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:0000000012855978

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the “SRS AIR BAG” and “SEAT BELT” of this Service Manual.

WARNING:

Always observe the following items for preventing accidental activation.

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, it is recommended that all maintenance and repair be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper repair, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see “SRS AIR BAG”.**
- **Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.**

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

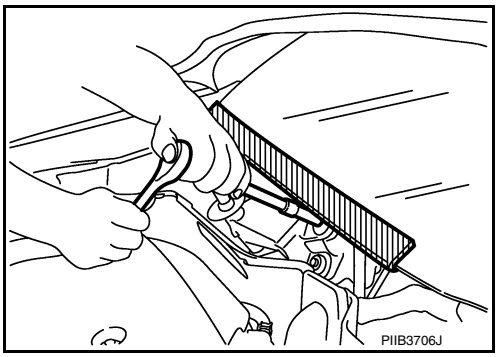
Always observe the following items for preventing accidental activation.

- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery or batteries, and wait at least 3 minutes before performing any service.**

Precaution for Procedure without Cowl Top Cover

INFOID:0000000012855979

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



Precautions For Xenon Headlamp Service

INFOID:0000000012855980

WARNING:

Comply with the following warnings to prevent any serious accident.

- **Disconnect the battery cable (negative terminal) or the power supply fuse before installing, removing, or touching the xenon headlamp (bulb included). The xenon headlamp contains high-voltage generated parts.**
- **Never work with wet hands.**
- **Check the xenon headlamp ON-OFF status after assembling it to the vehicle. Never turn the xenon headlamp ON in other conditions. Connect the power supply to the vehicle-side connector.**

(Turning it ON outside the lamp case may cause fire or visual impairments.)
- **Never touch the bulb glass immediately after turning it OFF. It is extremely hot.**

CAUTION:

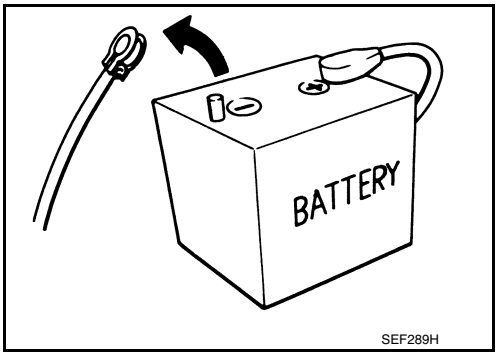
Comply with the following cautions to prevent any error and malfunction.
- **Install the xenon bulb securely. (Insufficient bulb socket installation may melt the bulb, the connector, the housing, etc. by high-voltage leakage or corona discharge.)**
- **Never perform HID circuit inspection with a tester.**
- **Never touch the xenon bulb glass with hands. Never put oil and grease on it.**
- **Dispose of the used xenon bulb after packing it in thick vinyl without breaking it.**
- **Never wipe out dirt and contamination with organic solvent (thinner, gasoline, etc.).**

Precautions for Removing Battery Terminal

INFOID:0000000012855981

When disconnecting the battery terminal, pay attention to the following.
- Always use a 12V battery as power source.
- Never disconnect battery terminal while engine is running.
- When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.
- For vehicles with the engine listed below, remove the battery terminal after a lapse of the specified time:

D4D engine	: 20 minutes	YS23DDT	: 4 minutes
HRA2DDT	: 12 minutes	YS23DDTT	: 4 minutes
K9K engine	: 4 minutes	ZD30DDTi	: 60 seconds
M9R engine	: 4 minutes	ZD30DDTT	: 60 seconds
R9M engine	: 4 minutes		
V9X engine	: 4 minutes		
YD25DDTi	: 2 minutes		



NOTE:
ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.
- After high-load driving, if the vehicle is equipped with the V9X engine, turn the ignition switch OFF and wait for at least 15 minutes to remove the battery terminal.

NOTE:
- Turbocharger cooling pump may operate in a few minutes after the ignition switch is turned OFF.
- Example of high-load driving
  - Driving for 30 minutes or more at 140 km/h (86 MPH) or more.
  - Driving for 30 minutes or more on a steep slope.
- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.

NOTE:
If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.
- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.

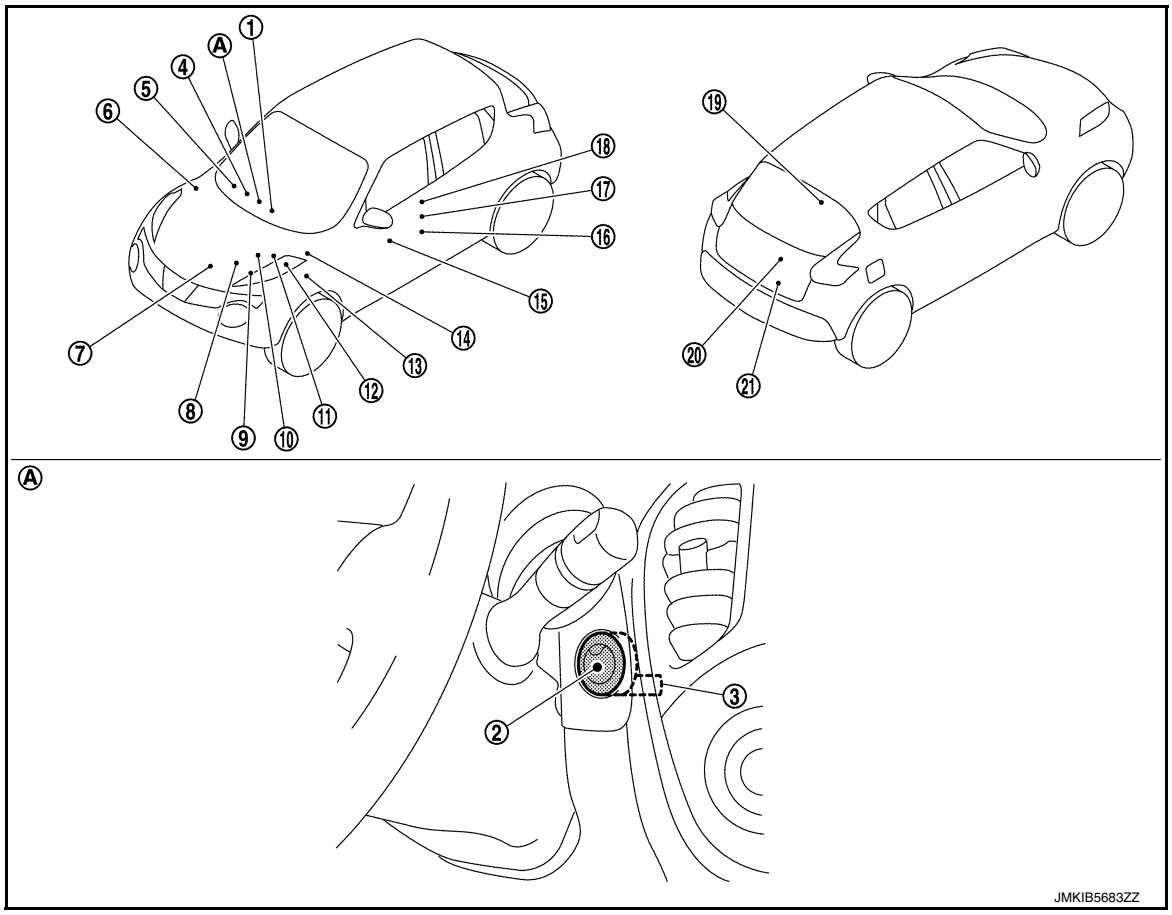
NOTE:
The removal of 12V battery may cause a DTC detection error.

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000012202092



1. Combination meter
   Refer to MWI-6, "METER SYSTEM : Component Parts Location".
2. Push-button ignition switch
3. NATS antenna amp.
4. Inside key antenna (instrument center)
   Refer to DLK-9, "Component Parts Location".
5. Remote keyless entry receiver
   Refer to DLK-9, "Component Parts Location".
6. ABS actuator and electric unit (control unit)
   Refer to BRC-9, "Component Parts Location".
7. Park/neutral position switch (M/T models)
   Refer to TM-17, "Component Parts Location".
8. Transmission range switch (CVT models)
   Refer to TM-156, "CVT CONTROL SYSTEM : Component Parts Location".
9. ECM
   Refer to EC-27, "ENGINE CONTROL SYSTEM : Component Parts Location".
10. IPDM E/R
    Refer to PCS-5, "Component Parts Location".
11. TCM (CVT models)
    Refer to TM-156, "CVT CONTROL SYSTEM : Component Parts Location".
12. Stop lamp switch
    Refer to EC-27, "ENGINE CONTROL SYSTEM : Component Parts Location".
13. Clutch interlock switch (M/T models)
    Refer to STR-5, "Component Parts Location".
14. BCM
    Refer to BCS-5, "BODY CONTROL SYSTEM : Component Parts Location".
15. Power window main switch (door lock and unlock switch)
16. Front door switch (driver side)
17. Front door lock assembly (door key cylinder switch)
18. Front door request switch (driver side)

19. Inside key antenna (luggage room) Refer to DLK-9, "Component Parts Location".
20. Back door request switch
21. Back door opener assembly (back door switch)

A. Behind push-button ignition switch

Component Description

INFOID:0000000012202093

Component	Reference
BCM	SEC-7
CVT shift selector (detention switch) (CVT models)	SEC-7
ECM	SEC-8
IPDM E/R	SEC-8
NATS antenna amp.	SEC-8
TCM (CVT models)	SEC-8
Clutch interlock switch (M/T models)	SEC-8
Combination meter	SEC-8
Door switch	SEC-8
Inside key antenna	SEC-8
Intelligent Key	SEC-8
Park/neutral position switch (M/T models)	SEC-9
Push-button ignition switch	SEC-9
Remote keyless entry receiver	SEC-9
Security indicator lamp	SEC-9
Starter control relay	SEC-9
Starter relay	SEC-9
Stop lamp switch	SEC-9
Transmission range switch (CVT models)	SEC-9
Vehicle information display	SEC-9

BCM

INFOID:0000000012202094

BCM controls INTELLIGENT KEY SYSTEM (ENGINE START FUNCTION), NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS [NVIS (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.

CVT Shift Selector (Detention Switch)

INFOID:0000000012202095

Detention switch detects that CVT shift selector is in the P position, and then transmits the signal to BCM and IPDM E/R.
BCM confirms the CVT shift selector position with the following 5 signals.
- P position signal from CVT shift selector (detention switch)
- P/N position signal from transmission range switch
- 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 CVT shift selector position with the following 3 signals.
- P position signal from CVT shift selector (detention switch)
- P/N position signal from transmission range switch
- P/N position signal from BCM (CAN)

ECM

INFOID:0000000012202096

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.
When ECM restarts engine by the Stop/Start System (CVT models), ECM transmits the control signals to IPDM E/R and BCM to crank engine.

IPDM E/R

INFOID:0000000012202097

IPDM E/R has starter relay and starter control relay inside. Starter relay and starter control relay are used for the engine starting function. Starter relay is controlled by BCM, and starter control relay is controlled by IPDM E/R while communicating with BCM.
During engine is running, IPDM E/R controls starter control relay according to the cranking request signal from ECM for Stop/Start System.

NATS Antenna Amp.

INFOID:0000000012202098

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 operation of starting engine is available.

TCM

INFOID:0000000012202099

TCM transmits the shift position signal (P/N position) to BCM and IPDM E/R via CAN communication.
BCM confirms the CVT shift selector position with the following 5 signals.
- P position signal from CVT shift selector (detention switch)
- P/N position signal from transmission range switch
- 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 CVT shift selector position with the following 3 signals.
- P position signal from CVT shift selector (detention switch)
- P/N position signal from transmission range switch
- P/N position signal from BCM (CAN)

Clutch Interlock Switch

INFOID:0000000012202100

Clutch interlock switch detects that clutch pedal is depressed, then provides power source to starter control relay and starter relay, and transmits ON/OFF signal to BCM.

Combination Meter

INFOID:0000000012202101

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:0000000012202102

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

Inside Key Antenna

INFOID:0000000012202103

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

Intelligent Key

INFOID:0000000012202104

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.

Park/Neutral Position Switch

INFOID:0000000012202105

Park/neutral position switch detects that shift lever is in the neutral position, and then transmits ON/OFF signal to BCM.

Push-button Ignition Switch

INFOID:0000000012202106

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:0000000012202107

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:0000000012202108

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 NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS [NVIS (NATS)] is on board.

Starter Control Relay

INFOID:0000000012202109

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.
During engine is running, starter control relay is controlled by IPDM E/R according to the cranking request signal from ECM for Stop/Start System.

Starter Relay

INFOID:0000000012202110

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.
During engine is running, starter relay is controlled by BCM according to the cranking request signal from ECM for Stop/Start System.

Stop Lamp Switch

INFOID:0000000012202111

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

Transmission Range Switch

INFOID:0000000012202112

Transmission range switch is integrated in CVT assembly, and detects the CVT 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 CVT shift selector position with the following 5 signals.
- P position signal from CVT shift selector (detention switch)
- P/N position signal from transmission range switch
- 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 CVT shift selector position with the following 3 signals.
- P position signal from CVT shift selector (detention switch)
- P/N position signal from transmission range switch
- P/N position signal from BCM (CAN)

Vehicle Information Display

INFOID:0000000012202113

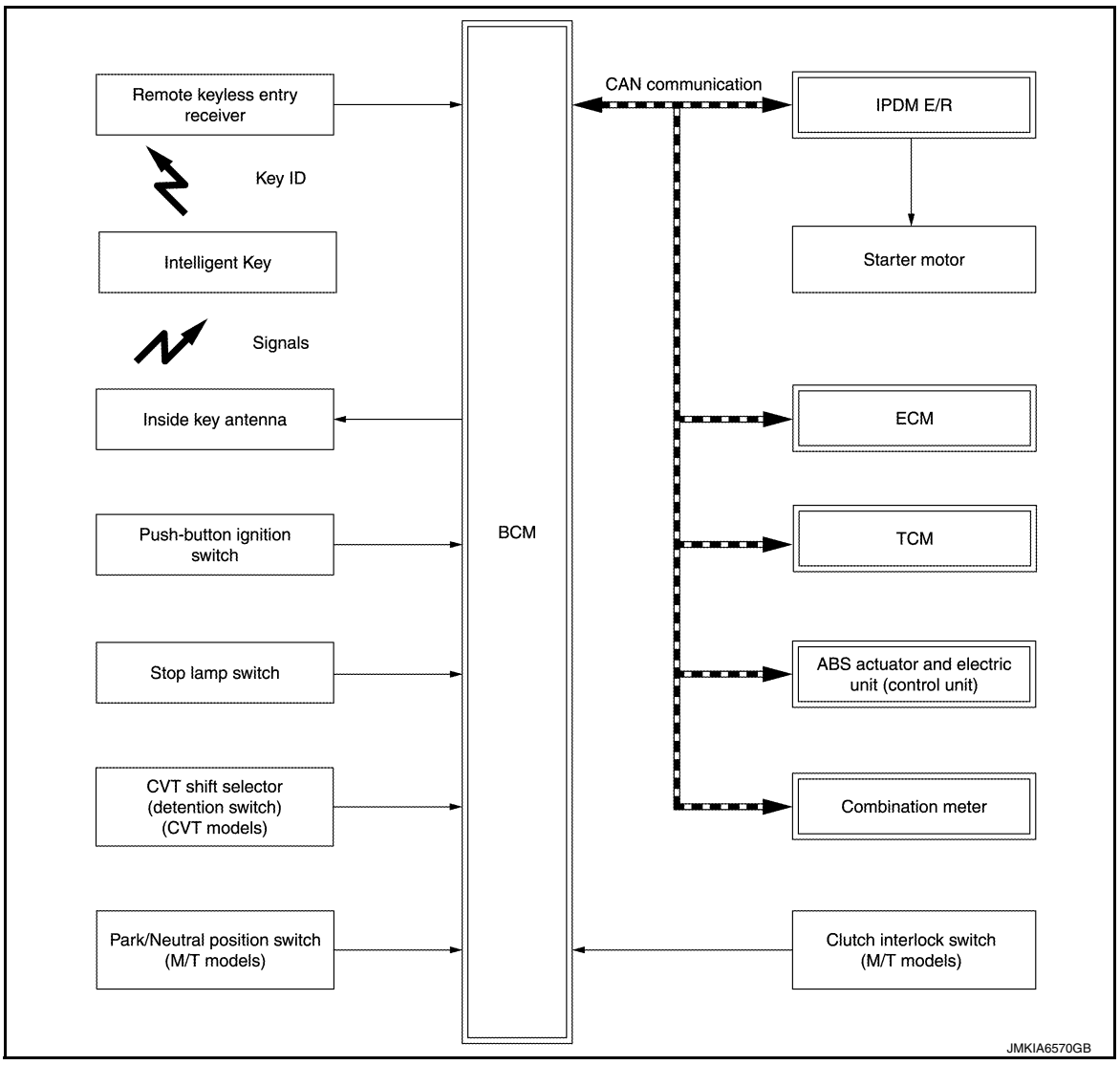
Vehicle information display is integrated in combination meter.
Various information and warnings regarding to the Intelligent Key System are displayed.

SYSTEM

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION : System Diagram

INFOID:0000000012202114



INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION : System Description

INFOID:0000000012202115

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 NVIS (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 NVIS (NATS) ID verification is performed.
- If the ID is successfully verified, 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-13, "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 NVIS (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 NVIS (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, 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 turns ACC relay ON and transmits the ignition power supply ON signal to IPDM E/R.
5. IPDM E/R turns the ignition relay ON to start the ignition power supply.
6. IPDM E/R turns the starter control relay ON for engine starting in advance.
7. BCM detects that the selector lever position and brake pedal operating condition (CVT models), or clutch pedal operation condition (M/T models).
8. 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.
9. Power source is supplied to starter motor through the starter relay and the starter control relay.
   CAUTION:
   If a malfunction is detected in the Intelligent Key system, the "KEY" warning lamp in the combination meter illuminates. At that time, the engine cannot be started.
10. When BCM 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 NVIS (NATS) ID verification between transponder integrated into 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.

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, they are equivalent to the operations below.
- When starting the engine, the BCM monitors the engine start conditions as per the following,
  CVT models
- Brake pedal operating condition
- Selector lever position
- Vehicle speed
  M/T models

- Clutch pedal operating condition
- 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
	CVT models		M/T models	
	Selector lever	Brake pedal operation condition	Clutch pedal operation condition	
OFF → ACC	—	Not depressed	Not depressed	1
OFF → ACC → ON	—	Not depressed	Not depressed	2
OFF → ACC → ON → OFF	—	Not depressed	Not depressed	3
OFF → START ACC → START ON → START	P or N position	Depressed	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
	CVT models		M/T models	
	Selector lever	Brake pedal operation condition	Clutch pedal operation condition	
Engine is running → ACC	—	—	—	Emergency stop operation
Engine stall return operation while driving	N position	Not depressed	Depressed	1

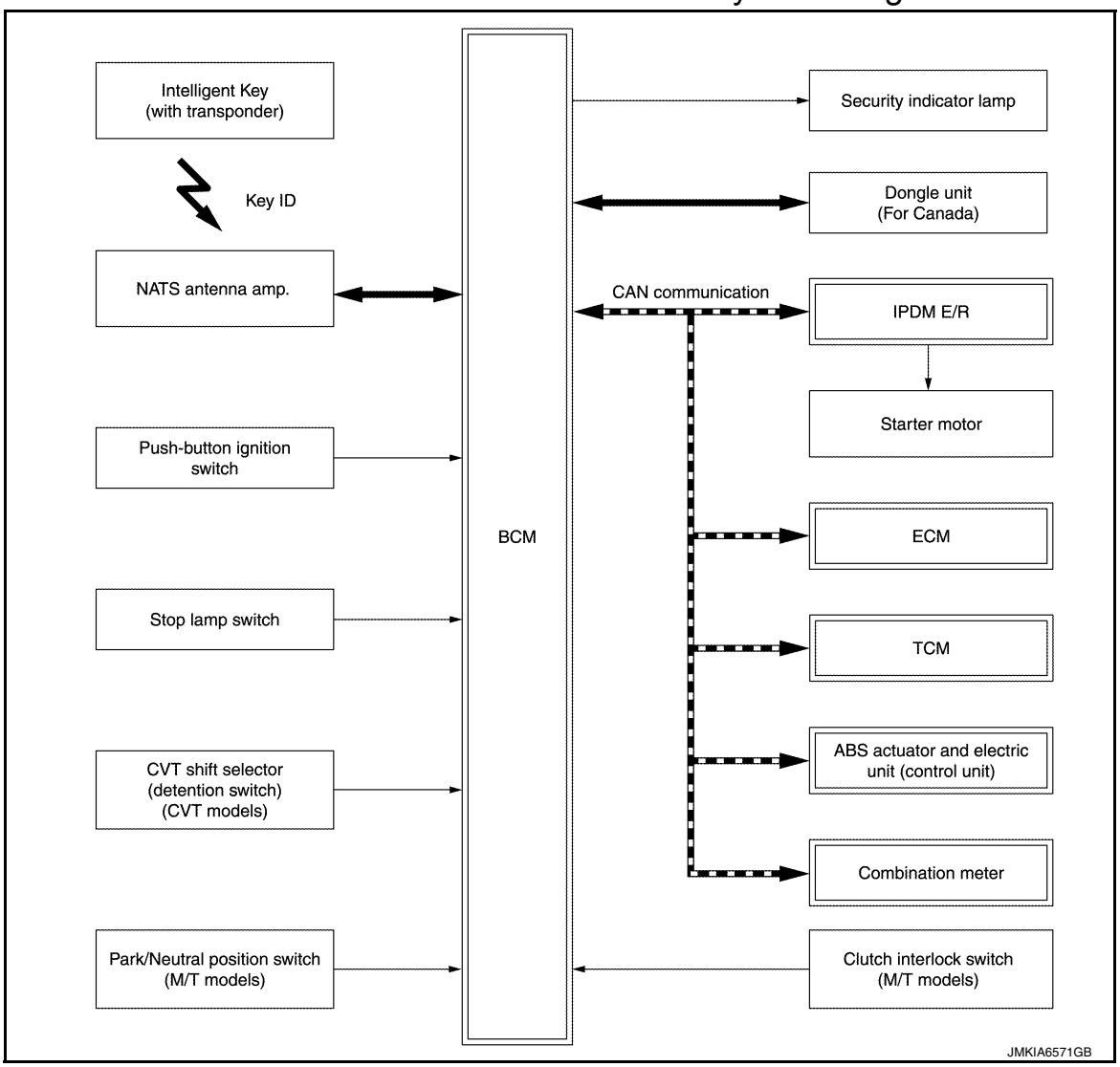
Emergency stop operation

- 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.

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS : System Diagram

INFOID:0000000012202116



NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS : System Description

INFOID:0000000012202117

SYSTEM DESCRIPTION

- The NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS [NVIS (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 NVIS (NATS) ID verification is performed between the transponder integrated into 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.
- The security indicator lamp on combination meter always blinks when the power supply position is any position other than ON which warns that the NVIS (NATS) is on board the model.
- 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.
- Possible symptom of NVIS (NATS) malfunction is “Engine cannot start”. The engine can not be started because of other than NVIS (NATS) malfunction, so start the trouble diagnosis according to SEC-44, "Work Flow".
- If ECM other than genuine part is installed, the engine cannot be started. For ECM replacement procedure, refer to EC-157, "Work Procedure".

PRECAUTIONS FOR KEY REGISTRATION

- The ID registration is a procedure that erases the current NVIS (NATS) ID once, and then registers 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 [NVIS (NATS) ID and Intelligent Key ID].

SECURITY INDICATOR LAMP

- Warns that the vehicle is equipped with NVIS (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 (CVT models), 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 NVIS (NATS) ID verification between BCM and Intelligent Key (transponder built-in) via NATS antenna amp.
3. When the NVIS (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 turns ACC relay ON and transmits ignition power supply ON signal to IPDM E/R.
5. IPDM E/R turns the starter control relay ON for engine starting in advance.
6. IPDM E/R turns the ignition relay ON to start the ignition power supply.
7. BCM detects that the selector lever position and brake pedal operating condition (CVT models), or clutch pedal operation condition (M/T models).
8. 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.
9. Power supply is supplied to the starter motor through the starter relay and the starter control relay.
10. When BCM receives feedback signal from ECM indicating that the engine is started, BCM transmits a stop signal to IPDM E/R to stop 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, they are equivalent to the operations below.
- When starting the engine, the BCM monitors the engine start conditions as per the following,

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

M/T models
- Clutch pedal operating condition
- 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
	CVT models		M/T models	
	Selector lever	Brake pedal operation condition	Clutch pedal operation condition	
OFF → ACC	—	Not depressed	Not depressed	1
OFF → ACC → ON	—	Not depressed	Not depressed	2

Power supply position	Engine start/stop condition			Push-button ignition switch operation frequency
	CVT models		M/T models	
	Selector lever	Brake pedal operation condition	Clutch pedal operation condition	
OFF → ACC → ON → OFF	—	Not depressed	Not depressed	3
OFF → START ACC → START ON → START	P or N position	Depressed	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
	CVT models		M/T models	
	Selector lever	Brake pedal operation condition	Clutch pedal operation condition	
Engine is running → ACC	—	—	—	Emergency stop operation
Engine stall return operation while driving	N position	Not depressed	Depressed	1

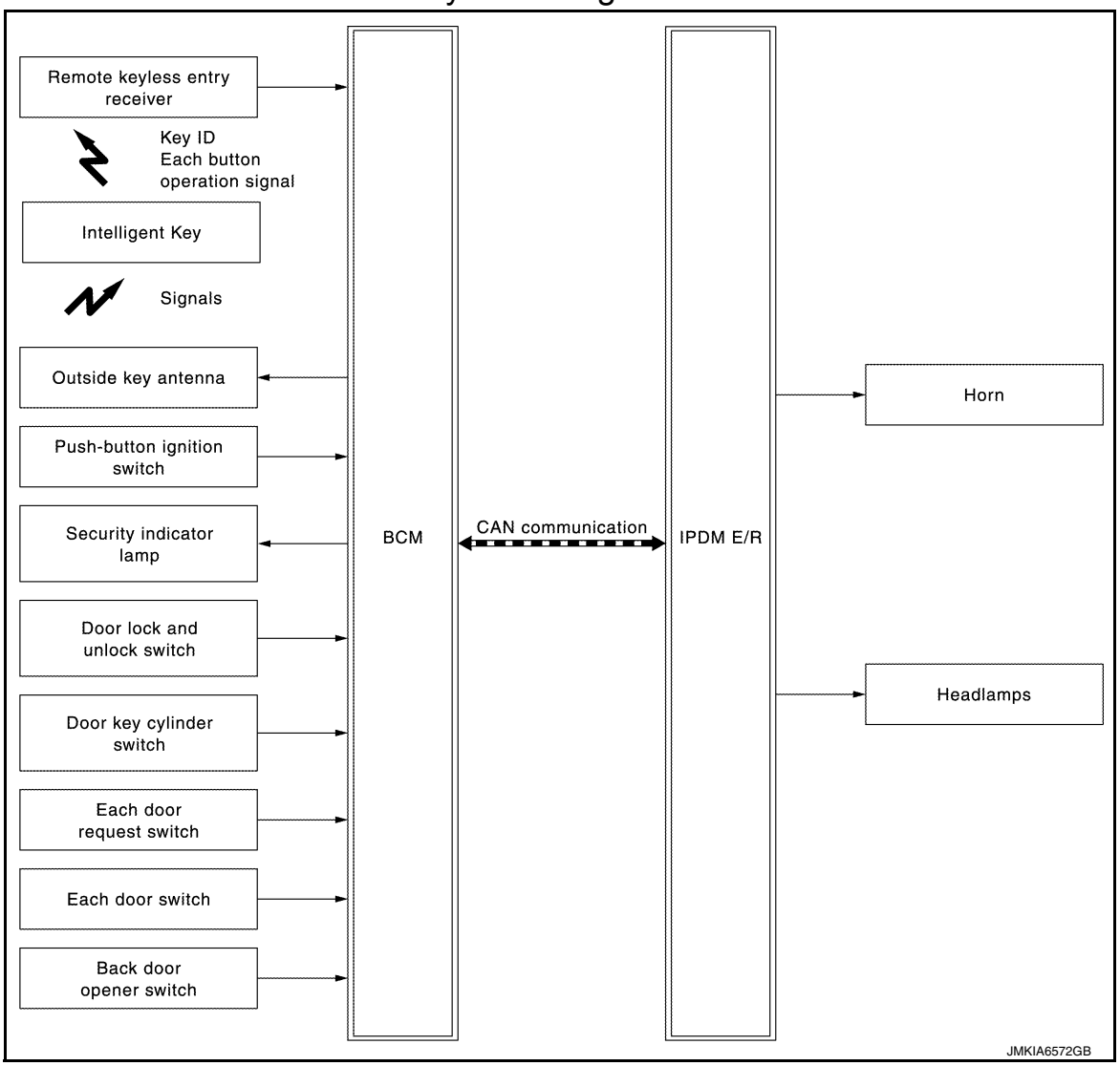
Emergency stop operation

- 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:0000000012202118



VEHICLE SECURITY SYSTEM : System Description

INFOID:0000000012202119

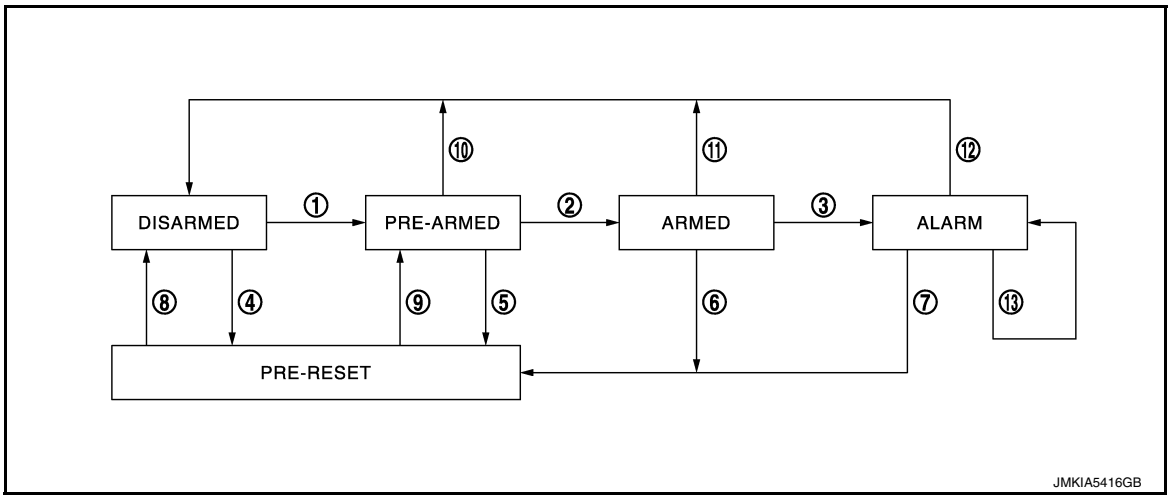
- The vehicle security system has two alarm functions (theft warning alarm and panic alarm), and reduces the possibility of a theft or mischief by activating horns and headlamps intermittently.
- The panic alarm does not start when the theft warning alarm is activating, and the panic alarm stops when 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 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 • All doors: Closed	All doors are locked by: • Door key cylinder LOCK switch • LOCK button of Intelligent Key • Door request switch • Door lock and unlock switch
2	PRE-ARMED to ARMED	When all of the following conditions are satisfied for 30 seconds.	• Power supply position: OFF • All doors: Locked	
3	ARMED to ALARM	When all conditions of A and of B are satisfied.	A	B
			Intelligent Key: Not used	• Any door: Open
4	DISARMED to PRE-RESET	No conditions.		
5	PRE-ARMED to PRE-RESET			
6	ARMED to PRE-RESET			
7	ALARM to PRE-RESET			
8	PRE-RESET to DISARMED			
9	PRE-RESET to PRE-ARMED			
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 • 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 • Door request switch: ON • Back door opener switch: ON	
12	ALARM to DISARMED			
13	RE-ALARM	When the following condition is satisfied after the ALARM operation is finished.	• Any door: 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-14, "DOOR LOCK FUNCTION : 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-14, "DOOR LOCK FUNCTION : 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 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.
The PRE-RESET phase is not available for this models.

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.
- 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 Function (BCM - COMMON ITEM)

INFOID:0000000012998443

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

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

NOTE:
*: For models with automatic A/C, this diagnosis mode is not used.

FREEZE FRAME DATA (FFD)
The BCM records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT.

CONSULT screen item	Indication/Unit	Description	
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected	
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected	
Vehicle Condition	SLEEP>LOCK	Power position status of the moment a particular DTC is detected	While turning BCM status from low power consumption mode to normal mode (Power position is “LOCK”*.)
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power position is “OFF”.)
	LOCK>ACC		While turning power position from “LOCK”* *to “ACC”
	ACC>ON		While turning power position from “ACC” to “IGN”
	RUN>ACC		While turning power position from “RUN” to “ACC” (Vehicle is stopping and selector lever is except P position.)
	CRANK>RUN		While turning power position from “CRANKING” to “RUN” (From cranking up the engine to run it)
	RUN>URGENT		While turning power position from “RUN“ to “ACC” (Emergency stop operation)
	ACC>OFF		While turning power position from “ACC” to “OFF”
	OFF>LOCK		While turning power position from “OFF” to “LOCK”*
	OFF>ACC		While turning power position from “OFF” to “ACC”
	ON>CRANK		While turning power position from “IGN” to “CRANKING”
	OFF>SLEEP		While turning BCM status from normal mode (Power position is “OFF”.) to low power consumption mode
	LOCK>SLEEP		While turning BCM status from normal mode (Power position is “LOCK”*.) to low power consumption mode
	LOCK		Power position is “LOCK”*
	OFF		Power position is “OFF” (Ignition switch OFF)
	ACC		Power position is “ACC” (Ignition switch ACC)
	ON		Power position is “IGN” (Ignition switch ON with engine stopped)
	ENGINE RUN		Power position is “RUN” (Ignition switch ON with engine running)
	CRANKING		Power 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.	

NOTE:

*: Power position shifts to “LOCK” from “OFF”, when ignition switch is in the OFF position, selector lever is in the P position (A/T models and CVT models), and any of the following conditions are met.

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

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

INTELLIGENT KEY

INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY)

INFOID:0000000012998442

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
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	**NOTE:** This item is displayed, but cannot be monitored
HORN WITH KEYLESS LOCK	Horn reminder function mode by Intelligent Key button can be changed to operate (ON) or not operate (OFF) with this mode • On: Operate • Off: Non-operation
PANIC ALARM SET	Panic alarm button pressing time on Intelligent Key remote control 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	**NOTE:** This item is displayed, but cannot be monitored
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

SELF-DIAG RESULT

Refer to BCS-62, "DTC Index".

DATA MONITOR

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

Monitor Item	Condition
REQ SW -DR	Indicates [On/Off] condition of door request switch (driver side)
REQ SW -AS	Indicates [On/Off] condition of door request switch (passenger side)
REQ SW -BD/TR	Indicates [On/Off] condition of back door request switch
PUSH SW	Indicates [On/Off] condition of push-button ignition switch
CLUTCH SW*1	Indicates [On/Off] condition of clutch interlock switch
BRAKE SW 1	Indicates [On/Off]*2 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
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	**NOTE:** This item is displayed, but cannot be monitored
S/L UNLK-IPDM	**NOTE:** This item is displayed, but cannot be monitored
S/L RELAY-REQ	**NOTE:** This item is displayed, but cannot be monitored
VEH SPEED 1	Display the vehicle speed signal received from 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 driver side door status
DOOR STAT-AS	Indicates [LOCK/READY/UNLK] condition of passenger side door status
ID OK FLAG	Indicates [Set/Reset] condition of key ID
PRMT ENG STRT	Indicates [Set/Reset] condition of engine start possibility
PRMT RKE STRT	**NOTE:** This item is displayed, but cannot be monitored
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

*1: It is displayed but does not operate on CVT models.

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

ACTIVE TEST

Test item	Description
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 screen is touched • Key: Key warning chime sounds when CONSULT screen is touched • Knob: OFF position warning chime sounds when CONSULT screen is touched • Off: Non-operation
INDICATOR	This test is able to check warning lamp operation • KEY ON: “KEY” Warning lamp illuminates when CONSULT screen is touched • KEY IND: “KEY” Warning lamp blinks when CONSULT 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 • BP N: Engine start operation indicator lamp indicate when CONSULT screen is touched • BP I: Engine start operation indicator lamp indicate when CONSULT screen is touched • ID NG: This item is displayed, but cannot be monitored • ROTAT: This item is displayed, but cannot be monitored • SFT P: Shift P warning lamp indicate when CONSULT screen is touched • INSRT: This item is displayed, but cannot be monitored • BATT: Key warning lamp indicator when CONSULT screen is touched • NO KY: Key warning lamp indicator when CONSULT screen is touched • OUTKEY: Engine start operation indicator lamp indicate when CONSULT screen is touched • LK WN: Engine start operation indicator lamp indicate when CONSULT 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 screen is touched
HORN	This test is able to check horn operation The horn is activated after “ON” on CONSULT screen is touched
P RANGE	This test is able to check CVT shift selector power supply • On: Operate • Off: Non-operation
ENGINE SW ILLUMI	This test is able to check push-ignition switch illumination operation Push-ignition switch illumination illuminates when “ON” on CONSULT screen is touched
PUSH SWITCH INDICATOR	This test is able to check LOCK indicator in push-ignition switch operation LOCK indicator in push-ignition switch illuminates when “ON” on CONSULT screen is touched
BATTERY SAVER	This test is able to check interior room lamp operation. The interior room lamp will be activated after “ON” on CONSULT screen is touched.
TRUNK/BACK DOOR	This test is able to check back door opener actuator open operation. This actuator opens when “Open” on CONSULT screen is touched.

THEFT ALM

THEFT ALM : CONSULT Function (BCM - THEFT)

INFOID:0000000012202122

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 screen.

DATA MONITOR

NOTE:

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

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

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 screen is touched.
VEHICLE SECURITY HORN	This test is able to check horns operation. Horns are activated for 0.5 seconds after “ON” on CONSULT screen is touched.
HEADLAMP(HI)	This test is able to check headlamp operation. Headlamps are activated for 0.5 seconds after “ON” on CONSULT screen is touched.
FLASHER	This test is able to check hazard warning lamp operation. Hazard warning lamps are activated after “ON” on CONSULT screen is touched.

IMMU

IMMU : CONSULT Function (BCM - IMMU)

INFOID:0000000012202123

WORK SUPPORT

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

DATA MONITOR

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

Monitor item	Content
CONFRM ID ALL	Indicates [YET] at all time. 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 screen is touched.

DIAGNOSIS SYSTEM (IPDM E/R)

CONSULT Function (IPDM E/R)

INFOID:0000000012998444

APPLICATION ITEM

CONSULT 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-24, "DTC Index".

DATA MONITOR

NOTE:

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

Monitor Item [Unit]	MAIN SIGNALS	Description
RAD FAN REQ [%]	×	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 ignition power supply (M/T models) or shift position (CVT models) 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.

Monitor Item [Unit]	MAIN SIGNALS	Description
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.
DETENT SW [Off/On]		Displays the status of the CVT shift selector (detention switch) judged by IPDM E/R.
S/L RLY -REQ [Off/On]		**NOTE:** This item is indicated, but not monitored.
S/L STATE [LOCK/UNLK/UNKWN]		**NOTE:** This item is indicated, but not monitored.
DTRL REQ [Off/On]		Displays the status of the daytime running light request signal received from BCM via CAN communication. **NOTE:** This item is monitored only for the except for NISMO models.
OIL P SW [Open/Close]		**NOTE:** This item is indicated, but not monitored.
HOOD SW [Off/On]		**NOTE:** This item is indicated, but not monitored.
HL WASHER REQ [Off/On]		**NOTE:** This item is indicated, but not monitored.
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 request signal received from BCM via CAN communication.

ACTIVE TEST

Test item

Test item	Operation	Description
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	**NOTE:** This item is indicated, but cannot be tested.
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.

ECU DIAGNOSIS INFORMATION

ECM, IPDM E/R, BCM

List of ECU Reference

INFOID:0000000012202125

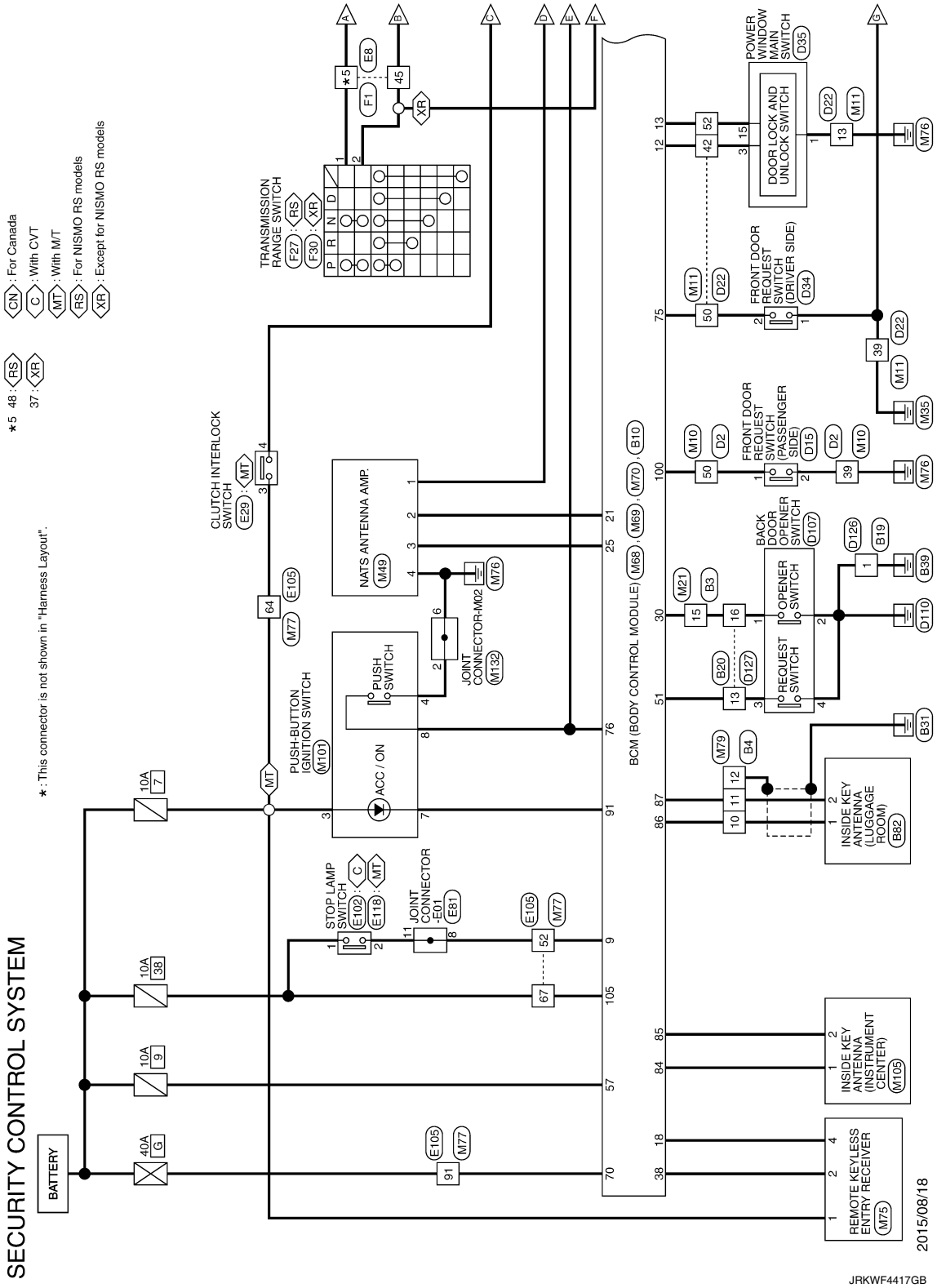
ECU		Reference
ECM	Reference Value	EC-96, "Reference Value"
	Fail-safe	EC-111, "Fail Safe"
	DTC Inspection Priority Chart	EC-113, "DTC Inspection Priority Chart"
	DTC Index	EC-115, "DTC Index"
IPDM E/R	Reference Value	PCS-17, "Reference Value"
	Fail-safe	PCS-23, "Fail-safe"
	DTC Index	PCS-24, "DTC Index"
BCM	Reference Value	BCS-39, "Reference Value"
	Fail-safe	BCS-60, "Fail-safe"
	DTC Inspection Priority Chart	BCS-61, "DTC Inspection Priority Chart"
	DTC Index	BCS-62, "DTC Index"

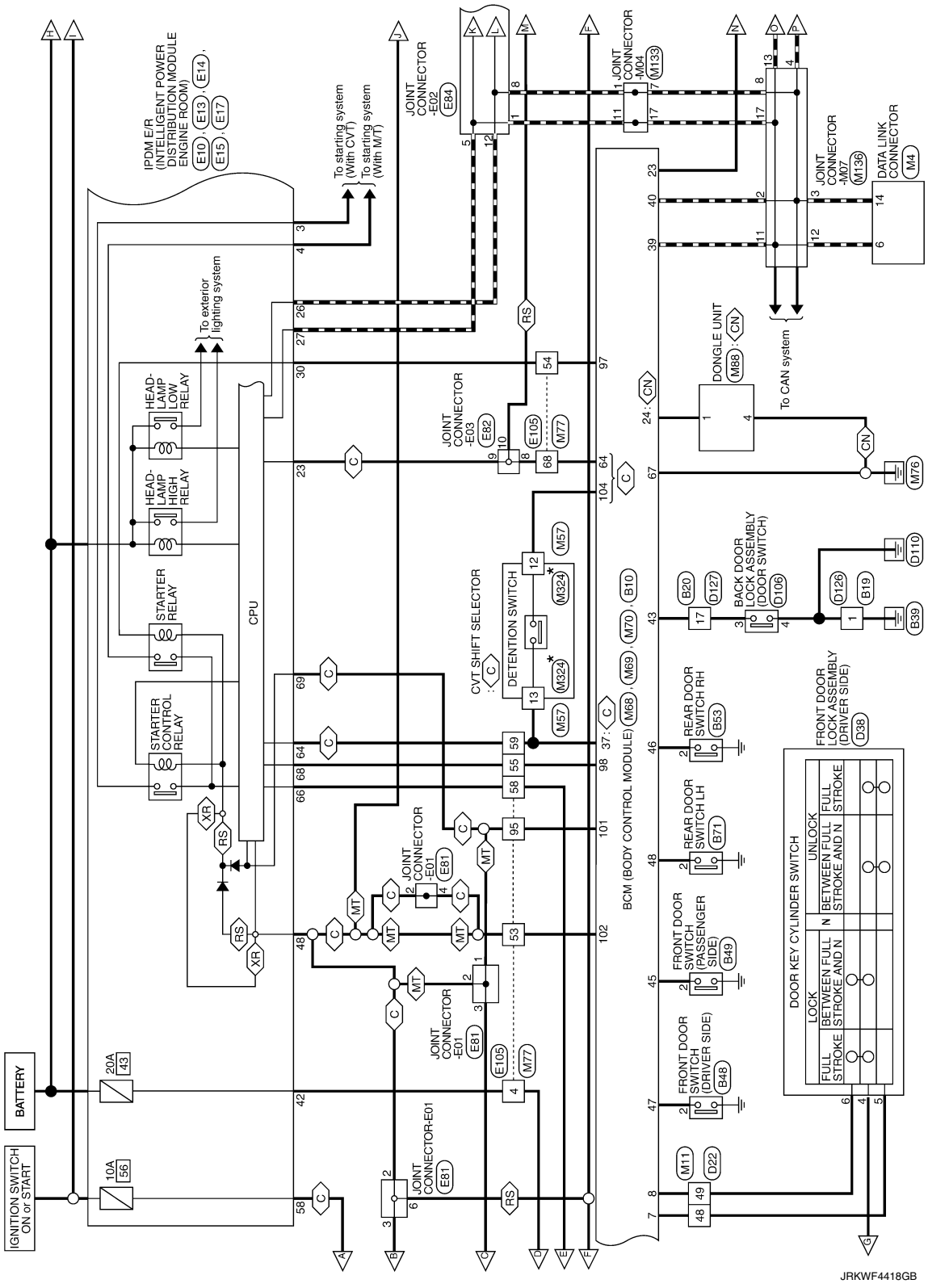
WIRING DIAGRAM

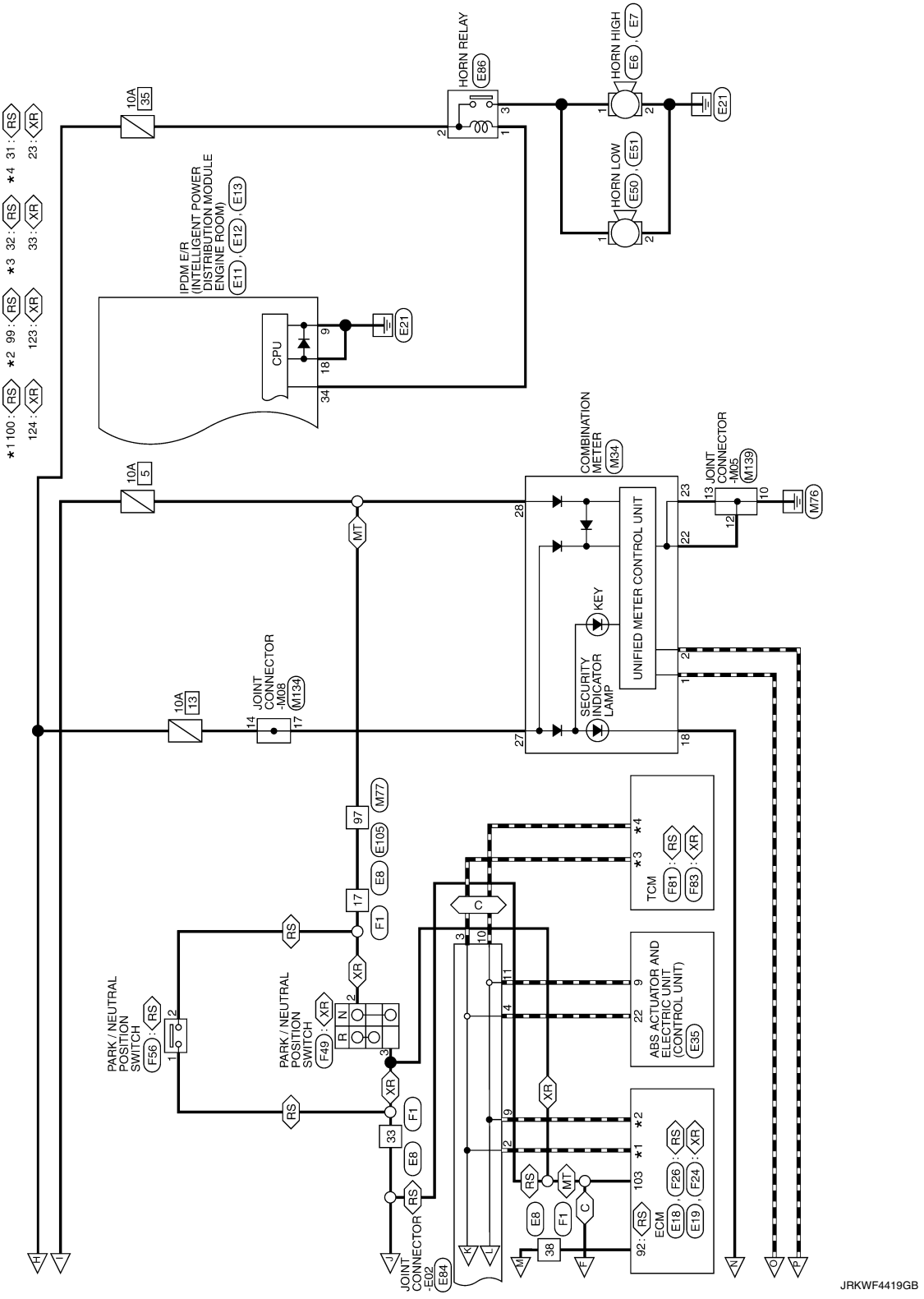
SECURITY CONTROL SYSTEM

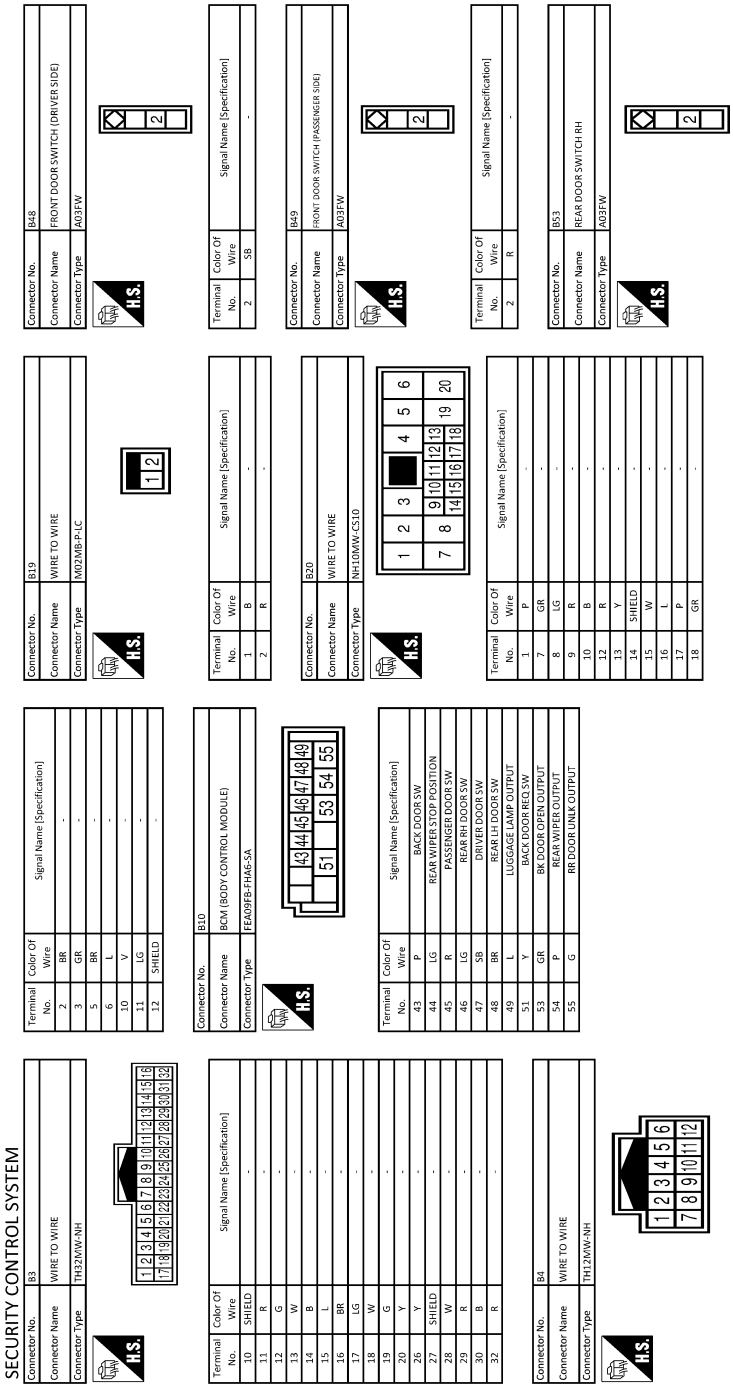
Wiring Diagram

INFOID:0000000012202126




IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E10, E13, E14, E15, E17
To starting system (With CVT)
To starting system (With M/T)
JOINT CONNECTOR -E02 E84
JOINT CONNECTOR M04 M133
JOINT CONNECTOR -M07 M136
DATA LINK CONNECTOR M4
To exterior lighting system
HEAD-LAMP LOW RELAY
HEAD-LAMP HIGH RELAY
STARTER RELAY
STARTER CONTROL RELAY
CPU
JOINT CONNECTOR -E03 E82
DONGLE UNIT M88 : CN
To CAN system
CVT SHIFT SELECTOR : C
DETENTION SWITCH M324
BCM (BODY CONTROL MODULE) M68, M69, M70, B10
BACK DOOR LOCK ASSEMBLY (DOOR SWITCH) D106
REAR DOOR SWITCH RH B53
REAR DOOR SWITCH LH B71
FRONT DOOR SWITCH (PASSENGER SIDE) B49
FRONT DOOR SWITCH (DRIVER SIDE) B48
FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE) D38
DOOR KEY CYLINDER SWITCH
LOCK
UNLOCK
FULL STROKE
BETWEEN FULL STROKE AND N
N
BATTERY
IGNITION SWITCH ON or START
20A 43
10A 56
JOINT CONNECTOR-E01 E81
JOINT CONNECTOR -E01 E81
JRKWF4418GB


HORN RELAY
E86
HORN HIGH
E6
E7
HORN LOW
E50
E51
E21
10A
35
10A
5
10A
13
IPDM E/R
(INTELLIGENT POWER
DISTRIBUTION MODULE
ENGINE ROOM)
E11
E12
E13
CPU
COMBINATION
METER
M34
UNIFIED METER CONTROL UNIT
KEY
SECURITY
INDICATOR
LAMP
JOINT
CONNECTOR
-M05
M139
M76
JOINT
CONNECTOR
-M08
M134
MT
97
M77
E105
E8
17
F1
RS
XR
PARK / NEUTRAL
POSITION
SWITCH
F56
PARK / NEUTRAL
POSITION
SWITCH
F49
TCM
F81
F83
ABS ACTUATOR AND
ELECTRIC UNIT
(CONTROL UNIT)
E35
ECM
E18
E19
F26
F24
103
92
38
JOINT
CONNECTOR
-E02
E84
JRKWF4419GB



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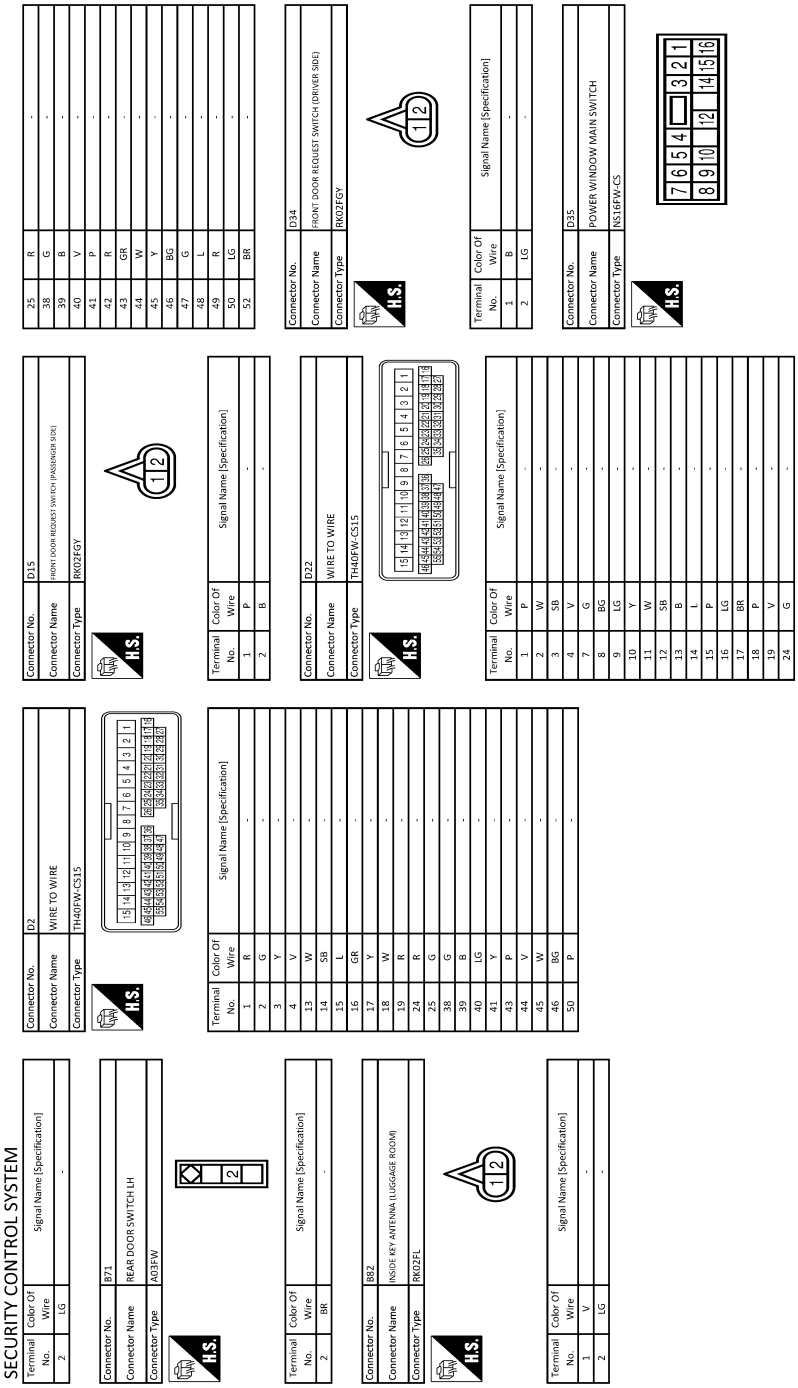

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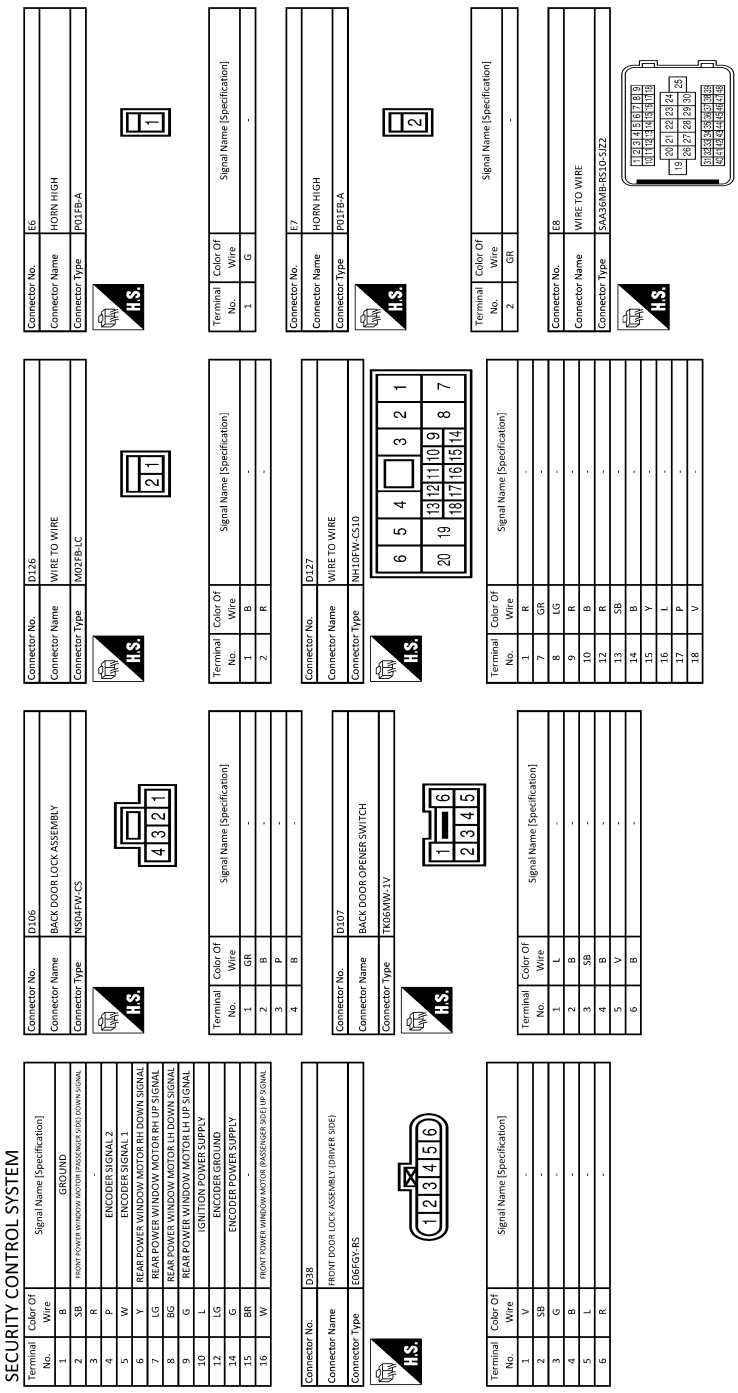

JRKWF4422GB

SECURITY CONTROL SYSTEM

Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	-
2	L	-
3	O	-
4	LG	- [For NISMO RS]
4	V	- [Except for NISMO RS]
5	O	-
7	BR	-
10	R	-
11	G	- [Except for NISMO RS]
11	O	- [For NISMO RS]
12	G	-
13	B	- [Except for NISMO RS]
13	V	- [For NISMO RS]
14	L	- [For NISMO RS]
14	LG	- [Except for NISMO RS]
15	R	-
16	SB	-
17	GR	-
18	W	-
19	L/B	-
20	L/W	-
21	G	-
22	G	- [For NISMO RS]
22	Y	- [Except for NISMO RS]
23	B	- [Except for NISMO RS]
23	SHIELD	- [For NISMO RS]
24	P	-
25	R	-
26	B	-
27	B	-
28	LG	-
29	SB	-
30	G	- [Except for NISMO RS]
30	P	- [For NISMO RS]
31	G	-
32	Y	-
33	BR	-
34	P	- [Except for NISMO RS]
34	W	- [For NISMO RS]
37	L	- [Without Intelligent Key]
37	LG	- [With Intelligent Key]
38	SB	-
39	B	-
40	P	-
41	V	-
42	L	-
43	BR	- [For NISMO RS]
43	W	- [Except for NISMO RS]
44	BR	- [Except for NISMO RS]
44	G	- [For NISMO RS]
45	BR	-
46	Y	-
47	SB	-
48	LG	- [With Intelligent Key]
48	Y	- [Without Intelligent Key]

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

Terminal No.	Color Of Wire	Signal Name [Specification]
3	R	-
4	P	-
5	LG	-
7	Y	-
8	W/R	-

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

H.S.

10 9
14

Terminal No.	Color Of Wire	Signal Name [Specification]
9	B/Y	-
10	L	-
14	R	-

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

H.S.

20 19 18

Terminal No.	Color Of Wire	Signal Name [Specification]
18	GR	-
19	R	- [Without front fog lamp]
19	W	- [With front fog lamp]
20	G	- [Without front fog lamp]
20	V	- [With front fog lamp]

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

H.S.

28 27 26 25 23
34 33 32 31 30

Terminal No.	Color Of Wire	Signal Name [Specification]
23	SB	-
25	BR	-
26	P	-
27	L	-
28	Y	-
30	V	-
31	Y	-
32	R	-
33	G	-
34	L	-

Connector No. E14
Connector Name IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type NS12FBR-CS

H.S.

39 37 36 35
46 45 44 43 42 41

Terminal No.	Color Of Wire	Signal Name [Specification]
35	G	-
36	P	-
37	L	-
39	L	-
41	BR	-
42	Y	-
43	L	-
44	BR	-
45	W	-
46	LG	-

Connector No. E15
Connector Name IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type NS16FW-CS

H.S.

52 51 50 49 48
62 61 60 59 58 57 56 55 54

Terminal No.	Color Of Wire	Signal Name [Specification]
48	BR	-
49	Y	-
50	G	-
51	L	-
52	P	-
54	P	-
55	G	-
56	SB	-
57	O	-
58	LG	-

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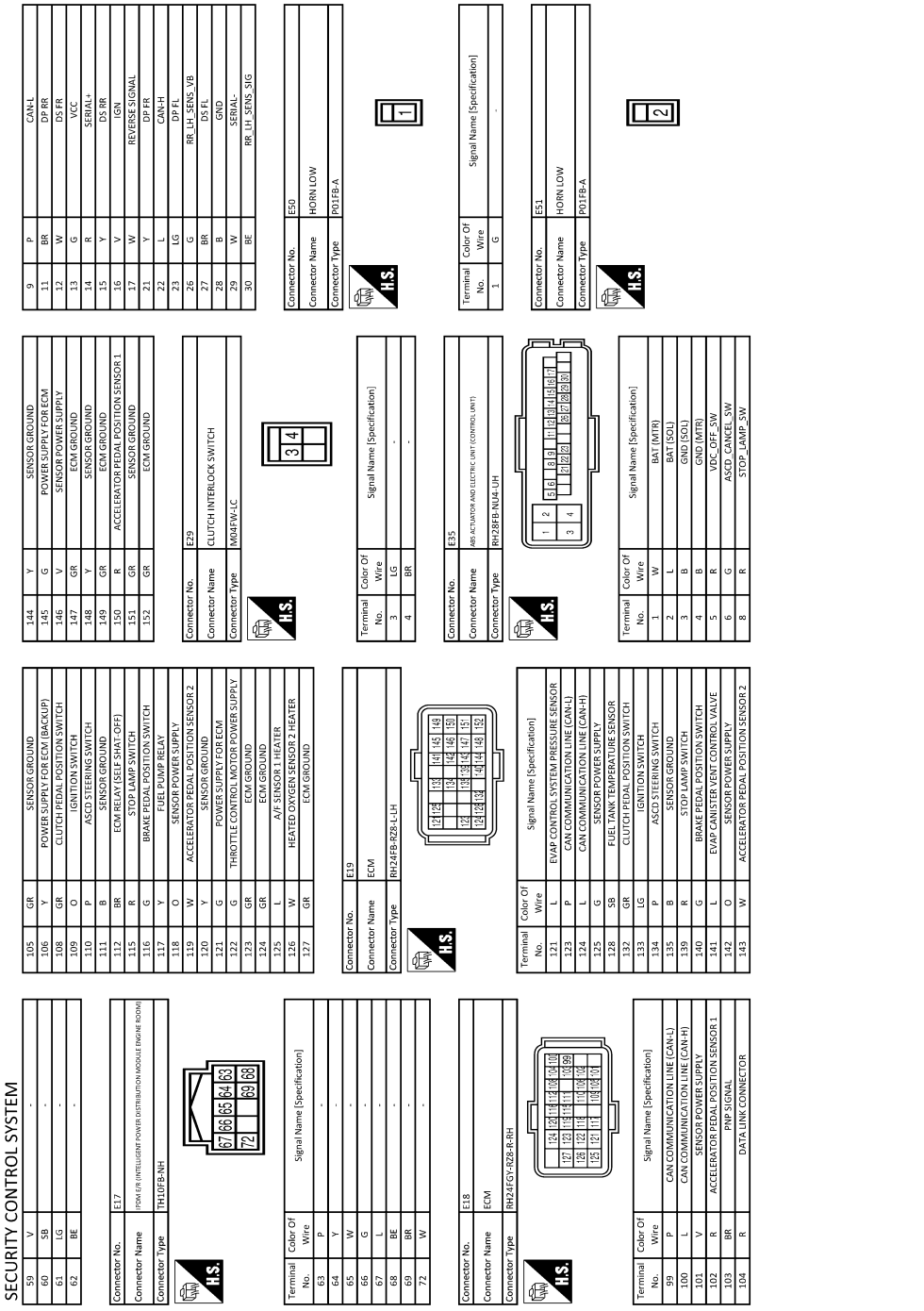

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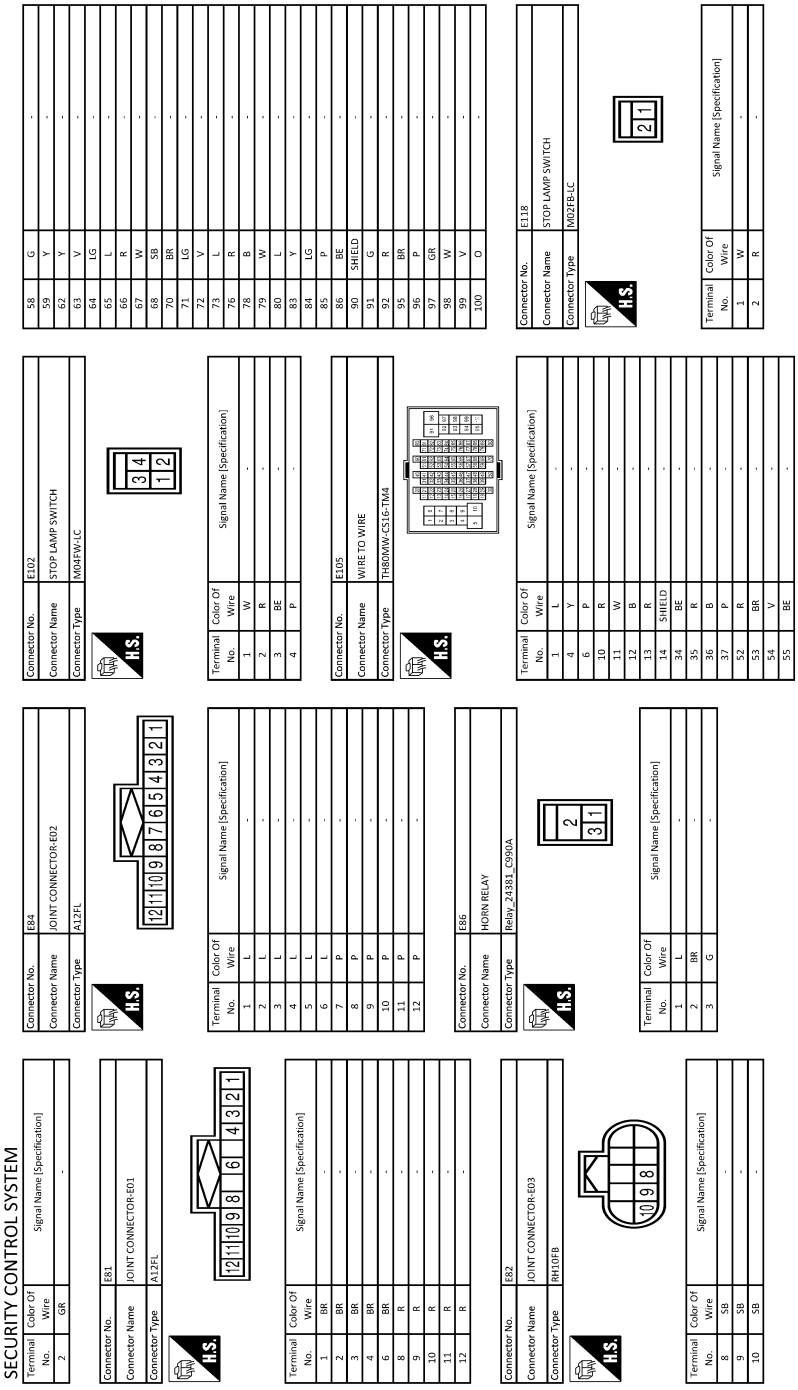


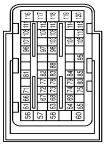
JRKWF4425GB

SECURITY CONTROL SYSTEM

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

Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	-
2	L	-
3	W	- [Except for NISMO RS]
3	Y	- [For NISMO RS]
4	BG	- [For NISMO RS]
4	GR	- [Except for NISMO RS]
5	LG	-
7	G	-
10	R	- [Except for NISMO RS]
10	Y	- [For NISMO RS]
11	G	- [Except for NISMO RS]
11	Y	- [For NISMO RS]
12	G	-
13	B	- [Except for NISMO RS]
13	BG	- [For NISMO RS]
14	L	- [For NISMO RS]
14	V	- [Except for NISMO RS]
15	BR	-
16	P	-
17	SB	-
18	G	-
19	G	-
20	BR	-
21	G	-
22	BR	- [For NISMO RS]
22	Y	- [Except for NISMO RS]
23	B	-
24	R	-
25	R	-
26	B	-
27	B	-
28	R	-
29	W	-
30	GR	- [Except for NISMO RS]
30	R	- [For NISMO RS]
31	BG	-
32	LG	-
33	BR	-
34	G	- [For NISMO RS]
34	P	- [Except for NISMO RS]
37	G	- [Without Intelligent Key]
37	GR	- [With Intelligent Key]
38	R	-
39	GR	-
40	P	-
41	BR	- [For NISMO RS]
41	V	- [Except for NISMO RS]
42	L	- [Except for NISMO RS]
42	W	- [For NISMO RS]
43	L	- [For NISMO RS]
43	W	- [Except for NISMO RS]
44	BR	- [Except for NISMO RS]
44	G	- [For NISMO RS]
45	BR	-
46	R	-
47	Y	-
48	GR	- [With Intelligent Key]
48	Y	- [Without Intelligent Key]

Connector No.	F24
Connector Name	ECM
Connector Type	MA835FB-MEB10-LH



Terminal No.	Color Of Wire	Signal Name [Specification]
56	R	EGR VOLUME CONTROL VALVE POWER SUPPLY
57	W	EGR VOLUME CONTROL VALVE MOTOR (+)
58	R	EGR VOLUME CONTROL VALVE MOTOR (-)
60	B	ECM GROUND
61	W	SENSOR POWER SUPPLY
63	L	SENSOR GROUND
64	SHIELD	SHIELD
65	R	WASTEGATE CONTROL VALVE POSITION SENSOR
66	G	SENSOR POWER SUPPLY
67	BR	CAMSHAFT POSITION SENSOR
68	GR	EGR VOLUME CONTROL VALVE POSITION SENSOR
69	LG	EXHAUST VALVE TIMING CONTROL POSITION SENSOR
71	L	SENSOR GROUND
72	B	SENSOR GROUND
73	GR	SENSOR POWER SUPPLY
74	B	A/F SENSOR 1
75	L	MULTI-WAY CONTROL VALVE POSITION SENSOR
77	V	INTAKE AIR TEMPERATURE SENSOR 2
78	R	SENSOR GROUND
79	W	A/F SENSOR 1
80	W	THROTTLE POSITION SENSOR 2
81	BR	ECM RELAY (SELF-SHUT-OFF)
82	Y	FUEL PUMP RELAY
83	B	SENSOR POWER SUPPLY
84	W	HEATED OXYGEN SENSOR 2
85	R	SENSOR GROUND
88	G	THROTTLE POSITION SENSOR 1
95	LG	IGNITION SIGNAL NO.2
96	R	IGNITION SIGNAL NO.1
97	Y	THROTTLE CONTROL MOTOR RELAY
98	R	ENGINE OIL PRESSURE CONTROL SOLENOID VALVE
101	SB	IGNITION SIGNAL NO.4
103	BR	PNP SIGNAL
104	P	IGNITION SIGNAL NO.3
105	BR	TURBOCHARGER BYPASS CONTROL VALVE
106	R	ELECTRIC WASTEGATE CONTROL ACTUATOR POWER SUPPLY
107	L/Y	ELECTRIC WASTEGATE CONTROL ACTUATOR MOTOR (+)
108	P/L	ELECTRIC WASTEGATE CONTROL ACTUATOR MOTOR (-)
110	B	ECM GROUND
111	W	INTAKE VALVE TIMING CONTROL SOLENOID VALVE
112	G	EXHAUST VALVE TIMING CONTROL SOLENOID VALVE
113	Y	POWER SUPPLY FOR ECM (ENGINE OFF TIMER)
114	L	INTAKE VALVE TIMING INTERMEDIATE LOCK CONTROL SOLENOID VALVE
115	L	EVAP CANISTER PURGE VOLUME CONTROL SOLENOID VALVE
116	G	A/F SENSOR 1 HEATER
117	G	HEATED OXYGEN SENSOR 2 HEATER
118	GR	THROTTLE CONTROL MOTOR POWER SUPPLY
119	GR	THROTTLE CONTROL MOTOR (OPEN)
120	BR	THROTTLE CONTROL MOTOR (CLOSE)

Connector No.	F26
Connector Name	ECM
Connector Type	RH40FBR-RZ8-L-RH

Terminal No.	Color Of Wire	Signal Name [Specification]
49	G	FUEL INJECTOR DRIVER POWER SUPPLY 1
50	B	ECM GROUND (HIGH PRESSURE FUEL PUMP)
51	GR	THROTTLE CONTROL MOTOR (OPEN)
52	BR	THROTTLE CONTROL MOTOR (CLOSE)
53	BR	FUEL INJECTOR DRIVER POWER SUPPLY 2
54	R	HIGH PRESSURE FUEL PUMP DRIVER POWER SUPPLY
55	BR	HIGH PRESSURE FUEL PUMP (HI)
56	Y	HIGH PRESSURE FUEL PUMP (LO)
58	G	SENSOR POWER SUPPLY
59	L	SENSOR GROUND
60	W	SENSOR GROUND
62	B	SENSOR POWER SUPPLY
63	BR	CAMSHAFT POSITION SENSOR (PHASE)
64	R	CRANKSHAFT POSITION SENSOR (POS)
67	LG	EXHAUST VALVE TIMING CONTROL POSITION SENSOR
68	Y	SENSOR POWER SUPPLY
69	L	EVAP CANISTER VENT CONTROL VALVE
72	GR	SENSOR POWER SUPPLY
73	BR	TURBOCHARGER BOOST CONTROL SOLENOID VALVE
74	R	SENSOR GROUND
75	G	THROTTLE POSITION SENSOR 1
76	W	THROTTLE POSITION SENSOR 2
77	Y	THROTTLE CONTROL RELAY
79	BG	BATTERY TEMPERATURE SENSOR
80	G	BATTERY CURRENT SENSOR
81	W	INTAKE VALVE TIMING CONTROL SOLENOID VALVE
82	R	IGNITION SIGNAL NO.1
83	G	G SENSOR
84	P	FUEL TANK TEMPERATURE SENSOR
85	G	EXHAUST VALVE TIMING CONTROL SOLENOID VALVE
86	LG	IGNITION SIGNAL NO.2
87	BR	SENSOR GROUND
88	V	INTAKE AIR TEMPERATURE SENSOR 2
90	P	IGNITION SIGNAL NO.3
92	R	CRANKING ENABLE SIGNAL
94	SB	IGNITION SIGNAL NO.4

JRKWF4426GB

SECURITY CONTROL SYSTEM

95	L	EVAP CANISTER PURGE VOLUME CONTROL SOLENOID VALVE

Connector No.	F27
Connector Name	TRANSMISSION RANGE SWITCH
Connector Type	RK08FG

H.S.

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

Connector No.	F30
Connector Name	TRANSMISSION RANGE SWITCH
Connector Type	YDX06FB-H54

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	BR	-
3	LG	-
4	SB	-
5	G	-
6	LG	-
7	W	-
8	BR	-

Connector No.	F49
Connector Name	PARK / NEUTRAL POSITION SWITCH
Connector Type	FEA03FG-LC

H.S.

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

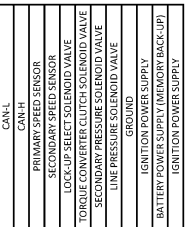
Connector No.	F56
Connector Name	PARK / NEUTRAL POSITION SWITCH
Connector Type	RK02FB

H.S.

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

Connector No.	F81
Connector Name	TCM
Connector Type	RH40FB-RZ8-L-RH

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	R RANGE SW
2	Y	N RANGE SW
3	W	D RANGE SW
4	V	-
5	B	GROUND
8	BR	CLOCK (SEL 2)
9	G	CHIP SELECT (SEL 1)
10	W	DATE I/O (SEL 3)
11	L	P RANGE SW
13	SB	CVT FLUID TEMPERATURE SENSOR
15	P	SECONDARY PRESSURE SENSOR
25	Y	SENSOR GROUND
26	LG	SENSOR POWER SUPPLY
27	GR	STEP MOTOR D
28	V	STEP MOTOR C
29	BG	STEP MOTOR B
30	R	STEP MOTOR A
31	P	CAN-L
32	L	CAN-H
33	BG	PRIMARY SPEED SENSOR
34	R	SECONDARY SPEED SENSOR
37	L	LOCK-UP SELECT SOLENOID VALVE
38	G	TORQUE CONVERTER CLUTCH SOLENOID VALVE
39	W	SECONDARY PRESSURE SOLENOID VALVE
40	Y	LINE PRESSURE SOLENOID VALVE
42	B	GROUND
46	LG	IGNITION POWER SUPPLY
47	BG	BATTERY POWER SUPPLY (MEMORY BACK-UP)
48	Y	IGNITION POWER SUPPLY

Connector No.	F83
Connector Name	TCM
Connector Type	RH40FB-RZ8-L-RH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
2	BR	-
4	W	D RANGE SW
5	LG	N RANGE SW
6	G	R RANGE SW
7	SB	P RANGE SW
11	Y	SENSOR GROUND
12	SB	CVT FLUID TEMPERATURE SENSOR
16	P	SECONDARY PRESSURE SENSOR
17	P	PRIMARY PRESSURE SENSOR
23	P	CAN-L
24	V	INPUT SPEED SENSOR
26	LG	SENSOR POWER SUPPLY
30	Y	LINE PRESSURE SOLENOID VALVE
33	L	CAN-H
34	R	OUTPUT SPEED SENSOR
35	BG	PRIMARY SPEED SENSOR
37	L	SELECT SOLENOID VALVE
38	LG	TORQUE CONVERTER CLUTCH SOLENOID VALVE
39	G	SECONDARY PRESSURE SOLENOID VALVE
40	W	PRIMARY PRESSURE SOLENOID VALVE
41	B	GROUND
42	B	GROUND
45	V	BATTERY POWER SUPPLY
46	GR	BATTERY POWER SUPPLY
47	LG	IGNITION POWER SUPPLY
48	W	IGNITION POWER SUPPLY

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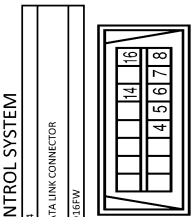
SECURITY CONTROL SYSTEM

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



Terminal No.	Color Of Wire	Signal Name [Specification]
4	B	-
5	B	-
6	L	-
7	W	-
8	LG	-
14	P	-
16	Y	-

Connector No.	M10
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS15

Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	G	-
3	SB	-
4	V	-
13	GR	-
14	GR	-
15	L	-
16	SHIELD	-
17	Y	-
18	G	-
19	L	-
24	R	-
25	G	-

38	Y	-
39	B	-
40	BR	-
41	G	-
43	V	-
44	V	-
45	LG	-
46	BR	-
50	P	-

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS15

Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	W	-
3	SB	-
4	V	-
7	R	-
8	G	-
9	LG	-
10	Y	-
11	GR	-
12	GR	-
13	B	-
14	L	-
15	P	-
16	SHIELD	-
17	R	-
18	B	-
19	W	-
24	BR	-
25	Y	-
38	W	-
39	B	-
40	V	-
41	P	-
42	GR	-
43	V	-

44	P	-
45	G	-
46	Y	-
47	GR	-
48	L	-
49	R	-
50	LG	-
52	BR	-

Connector No.	M21
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH

Terminal No.	Color Of Wire	Signal Name [Specification]
10	SHIELD	-
11	Y	-
12	BR	-
13	W	-
14	B	-
15	L	-
16	P	-
17	LG	-
18	W	-
19	G	-
20	R	-
26	R	-
27	SHIELD	-
28	V	-
29	L	-
30	LG	-
32	W	-

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

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	CAN-H
2	P	CAN-L
4	Y	VEHICLE SPEED SIGNAL (8-PULSE)
5	G	PADDLE SHIFTER UP SWITCH SIGNAL
6	BR	FUEL LEVEL SENSOR SIGNAL
7	R	AIR BAG SIGNAL
8	P	-
9	W	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)
10	SB	PARKING BRAKE SWITCH SIGNAL
11	G	BRAKE FLUID LEVEL SWITCH SIGNAL
13	GR	ILLUMINATION CONTROL SIGNAL
14	R	MANUAL MODE SHIFT UP SIGNAL
15	L	ACC POWER SUPPLY
16	W	MANUAL MODE SHIFT DOWN SIGNAL
17	G	WASHER LEVEL SWITCH SIGNAL
18	R	SECURITY SIGNAL
19	GR	AMBIENT SENSOR SIGNAL
20	R	AMBIENT SENSOR GROUND
21	B	GROUND
22	B	GROUND
23	B	GROUND
24	L	FUEL LEVEL SENSOR GROUND
25	B	VDC GROUND
26	V	PADDLE SHIFTER DOWN SWITCH SIGNAL
27	LG	BATTERY POWER SUPPLY
28	GR	IGNITION SIGNAL
29	V	PASSENGER SEAT BELT WARNING SIGNAL
31	P	A/C AUTO AMP. CONNECTION RECOGNITION SIGNAL
36	Y	MANUAL MODE SIGNAL
37	G	NON-MANUAL MODE SIGNAL
38	P	ALTERNATOR SIGNAL

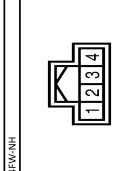
JRKWF4428GB

SECURITY CONTROL SYSTEM

Connector No.	M49
Connector Name	NATS ANTENNA AMP.
Connector Type	TH04FW-NH

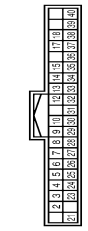
Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	BAT
2	P	CLK
3	LG	DATA
4	B	GND

Connector No.	M57
Connector Name	CVT SHIFT SELECTOR
Connector Type	TH16FW-NH



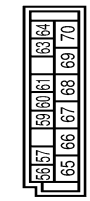
Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	-
2	B	-
3	BR	-
4	B	-
5	V	-
6	GR	-
7	Y	-
8	W	-
9	R	-
10	B	-
11	G	-
12	SB	-
13	G	-

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



Terminal No.	Color Of Wire	Signal Name [Specification]
2	L	COMBI SW INPUT 5
3	GR	COMBI SW INPUT 4
4	BR	COMBI SW INPUT 3
5	G	COMBI SW INPUT 2
6	W	COMBI SW INPUT 1
7	L	KEY CYL UNLOCK SW
8	R	KEY CYL LOCK SW
9	R	STOP LAMP SW 1
10	W	-
12	GR	DOOR LK & UNLK SW LOCK
13	BR	DOOR LK & UNLK SW UNLOCK
14	SB	OPTICAL SENS
15	W	REAR WINDOW DEF SW
17	Y	OPTICAL SENS PWR SPLY
18	V	RECEIVER GND
21	P	NATS ANT AMP.
23	R	SECURITY IND LAMP CONT
24	SB	DONGLE LINK
25	LG	NATS ANT AMP.
26	BR	THERMO AMP.
27	Y	A/C SW
28	LG	BLOWER FAN SW
29	SB	HAZARD SW
30	L	BK DOOR OPENER SW
31	GR	DR DOOR UNLK SENS
32	LG	COMBI SW OUTPUT 5
33	Y	COMBI SW OUTPUT 4
34	V	COMBI SW OUTPUT 3
35	R	COMBI SW OUTPUT 2
36	P	COMBI SW OUTPUT 1
37	G	DETENT SW
38	SB	RECEIVER COMM
39	L	CAN-H
40	P	CAN-L

Connector No.	M69
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FEA09FW-FHA6-SA



Terminal No.	Color Of Wire	Signal Name [Specification]
56	P	INT ROOM LAMP PWR SPLY
57	P	BATT(F.FUSE)
59	SB	PASS DOOR UNLK OUTPUT
60	V	TURN SIG LH OUTPUT
61	W	TURN SIG RH OUTPUT
63	BR	INT ROOM LAMP CONT
64	R	REVERSE SW
65	V	ALL DOOR LOCK OUTPUT
66	SB	DR DOOR UNLK OUTPUT
67	B	GND
68	L	PW PWR SPLY (IGN)
69	P	PW PWR SPLY (BAT)
70	Y	BAT (F/L)

Connector No.	M70
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FW-NH

Terminal No.	Color Of Wire	Signal Name [Specification]
72	SB	A/C IND OUTPUT
75	LG	DR DOOR REQ SW
76	LG	PUSH SW
78	P	DRIVER DOOR ANT+
79	V	DRIVER DOOR ANT-
80	BR	PASS DOOR ANT+
81	G	PASS DOOR ANT-
82	W	REAR BMPR ANT+
83	B	REAR BMPR ANT-
84	BR	ROOM ANT 1+
85	GR	ROOM ANT 1-
86	V	ROOM ANT2 +
87	LG	ROOM ANT2 -
90	W	PUSH-BTN IGN SW ILL PWR
91	V	ACC / ON IND
92	R	PUSH-BTN IGN SW ILL GND
93	GR	I-KEY WARN BUZZER
96	BR	ACC RELAY CONT
97	SB	STARTER RELAY CONT
98	P	IGN RELAY (1)PDM E/R) CONT
99	R	IGN RELAY (F/B) CONT
100	P	PASS DOOR REQ SW
101	Y	CLUTCH INTERLOCK SW [FOR M/T MODELS]
101	Y	IGN SPLY NO2. [EXCEPT FOR M/T MODELS]
101	Y	NEUTRAL SW [FOR M/T MODELS]
102	L	P/N POSITION [EXCEPT FOR M/T MODELS]
102	L	FR DEFROST SW
103	G	CVT SHIFT SELECT PWR SPLY
104	SB	STOP LAMP SW 2
105	V	BLWR RELAY CONT
106	Y	

Connector No.	M75
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Type	TH04FW-NH

Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	POWER
2	SB	SIGNAL
4	V	GND

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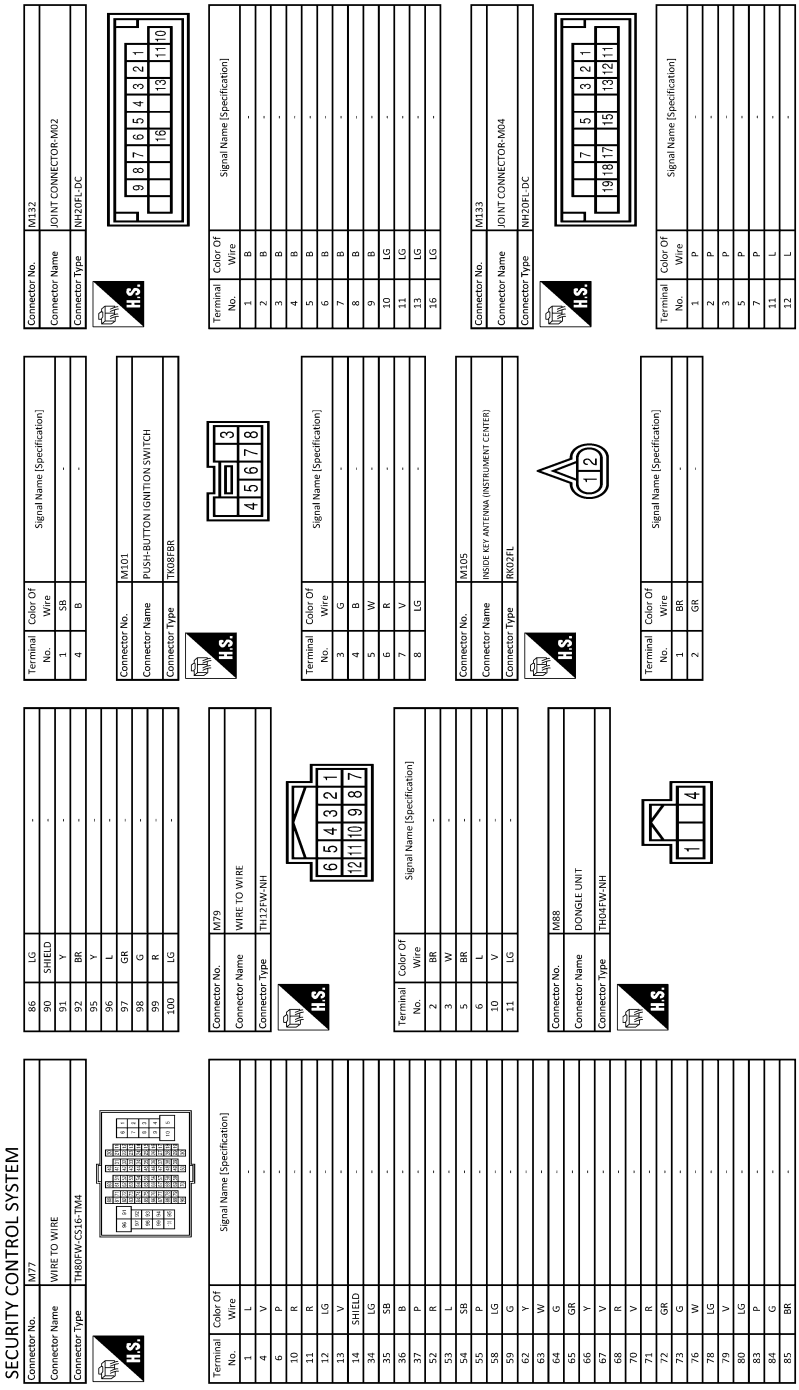

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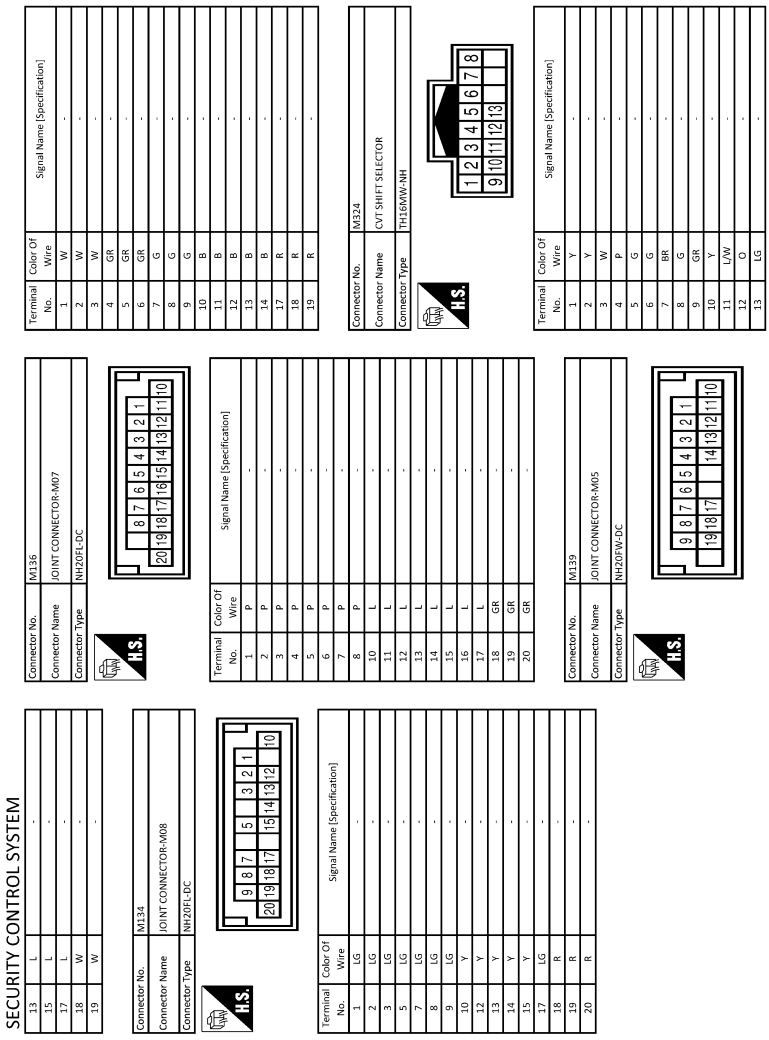

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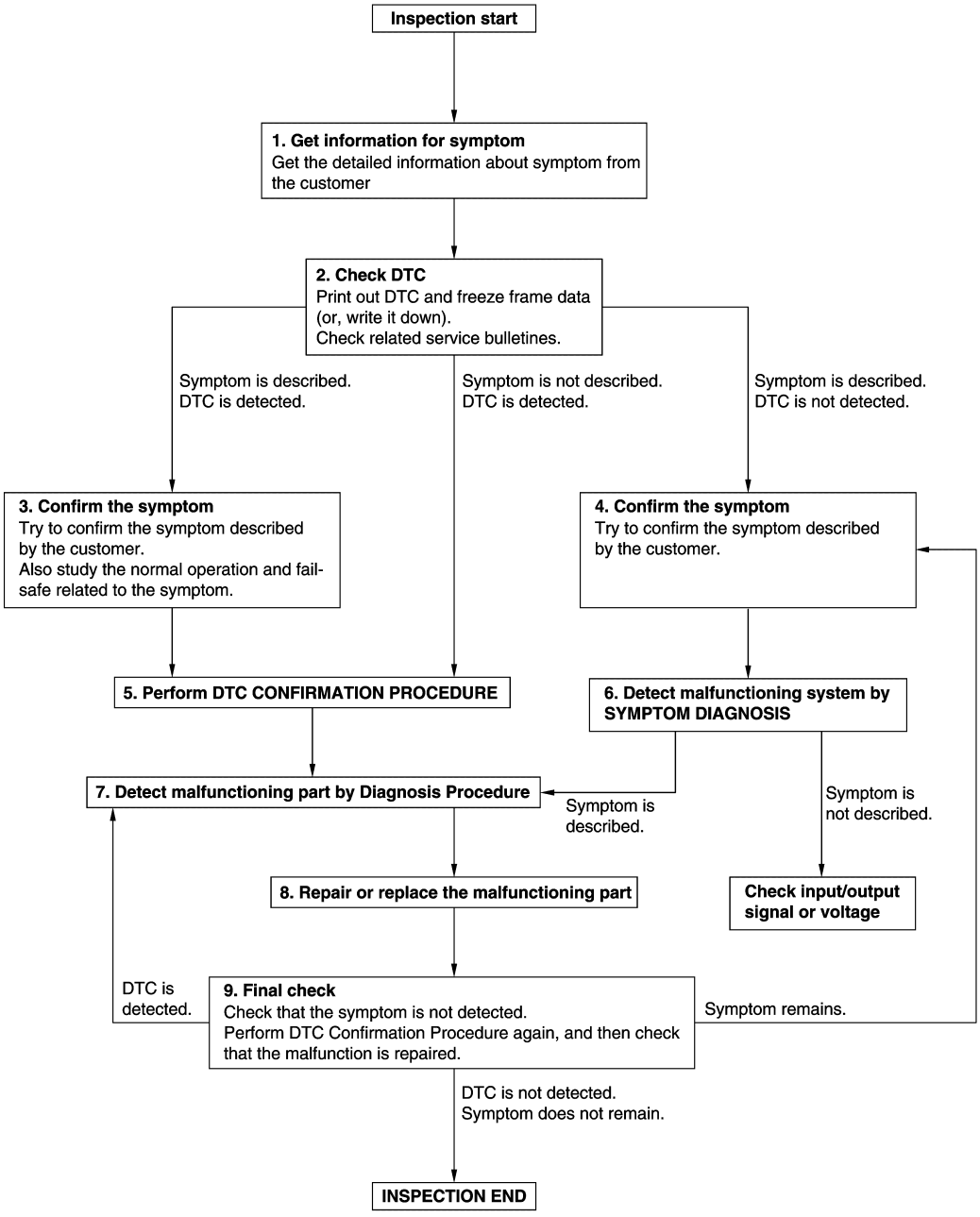
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000012202127

OVERALL SEQUENCE



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DETAILED FLOW

1.GET INFORMATION FOR SYMPTOM

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

>> GO TO 2.

2.CHECK DTC

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

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

3. Check related service bulletins for information.

Are any symptoms described and any DTC detected?

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

3.CONFIRM THE SYMPTOM

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

>> GO TO 5.

4.CONFIRM THE SYMPTOM

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

>> GO TO 6.

5.PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC CONFIRMATION PROCEDURE for the detected DTC, and then check that DTC is detected again. At this time, always connect CONSULT to the vehicle, and check self diagnostic results in real time.
If two or more DTCs are detected, refer to BCS-61, "DTC Inspection Priority Chart" (BCM), and determine trouble diagnosis order.

NOTE:

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

Is DTC detected?

YES >> GO TO 7.
NO >> Check according to GI-45, "Intermittent Incident".

6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM DIAGNOSIS

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

Is the symptom described?

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

7.DETECT MALFUNCTIONING PART BY DIAGNOSIS PROCEDURE

Inspect according to Diagnosis Procedure of the system.

Is malfunctioning part detected?

YES >> GO TO 8.
NO >> Check according to GI-45, "Intermittent Incident".

8. REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 9.

9. FINAL CHECK

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

Is DTC detected and does symptom remain?

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

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ECM

ECM : Description

INFOID:0000000012202128

When replacing ECM, the following procedure must be performed. For details, refer to EC-157, "Work Procedure".

PROGRAMMING OPERATION

NOTE:

After replacing with a blank ECM, programming is required to write ECM information. Be sure to follow the procedure to perform the programming.

ECM : Work Procedure

INFOID:0000000012202129

1. CHECK ECM PART NUMBER

Check ECM part number to see whether it is blank ECM or not.

NOTE:

- Part number of blank ECM is 23703 - ×××××.
- Check the part number when ordering ECM or with the one included in the label on the container box.

Is the ECM a blank ECM?

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

2. SAVE ECM PART NUMBER

Read out the part number from the old ECM and save the number, following the programming instructions. Refer to “CONSULT Operation Manual”.

NOTE:

- The ECM part number is saved in CONSULT.
- Even when ECM part number is not saved in CONSULT, go to 3.

>> GO TO 3.

3. PERFORM ECM PROGRAMMING

After replacing ECM, perform the ECM programming. Refer to “CONSULT Operation Manual”.

NOTE:

- Refer to EC-590, "Removal and Installation" for replacement of ECM.
- During programming, maintain the following conditions:
- Ignition switch: ON
- Electric load: OFF
- Brake pedal: Not depressed
- Battery voltage: 12 – 13.5 V (Be sure to check the value of battery voltage by selecting “BATTERY VOLT” in “Data monitor” of CONSULT.)

>> GO TO 5.

4. REPLACE ECM

Replace ECM. Refer to EC-590, "Removal and Installation".

>> GO TO 5.

5. PERFORM INITIALIZATION OF NVIS (NATS) SYSTEM AND REGISTRATION OF ALL NVIS (NATS) IGNITION KEY IDS

Refer to SEC-13, "NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS : System Description".

>> GO TO 6.

6. PERFORM ACCELERATOR PEDAL RELEASED POSITION LEARNING

Refer to EC-160, "Work Procedure".

>> GO TO 7.

7.PERFORM THROTTLE VALVE CLOSED POSITION LEARNING

Refer to EC-161, "Work Procedure".

>> GO TO 8.

8.PERFORM IDLE AIR VOLUME LEARNING

Refer toEC-162, "Work Procedure".

>> GO TO 9.

9.PERFORM G SENSOR CALIBRATION

Refer to EC-164, "Work Procedure".

>> END

BCM

BCM : Description

INFOID:0000000012202130

BEFORE REPLACEMENT

When replacing BCM, save or print current vehicle specification with CONSULT configuration before replacement. For details, refer to SEC-48, "BCM : Work Procedure".

NOTE:

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

AFTER REPLACEMENT

CAUTION:

When replacing BCM, always perform “WRITE CONFIGURATION” with CONSULT. Or not doing so, BCM control function does not operate normally.

- **Complete the procedure of “WRITE CONFIGURATION” in order.**
- **Configuration is different for each vehicle model. Confirm configuration of each vehicle model.**
- **If you set incorrect “WRITE CONFIGURATION”, incidents might occur.**

NOTE:

When replacing BCM, perform the system initialization (NATS) (if equipped).

BCM : Work Procedure

INFOID:0000000012202131

1.SAVING VEHICLE SPECIFICATION

CONSULT Configuration

Perform “READ CONFIGURATION” to save or print current vehicle specification. Refer to BCS-80, "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-94, "Removal and Installation".

>> GO TO 3.

3.WRITING VEHICLE SPECIFICATION

CONSULT Configuration
Perform “WRITE CONFIGURATION - Config file” or “WRITE CONFIGURATION - Manual selection” to write vehicle specification. Refer to BCS-80, "Work Procedure".

>> GO TO 4.

4. INITIALIZE BCM (NATS) (IF EQUIPPED)

Perform BCM initialization. (NATS)

>> WORK END

DTC/CIRCUIT DIAGNOSIS

P1610 LOCK MODE

Description

INFOID:0000000012202132

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:0000000012202133

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.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202134

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. Depress brake pedal and contact the registered Intelligent Key backside to push-button ignition switch, then 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:0000000012202135

DTC DETECTION 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.	• 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.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202136

1.PERFORM INITIALIZATION

Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

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

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

2.CHECK SELF DIAGNOSTIC RESULT

1. Select “Self Diagnostic Result” mode of “ENGINE” using CONSULT.
2. Erase DTC.
3. Perform DTC CONFIRMATION PROCEDURE for DTC P1611. Refer to SEC-51, "DTC Logic".

Is DTC detected?

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

3.REPLACE BCM

1. Replace BCM. Refer to BCS-94, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

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

Replace ECM.
Refer to EC-590, "Removal and Installation".

>> INSPECTION END

P1612 CHAIN OF ECM-IMMU

DTC Logic

INFOID:0000000012202137

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-83, "DTC Logic".
- If DTC P1612 is displayed with DTC U1010 (for BCM), first perform the trouble diagnosis for DTC U1010. Refer to BCS-84, "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.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202138

1.REPLACE BCM

1. Replace BCM. Refer to BCS-94, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

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

Replace ECM.
Refer to EC-590, "Removal and Installation".

>> INSPECTION END

B2192 ID DISCORD, IMMU-ECM

DTC Logic

INFOID:0000000012202139

DTC DETECTION 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.	• 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.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202140

1.PERFORM INITIALIZATION

Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

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

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

2.CHECK SELF DIAGNOSTIC RESULT

1. Select “Self Diagnostic Result” mode of “BCM” using CONSULT.
2. Erase DTC.
3. Perform DTC CONFIRMATION PROCEDURE for DTC B2192. Refer to SEC-53, "DTC Logic".

Is DTC detected?

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

3.REPLACE BCM

1. Replace BCM. Refer to BCS-94, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

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

Replace ECM.
Refer to EC-590, "Removal and Installation".

>> INSPECTION END

B2193 CHAIN OF ECM-IMMU

DTC Logic

INFOID:0000000012202141

DTC DETECTION LOGIC

NOTE:

- If DTC B2193 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-83, "DTC Logic".
- If DTC B2193 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-84, "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.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202142

1.REPLACE BCM

1. Replace BCM. Refer to BCS-94, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

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

Replace ECM.
Refer to EC-590, "Removal and Installation".

>> INSPECTION END

B2195 ANTI-SCANNING

DTC Logic

INFOID:0000000012202143

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.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202144

1.CHECK SELF DIAGNOSTIC RESULT 1

1. Select “Self Diagnostic Result” mode of “BCM” using CONSULT.
2. Erase DTC.
3. Perform DTC CONFIRMATION PROCEDURE for DTC B2195. Refer to SEC-55, "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.
3. Erase DTC.
4. Perform DTC CONFIRMATION PROCEDURE for DTC B2195. Refer to SEC-55, "DTC Logic".

Is DTC detected?

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

4.REPLACE BCM

1. Replace BCM. Refer to BCS-94, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

B2196 DONGLE UNIT

Description

INFOID:0000000012202145

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

DTC Logic

INFOID:0000000012202146

DTC DETECTION 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 DTC in “Self-diagnosis result” mode of “BCM” using CONSULT.

Is the DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202147

1.PERFORM INITIALIZATION

1. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.
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	M86	1	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		
M86	4		Existed

Is the inspection result normal?

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

B2198 NATS ANTENNA AMP.

DTC Logic

INFOID:0000000012202148

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 is detected when BCM enters in the low power consumption mode (BCM sleep condition)	• 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. Make the conditions that BCM enters in the low power consumption mode (BCM sleep condition). Refer to BCS-13, "POWER CONSUMPTION CONTROL SYSTEM : System Description".
2. Turn ignition switch ON.
3. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202149

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 (20 A)

Is the fuse blown (open)?

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)
NATS antenna amp.			
Connector	Terminal		
M49	1	Ground	6 - 16

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	M49	1	Existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".
NO >> Repair or replace harness.

4. CHECK NATS ANTENNA AMP. GROUND CIRCUIT

Check continuity between NATS antenna amp. harness connector and ground.

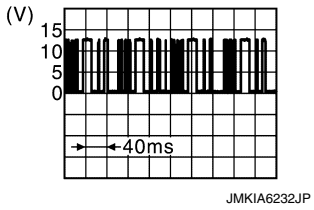
NATS antenna amp.		Ground	Continuity
Connector	Terminal		
M49	4		Existed

Is the inspection result normal?

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

5. CHECK NATS ANTENNA AMP. COMMUNICATION SIGNAL 1

Check voltage signal between NATS antenna amp. harness connector and ground using an oscilloscope.

(+) NATS antenna amp.		(–)	Condition		Voltage (V)
Connector	Terminal				
M49	2	Ground	Intelligent Key: Intelligent Key battery is removed	Brake pedal: Depressed **NOTE:** Waveform varies each time when brake pedal is depressed	 JMKIA6232JP
				Brake pedal: Released	12

Is the inspection result normal?

YES >> GO TO 7.
NO >> GO TO 6.

6. CHECK NATS ANTENNA AMP. OUTPUT SIGNAL CIRCUIT 1

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

NATS antenna amp.		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M49	2	M68	21	Existed

3. Check continuity between BNATS antenna amp. harness connector and ground.

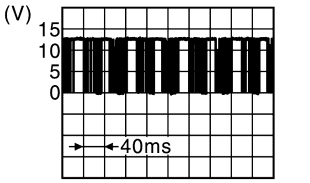
NATS antenna amp.		Ground	Continuity
Connector	Terminal		
M49	2		Not existed

Is the inspection result normal?

YES >> GO TO 9.
NO >> Repair or replace harness.

7. CHECK NATS ANTENNA AMP. COMMUNICATION SIGNAL 2

Check voltage signal between NATS antenna amp. harness connector and ground using an oscilloscope.

(+) NATS antenna amp. Connector	(+) NATS antenna amp. Terminal	(–)	Condition		Voltage (V)
M49	3	Ground	Intelligent Key: Intelligent Key battery is removed	Brake pedal: Depressed **NOTE:** Waveform varies each time when brake pedal is depressed	 JMKIA6233JP
				Brake pedal: Released	12

Is the inspection result normal?

YES >> Replace NATS antenna amp. Refer to SEC-126, "Removal and Installation".
NO >> GO TO 8.

8.CHECK NATS ANTENNA AMP. OUTPUT SIGNAL CIRCUIT 2

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

NATS antenna amp.		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M49	3	M68	25	Existed

3. Check continuity between NATS antenna amp. harness connector and ground.

NATS antenna amp.		Ground	Continuity
Connector	Terminal		
M49	3		Not existed

Is the inspection result normal?

YES >> GO TO 9.
NO >> Repair or replace harness.

9.REPLACE BCM

1. Replace BCM. Refer to BCS-94, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

B2555 STOP LAMP

DTC Logic

INFOID:0000000012202150

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 brake pedal and wait 1 second or more.
2. Turn ignition switch ON.
3. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202151

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		
M70	105	Ground	Battery voltage

Is the inspection normal?

YES >> GO TO 2.
NO-1 >> Check 10 A fuse [No. 38, 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		
E102 (CVT models) E118 (M/T models)	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-94, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> 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	
E102 (CVT models) E118 (M/T models)	2	M68	9	Existed

Is the inspection result normal?

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

6.CHECK STOP LAMP SWITCH

Refer to SEC-62, "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-45, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000012202152

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:0000000012202153

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.

CVT models
- Brake pedal: Not depressed

M/T models
- Clutch 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.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202154

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	8	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	8	M70	76	Existed

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

Push-button ignition switch		Ground	Continuity
Connector	Terminal		
M101	8		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-94, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> 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	4		Existed

Is the inspection result normal?

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

5.CHECK PUSH-BUTTON IGNITION SWITCH

Refer to SEC-64, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Replace push-button ignition switch. Refer to SEC-127, "Removal and Installation".

6.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000012202155

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				
8	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-127, "Removal and Installation".

B2557 VEHICLE SPEED

DTC Logic

INFOID:0000000012202156

DTC DETECTION LOGIC

NOTE:

- If DTC B2557 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-83, "DTC Logic".
- If DTC B2557 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-84, "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.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202157

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

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

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to BRC-50, "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.

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to MWI-33, "DTC Index".
NO >> GO TO 3.

3.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

B2601 SHIFT POSITION

DTC Logic

INFOID:0000000012202158

DTC DETECTION LOGIC

NOTE:

- If DTC B2601 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-83, "DTC Logic".
- If DTC B2601 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-84, "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 CVT 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 [CVT shift selector (detention switch) circuit is open or shorted.] • BCM • IPDM E/R

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.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202159

1.CHECK CVT SHIFT SELECTOR POWER SUPPLY

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

(+)		(–)	Voltage (V) (Approx.)
CVT shift selector (detention switch)			
Connector	Terminal		
M57	12	Ground	12

Is the inspection result normal?

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

2.CHECK CVT SHIFT SELECTOR POWER SUPPLY CIRCUIT

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

CVT shift selector (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M57	12	M70	104	Existed

3. Check continuity between CVT shift selector (detention switch) harness connector and ground.

CVT shift selector (detention switch)		Ground	Continuity
Connector	Terminal		
M57	12		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-94, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

4. CHECK CVT SHIFT SELECTOR CIRCUIT (IPDM E/R)

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

CVT shift selector (detention switch)		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M57	13	E17	64	Existed

Is the inspection result normal?

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

5. CHECK CVT SHIFT SELECTOR CIRCUIT (BCM)

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

CVT shift selector (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M57	13	M68	37	Existed

3. Check continuity between CVT shift selector (detention switch) harness connector and ground.

CVT shift selector (detention switch)		Ground	Continuity
Connector	Terminal		
M57	13		Not existed

Is the inspection result normal?

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

6. REPLACE BCM

1. Replace BCM. Refer to BCS-94, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.
3. Perform DTC CONFIRMATION PROCEDURE for DTC B2601. Refer to SEC-66, "DTC Logic".

Is DTC B2601 detected again?

YES >> Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".
NO >> INSPECTION END

B2602 SHIFT POSITION

DTC Logic

INFOID:0000000012202160

DTC DETECTION LOGIC

NOTE:

- If DTC B2602 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-83, "DTC Logic".
- If DTC B2602 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-84, "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 [CVT shift selector (detention switch) circuit is open or shorted.] • CVT 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.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202161

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

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

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to BRC-50, "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.

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to MWI-33, "DTC Index".
NO >> GO TO 3.

3.CHECK CVT SHIFT SELECTOR POWER SUPPLY

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

(+)		(–)	Voltage (V) (Approx.)
CVT shift selector (detention switch)			
Connector	Terminal		
M57	12	Ground	12

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 4.

4. CHECK CVT SHIFT SELECTOR POWER SUPPLY CIRCUIT

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

CVT shift selector (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M57	12	M70	104	Existed

3. Check continuity between CVT shift selector (detention switch) harness connector and ground.

CVT shift selector (detention switch)		Ground	Continuity
Connector	Terminal		
M57	12		Not existed

Is the inspection result normal?

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

5. REPLACE BCM

1. Replace BCM. Refer to BCS-94, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

6. CHECK CVT SHIFT SELECTOR CIRCUIT

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

CVT shift selector (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M57	13	M68	37	Existed

3. Check continuity between CVT shift selector (detention switch) harness connector and ground.

CVT shift selector (detention switch)		Ground	Continuity
Connector	Terminal		
M57	13		Not existed

Is the inspection result normal?

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

7. CHECK CVT SHIFT SELECTOR (DETENTION SWITCH)

Refer to SEC-70, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 8.
NO >> Replace CVT shift selector. Refer to TM-316, "Removal and Installation".

8. CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000012202162

1. CHECK CVT SHIFT SELECTOR (DETENTION SWITCH)

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

CVT shift selector (detention switch) Terminal		Condition		Continuity
12	13	Selector lever: P position	Selector button: Released	Not existed
			Selector button: Pressed	Existed
		Selector lever: Except P position		

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace CVT shift selector. Refer to TM-316, "Removal and Installation".

B2603 SHIFT POSITION

DTC Logic

INFOID:0000000012202163

DTC DETECTION LOGIC

NOTE:

- If DTC B2603 is displayed with DTC B2601, first perform the trouble diagnosis for DTC B2601. Refer to SEC-66, "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. • Transmission range switch signal: approx. 0 V • CVT shift selector (detention switch) signal: approx. 0 V	• Harness or connector [CVT shift selector (detention switch) circuit is open or shorted.] • Harness or connectors (Transmission range switch circuit is open or shorted.) • CVT shift selector (detention switch) • Transmission range switch • 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.

Is DTC detected?

YES >> Go to SEC-71, "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.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202164

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 8.

2.CHECK FUSE

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

Signal name	Fuse No.
Ignition power supply	56 (10 A)

Is the fuse blown (open)?

YES >> Replace the blown fuse after repairing the cause of blowing.
NO >> GO TO 3.

3.CHECK TRANSMISSION RANGE SWITCH POWER SUPPLY

1. Disconnect transmission range switch connector.
2. Turn ignition switch ON.

3. Check voltage between transmission range switch harness connector and ground.

(+)		(–)	Voltage (V)
Transmission range switch			
Connector	Terminal		
F27	1	Ground	6 - 16

Is the inspection result normal?

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

4. CHECK TRANSMISSION RANGE SWITCH POWER SUPPLY CIRCUIT

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

Transmission range switch		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
F27	1	E15	58	Existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".
NO >> Repair or replace harness.

5. CHECK BCM INPUT SIGNAL

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

(+)		(–)	Condition		Voltage (V) (Approx.)
BCM					
Connector	Terminal				
M70	102	Ground	Selector lever	P or N position	Battery voltage
				Other than above	0

Is the inspection result normal?

YES >> GO TO 13.
NO >> GO TO 6.

6. CHECK BCM INPUT SIGNAL CIRCUIT

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

Transmission range switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
F27	2	M70	102	Existed

Is the inspection result normal?

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

7. CHECK TRANSMISSION RANGE SWITCH

Refer to SEC-74, "Component Inspection (Transmission Range Switch)".

Is the inspection result normal?

YES >> GO TO 12.
NO >> Replace transmission range switch. Refer to TM-326, "Removal and Installation".

8. CHECK CVT SHIFT SELECTOR POWER SUPPLY

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

(+)		(–)	Voltage (V) (Approx.)
CVT shift selector (detention switch)			
Connector	Terminal		
M57	12	Ground	12

Is the inspection result normal?

YES >> GO TO 10.
NO >> GO TO 9.

9. CHECK CVT SHIFT SELECTOR POWER SUPPLY CIRCUIT

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

CVT shift selector (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M57	12	M70	104	Existed

3. Check continuity between CVT shift selector (detention switch) harness connector and ground.

CVT shift selector (detention switch)		Ground	Continuity
Connector	Terminal		
M57	12		Not existed

Is the inspection result normal?

YES >> GO TO 12.
NO >> Repair or replace harness.

10. CHECK CVT SHIFT SELECTOR CIRCUIT

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

CVT shift selector (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M57	13	M68	37	Existed

3. Check continuity between CVT shift selector (detention switch) harness connector and ground.

CVT shift selector (detention switch)		Ground	Continuity
Connector	Terminal		
M57	13		Not existed

Is the inspection result normal?

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

11. CHECK CVT SHIFT SELECTOR (DETENTION SWITCH)

Refer to SEC-74, "Component Inspection [CVT Shift Selector (Detention Switch)]".

Is the inspection result normal?

YES >> GO TO 13.
NO >> Replace CVT shift selector. Refer to TM-316, "Removal and Installation".

12. CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

13. REPLACE BCM

1. Replace BCM. Refer to BCS-94, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

Component Inspection (Transmission Range Switch)

INFOID:0000000012202165

1. CHECK TRANSMISSION RANGE SWITCH

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

Transmission range switch		Condition	Continuity
Terminal			
1	2	P or N position	Existed
		Other than above	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace transmission range switch. Refer to TM-326, "Removal and Installation".

Component Inspection [CVT Shift Selector (Detention Switch)]

INFOID:0000000012202166

1. CHECK CVT SHIFT SELECTOR (DETENTION SWITCH)

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

CVT shift selector (detention switch)		Condition		Continuity
Terminal				
12	13	Selector lever: P position	Selector button: Released	Not existed
			Selector button: Pressed	Existed
		Selector lever: Except P position		

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace CVT shift selector. Refer to TM-316, "Removal and Installation".

B2604 SHIFT POSITION

DTC Logic

INFOID:0000000012202167

DTC DETECTION LOGIC

NOTE:

- If DTC B2604 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-83, "DTC Logic".
- If DTC B2604 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-84, "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 transmission range switch but shift position signal input (CAN) from TCM is other than P and N • P/N position signal is not sent from transmission range switch 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 (Transmission range switch circuit is open or shorted.) • Transmission range switch • 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.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202168

1.CHECK DTC OF TCM

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

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to TM-203, "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				
M70	102	Ground	Selector lever	P or N position	Battery voltage
				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-94, "Removal and Installation".

2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

4. CHECK BCM INPUT SIGNAL CIRCUIT

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

Transmission range switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
F27	2	M70	102	Existed

5. Check continuity between transmission range switch harness connector and ground.

Transmission range switch		Ground	Continuity
Connector	Terminal		
F27	2		Not existed

Is the inspection result normal?

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

5. CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

B2605 SHIFT POSITION

DTC Logic

INFOID:0000000012202169

DTC DETECTION LOGIC

NOTE:

- If DTC B2605 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-83, "DTC Logic".
- If DTC B2605 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-84, "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 transmission range switch and P/N position signal input (CAN) from IPDM E/R do not match.	• Harness or connectors (CAN communication line is open or shorted.) • Harness or connectors (Transmission range switch circuit is open or shorted.) • Transmission range switch • IPDM E/R • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. 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.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202170

1.CHECK IPDM E/R INPUT SIGNAL 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	
E15	48	M70	102	Existed

Is the inspection result normal?

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

2.REPLACE BCM

1. Replace BCM. Refer to BCS-94, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.
3. Perform DTC CONFIRMATION PROCEDURE for B2605. Refer to SEC-77, "DTC Logic".

Is DTC B2605 detected again?

YES >> Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".
NO >> INSPECTION END

B2608 STARTER RELAY

DTC Logic

INFOID:0000000012202171

DTC DETECTION LOGIC

NOTE:

- If DTC B2608 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-83, "DTC Logic".
- If DTC B2608 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-84, "DTC Logic".
- If DTC B2608 is displayed with DTC B210D (IPDM E/R), first perform the trouble diagnosis for DTC B210D. Refer to SEC-109, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2608	STARTER RELAY	BCM outputs starter relay OFF signal but BCM receives starter 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.

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

M/T models
- Shift lever: In the Neutral position
- Clutch pedal: Depressed

2. Wait 1 second after engine started.
3. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202172

1.CHECK DTC OF IPDM E/R

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

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to PCS-24, "DTC Index".
NO >> GO TO 2.

2.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	M70	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 >> GO TO 3.
NO >> Repair or replace harness.

3.REPLACE IPDM E/R

1. Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".
2. Perform DTC CONFIRMATION PROCEDURE for DTC B2608. Refer to SEC-78, "DTC Logic".

Is DTC B2608 detected again?

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

4.REPLACE BCM

1. Replace BCM. Refer to BCS-94, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

B260F ENGINE STATUS

Description

INFOID:0000000012202173

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

DTC Logic

INFOID:0000000012202174

DTC DETECTION LOGIC

NOTE:

- If DTC B260F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-83, "DTC Logic".
- If DTC B260F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-84, "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.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202175

1.INSPECTION START

1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “BCM” using CONSULT.
3. Touch “ERASE”.
4. Perform DTC CONFIRMATION PROCEDURE for DTC B260F. Refer to SEC-80, "DTC Logic".

Is DTC detected?

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

2.REPLACE ECM

Replace ECM.
Refer to EC-590, "Removal and Installation".

>> INSPECTION END

B261A PUSH-BUTTON IGNITION SWITCH

DTC Logic

INFOID:0000000012202176

DTC DETECTION LOGIC

NOTE:

- If DTC B261A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-83, "DTC Logic".
- If DTC B261A is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-84, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B261A	PUSH-BTN IGN SW	BCM detects the mismatch between the following for 1 second or more • Push-button ignition switch operation condition judged by push switch signal • Push-button ignition switch status signal from IPDM E/R (CAN)	• Harness or connectors (Push-button ignition switch circuit is open or shorted) • IPDM E/R • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press push-button ignition switch for 1 second under the following condition.

CVT models
- Selector lever: In the P position
- Brake pedal: Not depressed

M/T models
- Shift lever: In the Neutral position
- Clutch pedal: Not depressed

2. Release push-button ignition switch and wait 1 second.
3. Check DTC in “Self diagnostic result” mode of “BCM” using CONSULT.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202177

1.CHECK PUSH-BUTTON IGNITION SWITCH POWER SUPPLY CIRCUIT

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	8	Ground	12

Is the inspection result normal?

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

2.CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT 1

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

Push-button ignition switch		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M101	8	E17	66	Existed

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

Push-button ignition switch		Ground	Continuity
Connector	Terminal		
M101	8		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".
NO >> Repair harness or connector.

3. CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT 2

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

Push-button ignition switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M101	8	M70	76	Existed

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

Push-button ignition switch		Ground	Continuity
Connector	Terminal		
M101	8		Not existed

Is the inspection result normal?

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

4. REPLACE BCM

1. Replace BCM. Refer to BCS-94, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

B261F ASCD CLUTCH SWITCH

DTC Logic

INFOID:0000000012202178

DTC DETECTION LOGIC

NOTE:

- If DTC B261F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-83, "DTC Logic".
- If DTC B261F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-84, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detection condition	Possible cause
B261F	ASCD CNCL/CLTCH SW	BCM detects the following status for 10 seconds 3 times • Clutch pedal position switch input (CAN) from ECM: OFF • Vehicle speed: 40 km/h (24.8 MPH) or more	• Harness or connectors. (CAN communication line is open or shorted.) (Clutch pedal position switch circuit is open or shorted.) • ABS actuator and electric unit (control unit) • Combination meter • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Drive vehicle at a speed of 40 km/h (24.8 MPH) or more for 10 seconds.
3. Decrease the vehicle speed to below 40 km/h (24.8 MPH).
4. Repeat steps 2 and 3 twice (a total of 3 times).
5. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202179

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

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

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to BRC-50, "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. Refer to MWI-33, "DTC Index".

Is the inspection result normal?

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

3.CHECK CLUTCH PEDAL POSITION SWITCH CIRCUIT

Refer to EC-572, "Component Function Check".

Is the inspection result normal?

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

4.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

B2620 PARK/NEUTRAL POSITION SWITCH

DTC Logic

INFOID:0000000012202180

NOTE:
- If DTC B2620 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-83, "DTC Logic".
- If DTC B2620 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-84, "DTC Logic".

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detection condition	Possible cause
B2620	NEUTRAL SW	BCM detects the following status for 10 seconds 3 times • Park/neutral position switch input: Battery voltage • Vehicle speed: 40 km/h (24.8 MPH) or more	• Harness or connector (CAN communication line is open or shorted.) • Harness or connector (Park/neutral position switch circuit is open or shorted) • Park/neutral position switch • Combination meter • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine.
2. Drive vehicle at a speed of 40 km/h (24.8 MPH) or more for 10 seconds.
3. Decrease the vehicle speed to below 40 km/h (24.8 MPH).
4. Repeat steps 2 and 3 twice (a total of 3 times).
5. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202181

1.CHECK DTC OF COMBINATION METER

Check DTC in “Self Diagnostic Result” mode of “METER/M&A” using CONSULT.
Refer to MWI-33, "DTC Index".

Is the inspection result normal?

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

2.CHECK FUSE

1. Turn power switch OFF.
2. Check that the following fuse in the fuse block (J/B) is not blown.

Signal name	Fuse No.
Ignition power supply	5 (10 A)

Is the fuse blown (open)?

YES >> Replace the blown fuse after repairing the cause of blowing.
NO >> GO TO 3.

3.CHECK PARK/NEUTRAL POSITION SWITCH POWER SUPPLY

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

(+)		(–)	Voltage (V) (Approx.)
Park/neutral position switch			
Connector	Terminal		
F49	2	Ground	Battery voltage

Is the inspection result normal?

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

4. CHECK PARK/NEUTRAL POSITION SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Connect park/neutral position switch connector.
3. Turn ignition switch ON.
4. Check voltage between BCM harness connector and ground.

(+)		(–)	Condition		Voltage (V) (Approx.)
BCM					
Connector	Terminal				
M70	102	Ground	Shift lever	Neutral position	Battery voltage
				Except neutral position	0

Is the inspection result normal?

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

5. REPLACE BCM

1. Replace BCM. Refer to BCS-94, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

6. CHECK PARK/NEUTRAL POSITION SWITCH SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect park/neutral position switch connector.
3. Disconnect BCM connector.
4. Check continuity between park/neutral position switch harness connector and BCM harness connector.

Park/neutral position switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
F49	3	M70	102	Existed

Is the inspection result normal?

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

7. CHECK PARK/NEUTRAL POSITION SWITCH

Refer to SEC-87, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 8.
NO >> Replace park/neutral position switch. Refer to TM-24, "Removal and Installation".

8. CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000012202182

1. CHECK PARK/NEUTRAL POSITION SWITCH

1. Turn ignition switch OFF.
2. Disconnect park/neutral position switch connector.
3. Check continuity between park/neutral position switch terminals.

Park/neutral position switch		Condition		Continuity
Terminal				
2	3	Shift lever	Neutral position	Existed
			Except neutral position	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace park/neutral position switch. Refer to TM-24, "Removal and Installation".

B26E8 CLUTCH INTERLOCK SWITCH

DTC Logic

INFOID:0000000012202183

NOTE:

- If DTC B26E8 is displayed with DTC B210F, first perform the trouble diagnosis for DTC B210F. Refer to BCS-83, "DTC Logic".
- If DTC B26E8 is displayed with DTC B2110, first perform the trouble diagnosis for DTC B2110. Refer to BCS-84, "DTC Logic".

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detection condition	Possible cause
B26E8	CLUTCH SW	BCM detects the following conditions for 2 seconds or more. • Clutch pedal position switch input (CAN) from ECM: ON (Clutch pedal is released) • Clutch interlock switch signal: ON (Clutch pedal is depressed)	• Harness or connector (CAN communication line is open or shorted) (Clutch interlock switch circuit is open or shorted) (Clutch pedal position switch circuit is open or shorted) • Clutch interlock switch • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

1. Turn ignition switch ON.
2. Wait 2 seconds or more under the following conditions.

- Shift lever: In the Neutral position.
- Clutch pedal: Depressed

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

Is DTC detected?

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

2.PERFORM DTC CONFIRMATION PROCEDURE 2

1. Release clutch pedal and wait 2 seconds or more.
2. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202184

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 3.

2.CHECK CLUTCH PEDAL POSITION SWITCH CIRCUIT

Refer to EC-572, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace the malfunctioning parts.

3.CHECK FUSE

1. Turn power switch OFF.
2. Check that the following fuse in the fuse block (J/B) is not blown.

Signal name	Fuse No.
Battery power supply	13 (10 A)

Is the fuse blown (open)?

YES >> Replace the blown fuse after repairing the cause of blowing.
NO >> GO TO 4.

4. CHECK CLUTCH INTERLOCK SWITCH POWER SUPPLY

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

(+)		(–)	Voltage (V) (Approx.)
Clutch interlock switch			
Connector	Terminal		
E29	3	Ground	Battery voltage

Is the inspection result normal?

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

5. CHECK CLUTCH INTERLOCK SWITCH SIGNAL

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

(+)		(–)	Condition		Voltage (V) (Approx.)
BCM					
Connector	Terminal				
M70	101	Ground	Clutch pedal	Depressed	Battery voltage
				Not depressed	0

Is the inspection result normal?

YES >> GO TO 9.
NO >> GO TO 6.

6. CHECK CLUTCH INTERLOCK SWITCH SIGNAL CIRCUIT

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

Clutch interlock switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E29	4	M70	101	Existed

Is the inspection result normal?

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

7. CHECK CLUTCH INTERLOCK SWITCH

Refer to SEC-90, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 8.
NO >> Replace clutch interlock switch. Refer to TM-24, "Removal and Installation".

8. CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

9.REPLACE BCM

1. Replace BCM. Refer to BCS-94, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Key using CONSULT.

>> INSPECTION END

Component Inspection

INFOID:0000000012202185

1.CHECK CLUTCH INTERLOCK SWITCH

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

.

Clutch interlock switch		Condition		Continuity
Terminal				
3	4	Clutch pedal	Depressed	Existed
			Not depressed	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace clutch interlock switch. Refer to TM-24, "Removal and Installation".

B26F3 STARTER CONTROL RELAY

DTC Logic

INFOID:0000000012202186

DTC DETECTION LOGIC

NOTE:

- If DTC B26F3 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-83, "DTC Logic".
- If DTC B26F3 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-84, "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.

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

M/T models
- Shift lever: In the Neutral position
- Clutch pedal: Depressed

2. Wait 2 seconds after engine started.
3. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202187

1.CHECK DTC OF IPDM E/R

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

Is DTC detected?

YES >> Perform the diagnosis procedure related to the detected DTC. Refer to PCS-24, "DTC Index".
NO >> GO TO 2.

2.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

B26F4 STARTER CONTROL RELAY

DTC Logic

INFOID:0000000012202188

DTC DETECTION LOGIC

NOTE:

- If DTC B26F4 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-83, "DTC Logic".
- If DTC B26F4 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-84, "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.

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

M/T models
- Shift lever: In the Neutral position
- Clutch pedal: Depressed

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202189

1.CHECK DTC OF IPDM E/R

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

Is DTC detected?

YES >> Perform the diagnosis procedure related to the detected DTC. Refer to PCS-24, "DTC Index".
NO >> GO TO 2.

2.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

B26F7 BCM

DTC Logic

INFOID:0000000012202190

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.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202191

1.INSPECTION START

1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “BCM” using CONSULT.
3. Touch “ERASE”.
4. Perform DTC CONFIRMATION PROCEDURE for DTC B26F7. Refer to SEC-93, "DTC Logic".

Is DTC detected?

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

2.REPLACE BCM

1. Replace BCM. Refer to BCS-94, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

B26F8 BCM

DTC Logic

INFOID:0000000012202192

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.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202193

1.INSPECTION START

1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of ”BCM” using CONSULT.
3. Touch “ERASE”.
4. Perform DTC CONFIRMATION PROCEDURE for DTC B26F8.
   Refer to SEC-94, "DTC Logic".

Is DTC detected?

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

2.REPLACE BCM

1. Replace BCM. Refer to BCS-94, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

B26F9 CRANKING REQUEST CIRCUIT

DTC Logic

INFOID:0000000012202194

DTC DETECTION LOGIC

NOTE:

- If DTC B26F9 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-83, "DTC Logic".
- If DTC B26F9 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-84, "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. Perform DTC CONFIRMATION PROCEDURE for DTC P1650. Refer to EC-492, "DTC Logic".
2. Turn ignition switch ON.
3. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202195

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 OFF		3.6
			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	F26	92	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-94, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.
3. Perform DTC CONFIRMATION PROCEDURE for DTC B26F9. Refer to SEC-95, "DTC Logic".

Is DTC detected?

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

4.REPLACE ECM

Replace ECM.
Refer to EC-590, "Removal and Installation".

>> INSPECTION END

B26FA CRANKING REQUEST CIRCUIT

DTC Logic

INFOID:0000000012202196

DTC DETECTION LOGIC

NOTE:

- If DTC B26FA is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-83, "DTC Logic".
- If DTC B26FA is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-84, "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. Perform DTC CONFIRMATION PROCEDURE for DTC P1650. Refer to EC-492, "DTC Logic".
2. Turn ignition switch ON.
3. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT.

Is DTC detected?

YES >> Go to SEC-97, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000012202197

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 OFF		3.6
			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	F26	92	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 EC-590, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.
3. Perform DTC CONFIRMATION PROCEDURE for DTC B26FA. Refer to SEC-97, "DTC Logic".

Is DTC detected?

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

4.REPLACE ECM

Replace ECM.
Refer to EC-590, "Removal and Installation".

>> INSPECTION END

B26FB CLUTCH SWITCH

DTC Logic

INFOID:0000000012202198

DTC DETECTION LOGIC

NOTE:

- If DTC B26FB is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-83, "DTC Logic".
- If DTC B26FB is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-84, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detection condition	Possible cause
B26FB	CLUTCH SW	BCM receives the abnormal signal of clutch pedal position switch from ECM via CAN communication.	• Harness or connector (CAN communication line is open or shorted) (Clutch pedal position switch circuit is open or shorted.)

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.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202199

1.INSPECTION START

1. Turn ignition switch ON.
2. Select “Self diagnostic result” mode of BCM using CONSULT.
3. Touch “ERASE”.
4. Perform DTC CONFIRMATION PROCEDURE for DTC B26FB. Refer to SEC-99, "DTC Logic".

Is DTC detected?

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

2.CHECK CLUTCH PEDAL POSITION SWITCH CIRCUIT

Refer to EC-572, "Component Function Check".

Is the inspection result normal?

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

3.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

B26FC KEY REGISTRATION

DTC Logic

INFOID:0000000012202200

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 registration of all Intelligent Keys using CONSULT.
2. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202201

1.REPLACE INTELLIGENT KEY

1. Prepare Intelligent Key that matches the vehicle.
2. Perform initialization of BCM and registration of Intelligent Key using CONSULT.
3. Check DTC in “Self Diagnostic Result” mode of “BCM” using CONSULT.

Is DTC detected?

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

2.REPLACE BCM

1. Replace BCM. Refer to BCS-94, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

B209F CRANKING REQUEST CIRCUIT

DTC Logic

INFOID:0000000012202202

DTC DETECTION LOGIC

NOTE:
If DTC B209F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to PCS-31, "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. Perform DTC CONFIRMATION PROCEDURE for DTC P1650. Refer to EC-492, "DTC Logic".
2. Turn ignition switch ON.
3. Check DTC in “Self Diagnostic Result” mode of “IPDM E/R” using CONSULT.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202203

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 OFF		3.6
			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	F26	92	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-37, "Removal and Installation".
2. Perform DTC CONFIRMATION PROCEDURE for DTC B209F. Refer to SEC-101, "DTC Logic".

Is DTC detected?

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

4.REPLACE ECM

Replace ECM.
Refer to EC-590, "Removal and Installation".

>> INSPECTION END

B20A0 CRANKING REQUEST CIRCUIT

DTC Logic

INFOID:0000000012202204

DTC DETECTION LOGIC

NOTE:
If DTC B20A0 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to PCS-31, "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. Perform DTC CONFIRMATION PROCEDURE for DTC P1650. Refer to EC-492, "DTC Logic".
2. Turn ignition switch ON.
3. Check DTC in “Self Diagnostic Result” mode of “IPDM E/R” using CONSULT.

Is DTC detected?

YES >> Refer to SEC-103, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000012202205

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 OFF		3.6
			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	F26	92	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-37, "Removal and Installation".
2. Perform DTC CONFIRMATION PROCEDURE for DTC B20A0. Refer to SEC-103, "DTC Logic".

Is DTC detected?

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

4.REPLACE ECM

Replace ECM.
Refer to EC-590, "Removal and Installation".

>> INSPECTION END

B210B STARTER CONTROL RELAY

DTC Logic

INFOID:0000000012202206

DTC DETECTION LOGIC

NOTE:
If DTC B210B is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to PCS-31, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210B	STR CONT RLY ON CIRC	When comparing the following items, IPDM E/R detects that starter control relay is stuck in the ON position for 5 seconds 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 • Ignition power supply No.2 signal from BCM	• Harness or connectors (CAN communication line is open or shorted. (Ignition power supply No.2 circuit is open or shorted.) • IPDM E/R • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

1. Press push-button ignition switch under the following conditions to start engine, and wait 5 seconds or more.

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

M/T models
- Shift lever: In the Neutral position
- Clutch pedal: Depressed

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

Is DTC detected?

YES >> Go to SEC-105, "Diagnosis Procedure".
NO (M/T models)>>INSPECTION END
NO (CVT models)>>GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE 2

1. Stop engine.
2. Perform DTC CONFIRMATION PROCEDURE for DTC P1650. Refer to EC-492, "DTC Logic".
3. Turn ignition switch ON.
4. Check DTC in “Self Diagnostic Result” mode of “IPDM E/R” using CONSULT.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202207

1.CHECK SELF DIAGNOSTIC RESULT

Select “Self Diagnostic Result” mode of “IPDM E/R” using CONSULT.

What is the display history of DTC “B210B”?

“CRNT”>> Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".
“PAST” >> GO TO 2.

2.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

B210C STARTER CONTROL RELAY

DTC Logic

INFOID:0000000012202208

DTC DETECTION LOGIC

NOTE:

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

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210C	STR CONT RLY OFF CIRC	When comparing the following items, IPDM E/R detects that starter control relay is stuck in the OFF position for 5 seconds 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 • Ignition power supply No.2 signal from BCM	• Harness or connectors (CAN communication line is open or shorted. (Ignition power supply No.2 circuit 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 5 seconds or more.

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

M/T models
- Shift lever: In the Neutral position
- Clutch pedal: Depressed

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

Is DTC detected?

YES >> Go to SEC-107, "Diagnosis Procedure".
NO (M/T models)>>INSPECTION END
NO (CVT models)>>GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE 2

1. Stop engine.
2. Perform DTC CONFIRMATION PROCEDURE for DTC P1650. Refer to EC-492, "DTC Logic".
3. Turn ignition switch ON.
4. Check DTC in “Self Diagnostic Result” mode of “IPDM E/R” using CONSULT.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202209

1.CHECK SELF DIAGNOSTIC RESULT

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

What is the display history of DTC “B210C”?

“CRNT”>> GO TO 3.
“PAST” >> GO TO 2.

2.CHECK BATTERY VOLTAGE

Measure the battery voltage.

Which is the measurement result?

More than 12.4 V>>GO TO 5.
Less than 12.4 V>>Perform battery inspection. Refer to PG-97, "How to Handle Battery".

3.CHECK P/N POSITION SIGNAL CIRCUIT VOLTAGE

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

CVT models

(+)		(-)	Condition		Voltage (V)
IPDM E/R					
Connector	Terminal				
E15	48	Ground	Shift position	P or N	9 - 16

M/T models

(+)		(-)	Condition		Voltage (V)
IPDM E/R					
Connector	Terminal				
E15	48	Ground	Clutch pedal	Depressed	6 - 16

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".
NO >> GO TO 4.

4.CHECK P/N POSITION SIGNAL CIRCUIT

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

IPDM E/R		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E15	48	M70	102	Existed

Is the inspection result normal?

YES >> Replace BCM. Refer to PCS-37, "Removal and Installation".
NO >> Repair or replace harness.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

B210D STARTER RELAY

DTC Logic

INFOID:0000000012202210

DTC DETECTION LOGIC

NOTE:
If DTC B210D is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to PCS-31, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210D	STARTER RLY ON CIRC	When comparing the following items, IPDM E/R detects that starter relay is stuck in the ON position for 5 seconds 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 • Ignition power supply No.2 signal from BCM	• Harness or connectors (CAN communication line is open or shorted.) (Ignition power supply No.2 circuit is open or shorted.) • BCM • IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

1. Press push-button ignition switch under the following conditions to start engine, and wait 5 seconds or more.

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

M/T models
- Shift lever: In the Neutral position
- Clutch pedal: Depressed

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

Is DTC detected?

YES >> Go to SEC-109, "Diagnosis Procedure".
NO (M/T models)>>INSPECTION END
NO (CVT models>>GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE 2

1. Stop engine.
2. Perform DTC CONFIRMATION PROCEDURE for DTC P1650. Refer to EC-492, "DTC Logic".
3. Turn ignition switch ON.
4. Check DTC in “Self Diagnostic Result” mode of “IPDM E/R” using CONSULT.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202211

1.CHECK SELF DIAGNOSTIC RESULT

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

What is the display history of DTC “B210D”?

“CRNT”>> GO TO 2.
“PAST” >> GO TO 4.

2.CHECK STARTER RELAY CONTROL CIRCUIT VOLTAGE

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

(+)		(–)	Condition		Voltage (V)
IPDM E/R					
Connector	Terminal				
E13	30	Ground	Ignition switch ON	Select lever P or N	6 - 16

Is the inspection result normal?

Approx. 12 V>>Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".
Approx. 0 V>>GO TO 3.

3.CHECK STARTER RELAY CONTROL CIRCUIT

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

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

Is the inspection result normal?

YES >> Perform the diagnosis procedure for DTC B2608 of BCM. Refer to BCS-62, "DTC Index".
NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

B210E STARTER RELAY

DTC Logic

INFOID:0000000012202212

DTC DETECTION LOGIC

NOTE:

- If DTC B210E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to PCS-31, "DTC Logic".
- If DTC B210E is displayed with DTC B2605, first perform the trouble diagnosis for DTC B2605. Refer to SEC-77, "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 RLY OFF CIRC	When comparing the following items, IPDM E/R detects that starter relay is stuck in the OFF position for 5 seconds 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 • Ignition power supply No.2 signal from BCM	• 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 5 seconds or more.

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

M/T models
- Shift lever: In the Neutral position
- Clutch pedal: Depressed

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

Is DTC detected?

YES >> Go to SEC-111, "Diagnosis Procedure".
NO (M/T models)>>INSPECTION END
NO (CVT models)>>GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE 2

1. Stop engine.
2. Perform DTC CONFIRMATION PROCEDURE for DTC P1650. Refer to EC-492, "DTC Logic".
3. Turn ignition switch ON.
4. Check DTC in “Self Diagnostic Result” mode of “IPDM E/R” using CONSULT.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202213

1.CHECK SELF DIAGNOSTIC RESULT

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

What is the display history of DTC “B210E”?

“CRNT”>> GO TO 3.

"PAST" >> GO TO 2.

2.CHECK BATTERY VOLTAGE

Measure the battery voltage.

Which is the measurement result?

More than 12.4 V>>GO TO 5.
Less than 12.4 V>>Perform battery inspection. Refer to PG-97, "How to Handle Battery".

3.CHECK STARTER RELAY CONTROL CIRCUIT VOLTAGE

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

(+)		(–)	Condition		Voltage (V)
IPDM E/R					
Connector	Terminal				
E13	30	Ground	Ignition switch ON	Select lever P or N	6 - 16

Is the inspection result normal?

Approx. 12 V>>GO TO 4.
Approx. 0 V>>Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".

4.CHECK STARTER RELAY CONTROL CIRCUIT

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

BCM		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M70	97	E13	30	Existed

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M70	97		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to PCS-37, "Removal and Installation".
NO >> Repair or replace harness.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

B210F SHIFT POSITION/CLUTCH INTERLOCK SWITCH

DTC Logic

INFOID:0000000012202214

DTC DETECTION LOGIC

NOTE:
If DTC B210F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to PCS-31, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210F	INTRLCK/PNP SW ON	There is a difference between P/N position signal from transmission range switch and P/N position signal from BCM (CAN).	• Harness or connectors (CAN communication line is open or shorted.) • Harness or connectors (Transmission range switch circuit is open or shorted.) • Transmission range switch • IPDM E/R • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. 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.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000012202215

1.CHECK DTC OF BCM

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

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to BCS-62, "DTC Index".
NO >> GO TO 2.

2.CHECK DTC OF TCM

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

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to TM-203, "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 transmission range switch connector.
4. Check continuity between IPDM E/R harness connector and transmission range switch harness connector.

IPDM E/R		Transmission range switch		Continuity
Connector	Terminal	Connector	Terminal	
E15	48	F27	2	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-37, "Removal and Installation".
NO >> Repair or replace harness.

B2110 SHIFT POSITION/CLUTCH INTERLOCK SWITCH

DTC Logic

INFOID:0000000012202216

DTC DETECTION LOGIC

NOTE:
If DTC B2110 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to PCS-31, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2110	INTRLCK/PNP SW OFF	There is a difference between P/N position signal from transmission range switch and P/N position signal from BCM (CAN).	• Harness or connectors (CAN communication line is open or shorted.) • Harness or connectors (Transmission range switch circuit is open or shorted.) • Transmission range switch • IPDM E/R • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. 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.

Is DTC detected?

YES >> Go to SEC-115, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000012202217

1.CHECK DTC OF BCM

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

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to BCS-62, "DTC Index".
NO >> GO TO 2.

2.CHECK DTC OF TCM

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

Is DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to TM-203, "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 transmission range switch connector.
4. Check continuity between IPDM E/R harness connector and transmission range switch harness connector.

IPDM E/R		Transmission range switch		Continuity
Connector	Terminal	Connector	Terminal	
E15	48	F27	2	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-37, "Removal and Installation".
NO >> Repair or replace harness.

HEADLAMP FUNCTION

Component Function Check

INFOID:0000000012202218

1.CHECK FUNCTION

1. Perform “HEAD LAMP(HI)” in “ACTIVE TEST” mode of “THEFT ALM” of “BCM” using CONSULT.
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-117, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012202219

1.CHECK HEADLAMP FUNCTION

Refer to EXL-50, "Component Function Check" (Xenon type) or EXL-162, "Component Function Check" (Halogen type).

Is the inspection result normal?

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

2.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

HORN FUNCTION

Component Function Check

INFOID:0000000012202220

1.CHECK FUNCTION

1. Perform “VEHICLE SECURITY HORN” in “ACTIVE TEST” mode of “THEFT ALM” of “BCM” using CONSULT.
2. Check the horn operation.

Test item		Description	
VEHICLE SECURITY HORN	ON	Horn	Sounds (for 0.5 sec)

Is the operation normal?

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

Diagnosis Procedure

INFOID:0000000012202221

1.CHECK HORN FUNCTION

Check that horn functions properly using horn switch.

Do horns sound?

YES >> GO TO 2.
NO >> Check horn circuit. Refer to HRN-4, "Wiring Diagram".

2.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

Is the inspection result normal?

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

3.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

SECURITY INDICATOR LAMP

Component Function Check

INFOID:0000000012202222

1.CHECK FUNCTION

1. Perform “THEFT IND” in “ACTIVE TEST” mode of “IMMU” of “BCM” using CONSULT.
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-119, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012202223

1.CHECK FUSE

1. Turn power switch OFF.
2. Check that the following fuse in the fuse block (J/B) is not blown.

Signal name	Fuse No.
Battery power supply	11 (10 A)

Is the fuse blown (open)?

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

2.CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT

1. Disconnect combination meter connector.
2. Check voltage between combination meter harness connector and ground.

(+)		(–)	Voltage (V) (Approx.)
Combination meter			
Connector	Terminal		
M34	27	Ground	Battery voltage

Is the inspection result normal?

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

3.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 4.
NO >> GO TO 5.

4.REPLACE BCM

1. Replace BCM. Refer to BCS-94, "Removal and Installation".
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.

>> INSPECTION END

5. 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	18	M68	23	Existed

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

Combination meter		Ground	Continuity
Connector	Terminal		
M34	18		Not existed

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-64, "Removal and Installation".
NO >> Repair or replace harness.

SYMPTOM DIAGNOSIS

ENGINE DOES NOT START WHEN INTELLIGENT KEY IS INSIDE OF VEHICLE

Description

INFOID:0000000012202224

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 systems are operating normally.

Conditions of Vehicle (Operating Conditions)

- “ENGINE START BY I-KEY”: ON
  Check the setting of “ENGINE START BY I-KEY” in “Work Support” mode of “INTELLIGENT KEY” of “BCM” using CONSULT.
- One or more of Intelligent Keys with registered Intelligent Key ID are in the vehicle.

Diagnosis Procedure

INFOID:0000000012202225

1.PERFORM WORK SUPPORT

Perform “INSIDE ANT DIAGNOSIS” in “Work Support” mode of “INTELLIGENT KEY” of BCM using CONSULT.
Refer to DLK-28, "INTELLIGENT KEY : CONSULT 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-62, "DTC Index".
NO >> GO TO 3.

3.CHECK PUSH-BUTTON IGNITION SWITCH

Check push-button ignition switch.
Refer to PCS-78, "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-45, "Intermittent Incident".
NO >> GO TO 1.

SECURITY INDICATOR LAMP DOES NOT TURN ON OR BLINK

Description

INFOID:0000000012202226

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-44, "Work Flow".
- Check that vehicle is under the condition shown in “CONDITIONS OF VEHICLE (OPERATING CONDITIONS)” before starting diagnosis, and check each symptom.

CONDITIONS OF VEHICLE (OPERATING CONDITIONS)

Power supply position is not the ON position.

Diagnosis Procedure

INFOID:0000000012202227

1.CHECK SECURITY INDICATOR LAMP

Check security indicator lamp.

Refer to SEC-119, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-45, "Intermittent Incident".

NO >> GO TO 1.

VEHICLE SECURITY SYSTEM CANNOT BE SET

INTELLIGENT KEY

INTELLIGENT KEY : Description

INFOID:0000000012202228

Armed phase is not activated when all doors are locked using Intelligent Key.

NOTE:

Check that vehicle is under the condition shown in “CONDITIONS OF VEHICLE (OPERATING CONDITIONS)” before starting diagnosis, and check each symptom.

CONDITION OF VEHICLE (OPERATING CONDITIONS)

“SECURITY ALARM SET”: ON

Check the setting of “SECURITY ALARM SET” in “Work Support” mode of “THEFT ALM” of “BCM” using CONSULT.

INTELLIGENT KEY : Diagnosis Procedure

INFOID:0000000012202229

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

Lock/unlock door with Intelligent Key.

Refer to DLK-18, "REMOTE KEYLESS ENTRY FUNCTION : System Description".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check Intelligent Key system (remote keyless entry function). Refer to DLK-97, "Diagnosis Procedure".

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-45, "Intermittent Incident".

NO >> GO TO 1.

DOOR REQUEST SWITCH

DOOR REQUEST SWITCH : Description

INFOID:0000000012202230

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

NOTE:

Check that vehicle is under the condition shown in “CONDITIONS OF VEHICLE (OPERATING CONDITIONS)” before starting diagnosis, and check each symptom.

CONDITION OF VEHICLE (OPERATING CONDITIONS)

“SECURITY ALARM SET”: ON

Check the setting of “SECURITY ALARM SET” in “Work Support” mode of “THEFT ALM” of “BCM” using CONSULT.

DOOR REQUEST SWITCH : Diagnosis Procedure

INFOID:0000000012202231

1.CHECK INTELLIGENT KEY SYSTEM (DOOR LOCK FUNCTION)

Lock/unlock door with door request switch.

Refer to DLK-14, "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-93, "ALL DOOR REQUEST SWITCHES : Diagnosis Procedure".

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-45, "Intermittent Incident".

NO >> GO TO 1.

DOOR KEY CYLINDER

DOOR KEY CYLINDER : Description

INFOID:0000000012202232

ARMED phase is not activated when all doors are 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)

- SECURITY ALARM SET: ON
  Check the setting of “SECURITY ALARM SET” in “Work Support” mode of “THEFT ALM” of “BCM” using CONSULT.

DOOR KEY CYLINDER : Diagnosis Procedure

INFOID:0000000012202233

1.CHECK POWER DOOR LOCK SYSTEM

Lock or unlock doors using mechanical key.
Refer to DLK-11, "System Description".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Check power door lock system. Refer to DLK-96, "Diagnosis Procedure".

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-45, "Intermittent Incident".
NO >> GO TO 1.

DOOR LOCK AND UNLOCK SWITCH

DOOR LOCK AND UNLOCK SWITCH : Description

INFOID:0000000012202234

Armed phase is not activated when all doors are locked by door lock and unlock switch.

NOTE:

Check that vehicle is under the condition shown in “CONDITIONS OF VEHICLE (OPERATING CONDITIONS)” before starting diagnosis, and check each symptom.

CONDITION OF VEHICLE (OPERATING CONDITIONS)

“SECURITY ALARM SET”: ON
Check the setting of “SECURITY ALARM SET” in “Work Support” mode of “THEFT ALM” of “BCM” using CONSULT.

DOOR LOCK AND UNLOCK SWITCH : Diagnosis Procedure

INFOID:0000000012202235

1.CHECK DOOR LOCK FUNCTION

Lock/unlock door using mechanical key inserted into door key cylinder.
Refer to DLK-11, "System Description".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Check Intelligent Key system (remote keyless entry function). Refer to DLK-90, "ALL DOOR : Diagnosis Procedure".

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-45, "Intermittent Incident".
NO >> GO TO 1.

VEHICLE SECURITY ALARM DOES NOT ACTIVATE

Description

INFOID:0000000012202236

Alarm does not operate when alarm operating condition is satisfied.

NOTE:

Check that vehicle is under the condition shown in “CONDITIONS OF VEHICLE (OPERATING CONDITIONS)” before starting diagnosis, and check each symptom.

CONDITION OF VEHICLE (OPERATING CONDITIONS)

“SECURITY ALARM SET”: ON

Check the setting of “SECURITY ALARM SET” in “Work Support” mode of “THEFT ALM” of “BCM” using CONSULT.

Diagnosis Procedure

INFOID:0000000012202237

1.CHECK DOOR SWITCH

Check door switch.

Refer to DLK-77, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the malfunctioning door switch

2.CHECK HEADLAMPS FUNCTION

Check head lamps function.

Refer to SEC-117, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.CHECK HORN FUNCTION

Check horn function.

Refer to SEC-118, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunctioning parts.

4.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-45, "Intermittent Incident".

NO >> GO TO 1.

REMOVAL AND INSTALLATION

NATS ANTENNA AMP.

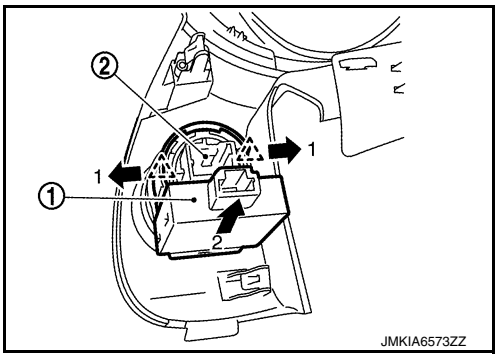
Removal and Installation

INFOID:0000000012202238

REMOVAL

1. Remove the cluster lid A. Refer to IP-13, "Removal and Installation".
2. Remove the NATS antenna amp.
   1. Disengage the NATS antenna amp. (1) fixing pawls using remover tool.
   2. Pull NATS antenna amp. to remove it from push-button ignition switch (2).

: Pawl



INSTALLATION

Install in the reverse order of removal.

PUSH-BUTTON IGNITION SWITCH

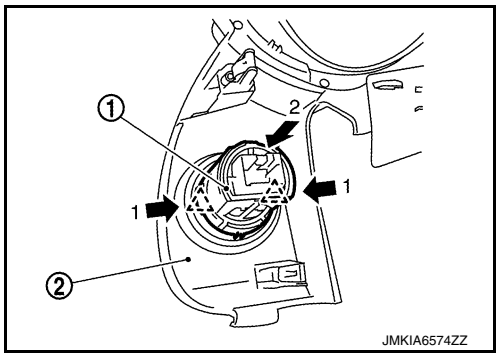
Removal and Installation

INFOID:0000000012202239

REMOVAL

1. Remove the NATS antenna amp. Refer to IP-13, "Removal and Installation".
2. Remove the push-button ignition switch.
   1. Disengage the push-button ignition switch (1) fixing pawls using remover tool.
   2. Press the push-button ignition switch to remove it from cluster lid A (2).

: Pawl



INSTALLATION

Install in the reverse order of removal.