

INFOID:0000000006226340

REMOVAL

1. Remove the cluster lid A. Refer to IP-14, "Removal and Installation".
2. Disengage the push-button ignition switch fixing pawl and then remove push-button ignition switch.

: Pawl



INSTALLATION

Install in the reverse order of removal.