

SECTION **SEC** SECURITY CONTROL SYSTEM

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PRECAUTIONS

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PRECAUTION

PRECAUTIONS

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

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The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

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

WARNING:

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery and wait at least three minutes before performing any service.

Precaution for Work

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- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with a new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components:
 - Water soluble dirt:
 - Dip a soft cloth into lukewarm water, wring the water out of the cloth and wipe the dirty area.
 - Then rub with a soft, dry cloth.
 - Oily dirt:
 - Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%) and wipe the dirty area.
 - Then dip a cloth into fresh water, wring the water out of the cloth and wipe the detergent off.
 - Then rub with a soft, dry cloth.
 - Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
 - For genuine leather seats, use a genuine leather seat cleaner.

PREPARATION

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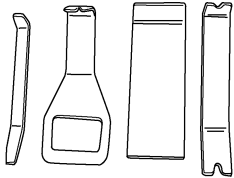
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Special Service Tool

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The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

Tool number (Kent-Moore No.) Tool name	Description
— (J-46534) Trim Tool Set	Removing trim components
 AWJIA0483ZZ	

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COMPONENT PARTS

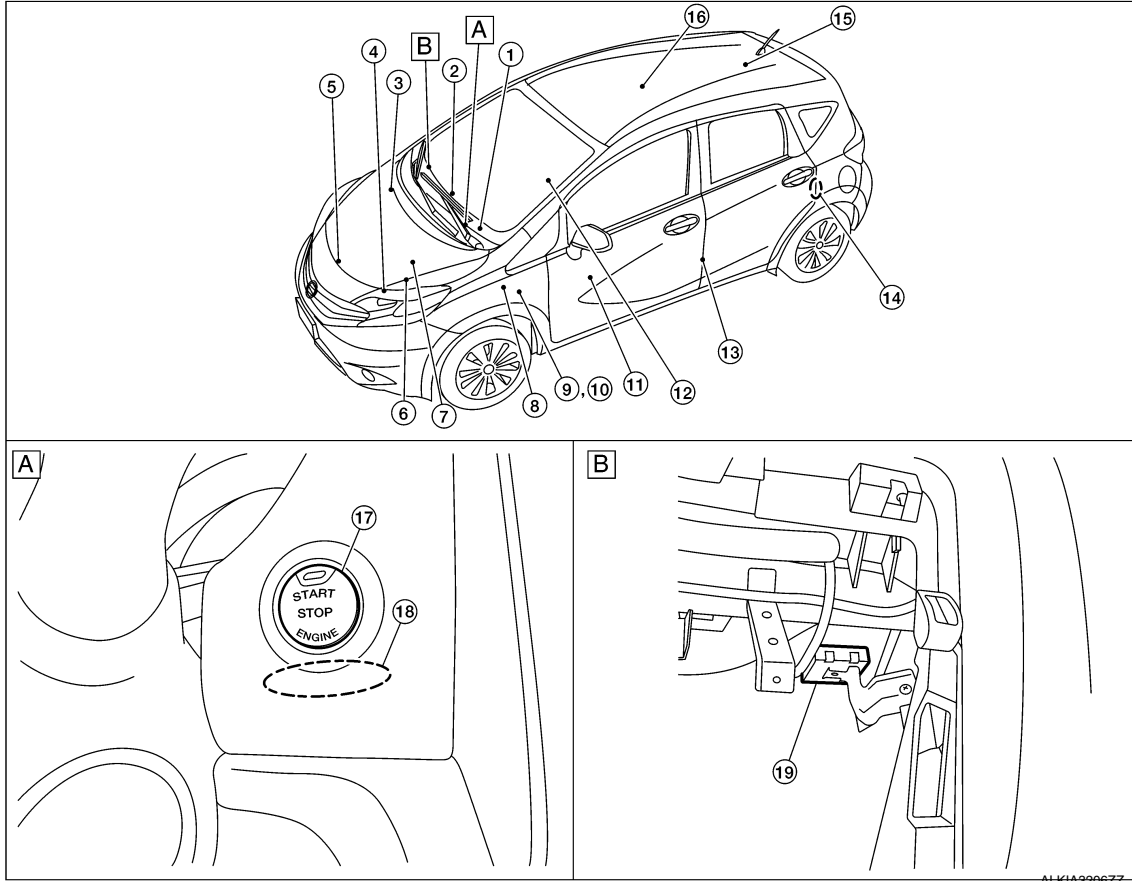
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SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

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A. View right of steering column

B. View with glove box cover removed

COMPONENT PARTS

< SYSTEM DESCRIPTION >

No.	Component	Function
1.	Combination meter	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. Security indicator lamp is located on combination meter. Security indicator lamp blinks when ignition switch is in any position other than ON to warn that NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS [NVIS (NATS)] is on board. Refer to MWI-6, "METER SYSTEM : Combination Meter" .
2.	Inside key antenna (instrument center)	Inside key antenna (instrument center) detects whether Intelligent Key is inside the vehicle or not, and then transmits the signal to the BCM. Refer to DLK-12, "DOOR LOCK SYSTEM : Inside Key Antenna (Instrument Center)" .
3.	ABS actuator and electric unit (control unit)	ABS actuator and electric unit (control unit) transmits the vehicle speed signal to BCM via CAN communication. BCM also receives the vehicle speed signal from the combination meter via CAN communication. BCM compares both signals to detect the vehicle speed. Refer to BRC-6, "Component Parts Location" for detailed installation location.
4.	Intelligent Key warning buzzer	Intelligent Key warning buzzer warns the user, who is outside the vehicle, of operation confirmation according to Intelligent Key operation and door request switch operation, or of an inappropriate operation. Refer to DLK-14, "DOOR LOCK SYSTEM : Intelligent Key Warning Buzzer" .
5.	Hood switch	Hood switch detects that brake hood is open or closed, and then transmits that signal to the IPDM E/R
6.	Transmission range switch	Transmission range switch detects the CVT shift selector lever position.
7.	IPDM E/R	Starter control relay is integrated in IPDM E/R and 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. IPDM E/R sends the starter control relay and starter relay status signal to BCM.

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COMPONENT PARTS

< SYSTEM DESCRIPTION >

No.	Component	Function
8.	BCM	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, ignition switch operation is available. Then, when the ignition switch is turned ON, BCM performs ID verification between BCM and ECM. If the ID verification result is OK, ECM can start engine. Refer to BCS-4, "BODY CONTROL SYSTEM : Component Parts Location" for detailed installation location.
9.	Clutch interlock switch	Clutch interlock switch detects that clutch pedal is depressed, and then transmits ON/OFF signal to the BCM
10.	Stop lamp switch	Stop lamp switch detects that brake pedal is depressed, and then transmits ON/OFF signal to the BCM
11.	Main power window and door lock/unlock switch	Door lock and unlock switch is integrated into the power window main switch. Door lock and unlock switch transmits door lock/unlock operation signal to BCM. Refer to PWC-6, "Power Window Main Switch".
12.	CVT shift selector (park position switch)	Park position switch is integrated into the CVT shift selector and detects that the selector lever is in the P (park) position, then transmits ON/OFF signal to the BCM and IPDM E/R.
13.	Front door switch LH	Door switch detects door open/close condition and then transmits ON/OFF signal to BCM.
14.	Rear door switch LH	Door switch detects door open/close condition and then transmits ON/OFF signal to BCM.
15.	Inside key antenna (trunk room)	Inside key antenna (trunk room) detects whether Intelligent Key is inside the vehicle or not, and then transmits the signal to the BCM. Refer to DLK-13, "DOOR LOCK SYSTEM : Inside Key Antenna (Trunk Room)" .
16.	Inside key antenna (console)	Inside key antenna (console) detects whether Intelligent Key is inside the vehicle or not, and then transmits the signal to the BCM. Refer to DLK-13, "DOOR LOCK SYSTEM : Inside Key Antenna (Console)" .
17.	Push button ignition switch	Push-button ignition switch has push switch inside which detects that push-button ignition switch is pressed, and then transmits ON/OFF signal to BCM. BCM changes the ignition switch position with the operation of push-button ignition switch. BCM maintains the ignition switch position status while push-button ignition switch is not operated.

COMPONENT PARTS

< SYSTEM DESCRIPTION >

No.	Component	Function
18.	NATS antenna amp.	ID verification is performed between the BCM and the transponder integrated into the Intelligent Key via the NATS antenna amp.
19.	Remote keyless entry receiver	Remote keyless entry receiver receives button operation signal and key ID signal of Intelligent Key, and then transmits them to the BCM. Refer to DLK-14, "DOOR LOCK SYSTEM : Remote Keyless Entry Receiver" .

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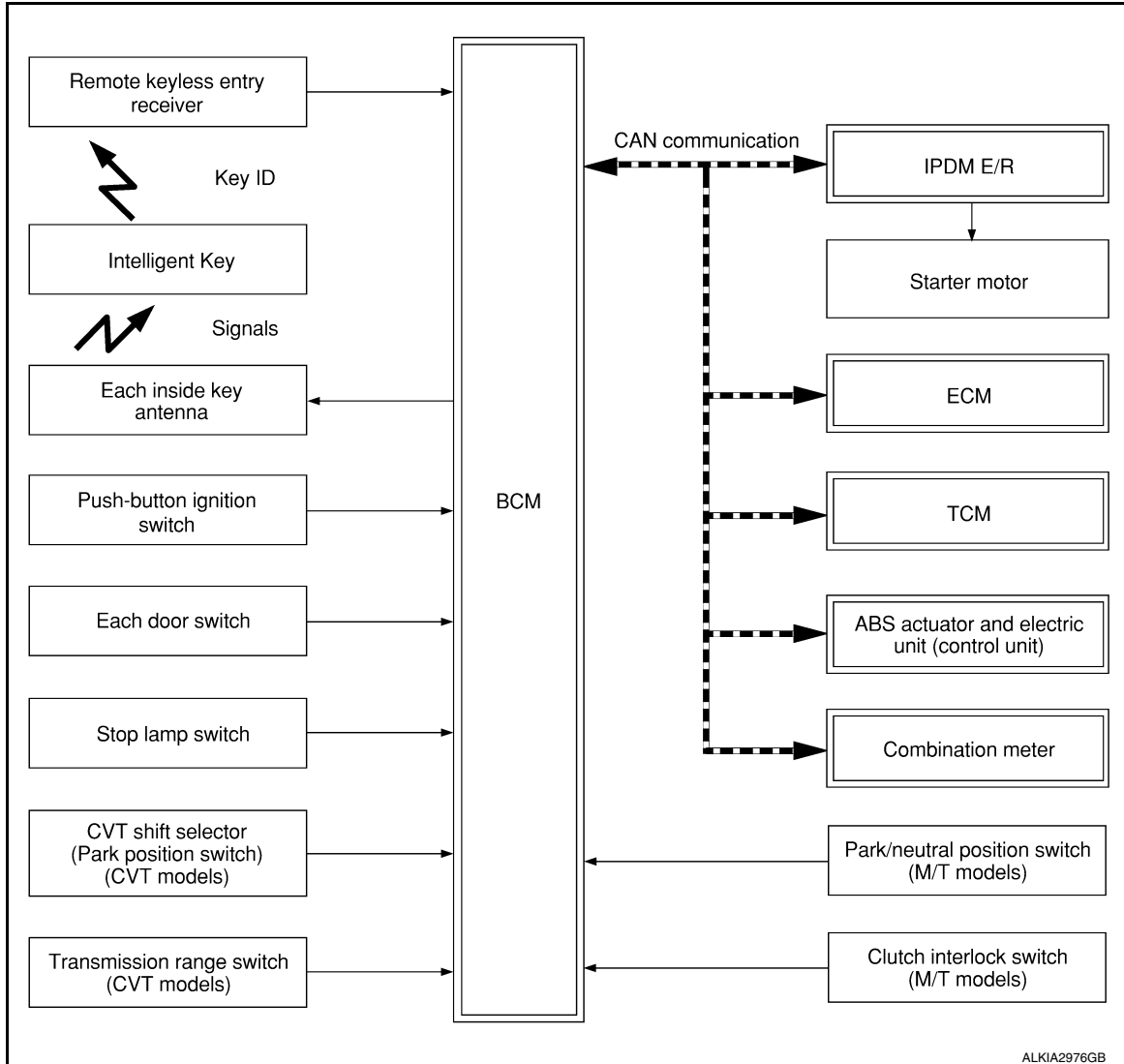
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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION : System Description

INFOID:000000009606330

SYSTEM DIAGRAM



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 NATS ID). It can perform the door lock/unlock operation and the push-button ignition switch operation when the registered Intelligent Key is carried.
- If the ID is successfully verified, when push-button ignition switch is pressed the engine can be started.
- Up to 4 Intelligent Keys can be registered (Including the standard Intelligent Key) upon request from the customer.

NOTE:

Refer to [SEC-13, "NISSAN ANTI-THEFT SYSTEM : System Description"](#) for any functions other than engine start function of Intelligent Key system.

SYSTEM

< SYSTEM DESCRIPTION >

PRECAUTIONS FOR INTELLIGENT KEY SYSTEM

The transponder (the chip for 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, NATS ID verification can be performed when Intelligent Key backside is contacted to push-button ignition switch while brake pedal is depressed. If verification result is OK, engine can be started.

OPERATION WHEN INTELLIGENT KEY IS CARRIED

1. When the push-button ignition switch is pressed, the BCM activates the inside key antenna and transmits the request signal to the Intelligent Key.
2. The Intelligent Key receives the request signal and transmits the Intelligent Key ID signal to the BCM.
3. BCM receives the Intelligent Key ID signal via remote keyless entry receiver and verifies it with the registered ID.
4. BCM 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 and starts the ignition power supply.
6. IPDM E/R turns the starter control relay ON for engine starting in advance.
7. BCM detects the selector lever position and brake pedal operation condition.
8. BCM transmits the starter request signal to IPDM E/R and turns the starter relay ON if BCM judges that the engine start condition* is satisfied.
9. Power supply is supplied through the starter relay and the starter control relay to operate the starter motor.
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:

If a malfunction is detected in the Intelligent Key system, the “KEY” warning lamp on the combination meter illuminates. At that time, the engine cannot be started.

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 “IGNITION SWITCH 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, NATS ID verification between transponder in Intelligent Key and BCM is performed when Intelligent Key backside is contacted to push-button ignition switch while brake pedal is depressed. If the verification result is OK, engine can be started.

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

The ignition switch position can be changed by the following operations.

NOTE:

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

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

SYSTEM

< SYSTEM DESCRIPTION >

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

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

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

Emergency stop operation

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

NISSAN ANTI-THEFT SYSTEM

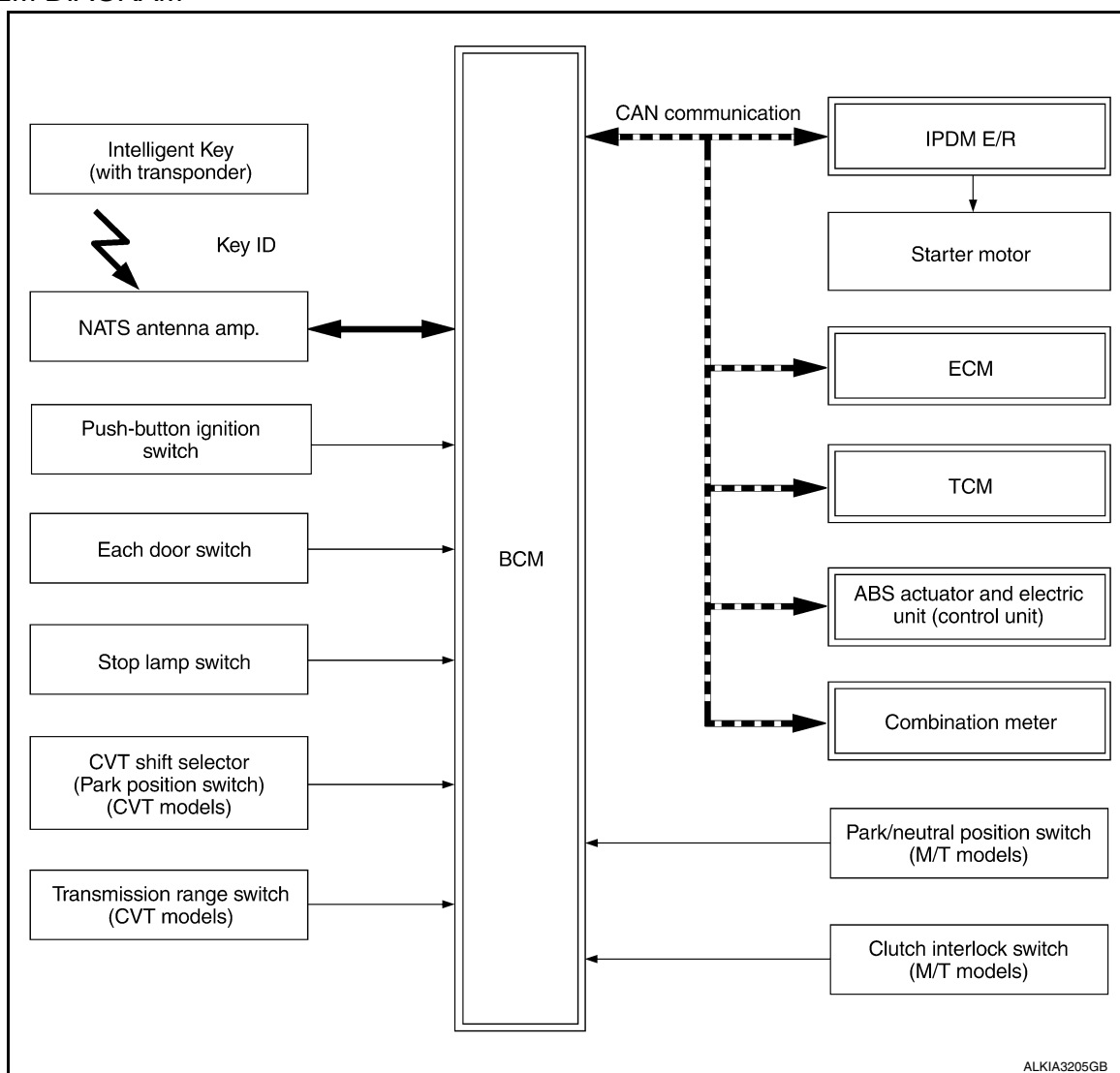
SYSTEM

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NISSAN ANTI-THEFT SYSTEM : System Description

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SYSTEM DIAGRAM



SYSTEM DESCRIPTION

- The Nissan Anti-Theft System (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 NATS ID verification is performed between the transponder integrated with Intelligent Key and BCM via NATS antenna amp. when the Intelligent Key backside is contacted to push-button ignition switch while brake pedal is depressed. If the verification result is OK, the engine start operation can be performed by the push-button ignition switch operation.
- Locate the security indicator lamp and always blinks it when the ignition switch is in any position except ON to warn that the vehicle is equipped with Nissan Anti-Theft System (NATS).
- Up to 4 Intelligent Keys can be registered (including the standard ignition key) upon request from the owner.
- When replacing ECM, BCM or Intelligent Key, the specified procedure (Initialization and registration) using CONSULT is required.
- Possible symptom of NATS malfunction is "Engine can not start". This symptom also occurs because of other than NATS malfunction, so start the trouble diagnosis according to [SEC-58. "Work Flow"](#).
- If ECM other than genuine part is installed, the engine cannot be started.
For ECM replacement procedure, refer to [EC-338. "Removal and Installation"](#).

PRECAUTIONS FOR KEY REGISTRATION

SYSTEM

< SYSTEM DESCRIPTION >

- The ID registration is a procedure that erases the current 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 IDs (NATS ID and Intelligent Key ID).

SECURITY INDICATOR LAMP

- Security indicator lamp warns that the vehicle is equipped with NATS.
- Security indicator lamp always blinks when the ignition switch is in 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 the 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 NATS ID verification between BCM and Intelligent Key (transponder built-in) via NATS antenna amp.
3. When NATS ID verification result is OK, buzzer in combination meter sounds and BCM transmits the result to ECM.
4. BCM turns ACC relay ON and transmits ignition power supply ON signal to IPDM E/R.
5. IPDM E/R turns the ignition relay ON and starts 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 operation condition.
8. BCM transmits starter request signal to IPDM E/R and turns the starter relay ON if BCM judges that the engine start condition* is satisfied.
9. Power supply is supplied through the starter relay and the starter control relay to operate the starter motor.
10. When BCM receives feedback signal from ECM indicating that the engine is started, BCM transmits a stop signal to IPDM E/R and stops cranking by turning off the starter motor relay. (If engine start is unsuccessful, cranking stops automatically within 5 seconds.)

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

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

The ignition switch position can be changed by the following operations.

NOTE:

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

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

Power supply position	Condition		Push-button ignition switch operation frequency
	Selector lever	Brake pedal operation condition	
OFF → ACC	—	Not depressed	1
OFF → ACC → ON	—	Not depressed	2
OFF → ACC → ON → OFF	—	Not depressed	3

SYSTEM

< SYSTEM DESCRIPTION >

Power supply position	Condition		Push-button ignition switch operation frequency
	Selector lever	Brake pedal operation condition	
OFF → START ACC → START ON → START	P or N position	Depressed	1
Engine is running → OFF	—	—	1

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

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

Emergency stop operation

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

VEHICLE SECURITY SYSTEM

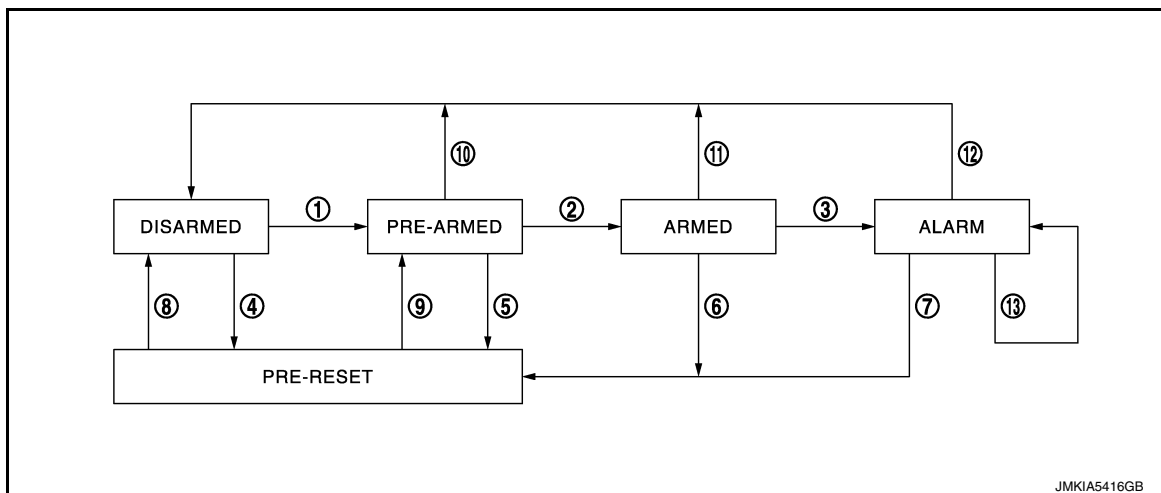
VEHICLE SECURITY SYSTEM : System Description

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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



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No.	System state	Switching condition	
1	DISARMED to PRE-ARMED	When all conditions of A and one condition of B is satisfied.	A
			B
2	PRE-ARMED to ARMED	When all of the following conditions are satisfied for 30 seconds.	A
			B

SYSTEM

< SYSTEM DESCRIPTION >

No.	System state	Switching condition		
3	ARMED to ALARM	When one condition of A and one condition of B are satisfied.	A	B
			Intelligent Key: Not used	• Any door: Open
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 conditions is satisfied.	• Power supply position: ACC/ON/CRANKING/RUN • Door key cylinder UNLOCK switch: ON • UNLOCK button of Intelligent Key: ON • Door request switch: ON • Any door: Open	
11	ARMED to DISARMED	When one of the following conditions is satisfied.	• Power supply position: ACC/ON/CRANKING/RUN • Door key cylinder UNLOCK switch: ON • UNLOCK button of Intelligent Key: ON • Door request switch: ON	
12	ALARM to DISARMED			
13	RE-ALARM	When one of the following conditions 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 [SEC-10. "INTELLIGENT KEY SYSTEM/ENGINE START 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

SYSTEM

< SYSTEM DESCRIPTION >

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.

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SEC

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:000000009606333

APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

Direct Diagnostic Mode	Description
ECU identification	The BCM part number is displayed.
Self Diagnostic Result	The BCM self diagnostic results are displayed.
Data Monitor	The BCM input/output data is displayed in real time.
Active Test	The BCM activates outputs to test components.
Work support	The settings for BCM functions can be changed.
Configuration	- The vehicle specification can be read and saved. - The vehicle specification can be written when replacing BCM.
CAN DIAG SUPPORT MNTR	The result of transmit/receive diagnosis of CAN communication is displayed.

SYSTEM APPLICATION

BCM can perform the following functions.

System	Sub System	Direct Diagnostic Mode						
		ECU identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN DIAG SUPPORT MNTR
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 conditioner	AIR CONDITIONER			×				
Intelligent Key system	INTELLIGENT KEY		×	×	×	×		
Combination switch	COMB SW			×				
BCM	BCM	×	×			×	×	×
Immobilizer	IMMU		×		×	×		
Interior room lamp battery saver	BATTERY SAVER			×	×	×		
Vehicle security system	THEFT ALM			×	×	×		
RAP system	RETAINED PWR			×		×		
Signal buffer system	SIGNAL BUFFER			×				

INTELLIGENT KEY

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY)

INFOID:000000009606334

SELF DIAGNOSTIC RESULT

Refer to [BCS-46, "DTC Index"](#).

DATA MONITOR

Monitor Item [Unit]	Main	Description
REQ SW -DR [On/Off]	×	Indicates condition of door request switch LH.
REQ SW -AS [On/Off]	×	Indicates condition of door request switch RH.
REQ SW -BD/TR [On/Off]	×	Indicates condition of back door request switch.
PUSH SW [On/Off]		Indicates condition of push-button ignition switch.
BRAKE SW 1 [On/Off]	×	Indicates condition of brake switch.
CLUTCH SW [On/Off]	×	Indicates condition of clutch interlock switch.
BRAKE SW 2 [On/Off]		Indicates condition of brake switch.
DETE/CANCL SW [On/Off]	×	Indicates condition of P (park) position.
SFT PN/N SW [On/Off]	×	Indicates condition of P (park) or N (neutral) position.
UNLK SEN -DR [On/Off]	×	Indicates condition of door unlock sensor.
PUSH SW -IPDM [On/Off]		Indicates condition of push-button ignition switch received from IPDM E/R on CAN communication line.
IGN RLY1 -F/B [On/Off]		Indicates condition of ignition relay 1 received from IPDM E/R on CAN communication line.
DETE SW -IPDM [On/Off]		Indicates condition of detent switch received from TCM on CAN communication line.
SFT PN -IPDM [On/Off]		Indicates condition of P (park) or N (neutral) position from TCM on CAN communication line.
SFT P -MET [On/Off]		Indicates condition of P (park) position from TCM on CAN communication line.
SFT N -MET [On/Off]		Indicates condition of N (neutral) position from IPDM E/R on CAN communication line.
ENGINE STATE [Stop/Start/Crank/Run]	×	Indicates condition of engine state from ECM on CAN communication line.
VEH SPEED 1 [mph/km/h]	×	Indicates condition of vehicle speed signal received from ABS on CAN communication line.
VEH SPEED 2 [mph/km/h]	×	Indicates condition of vehicle speed signal received from combination meter on CAN communication line.
DOOR STAT -DR [LOCK/READY/UNLK]	×	Indicates condition of driver side door status.
DOOR STAT -AS [LOCK/READY/UNLK]	×	Indicates condition of passenger side door status.
ID OK FLAG [Set/Reset]		Indicates condition of Intelligent Key ID.
PRMT ENG STRT [Set/Reset]		Indicates condition of engine start possibility.
RKE OPE COUN1 [0-19]	×	When remote keyless entry receiver receives the signal transmitted while operating on Intelligent Key, the numerical value start changing.
RKE OPE COUN2 [0-19]	×	When remote keyless entry receiver receives the signal transmitted while operating on Intelligent Key, the numerical value start changing.
RKE-LOCK [On/Off]		Indicates condition of lock signal from Intelligent Key.
RKE-UNLOCK [On/Off]		Indicates condition of unlock signal from Intelligent Key.
RKE-MODE CHG [On/Off]		Indicates condition of mode change signal from Intelligent Key.

ACTIVE TEST

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

Test Item	Description
INSIDE BUZZER	This test is able to check combination meter warning chime operation [Take Out/Knob/Key/Off].
LCD	This test is able to check combination meter display information [Off/LK WN/OUTKEY/NO KY/BATT/INSRT/SFT P/ROTAT/ID NG/B&P I/B&P N].
BATTERY SAVER	This test is able to check battery saver operation [On/Off].
ENGINE SW ILLUMI	This test is able to check push-button ignition switch START indicator operation [On/Off].
PUSH SWITCH INDICATOR	This test is able to check back door lock actuator operation [On/Off].
INT LAMP	This test is able to check interior room lamp operation [On/Off].
INDICATOR	This test is able to check combination meter warning lamp operation [KEY ON/KEY IND/Off].
FLASHER	This test is able to check hazard lamp operation [LH/RH/Off].
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation [On/Off].
HORN	This test is able to check horn operation [On].
P RANGE	This test is able to check CVT shift selector illumination operation [On/Off].

WORK SUPPORT

Support Item	Setting	Description
LOCK/UNLOCK BY I-KEY	On*	Door lock/unlock function from Intelligent Key ON.
	Off	Door lock/unlock function from Intelligent Key OFF.
ANTI KEY LOCK IN FUNCTI	On*	Anti lock out setting ON.
	Off	Anti lock out setting OFF.
ANS BACK I-KEY UNLOCK	Off	No buzzer reminder when doors are unlocked with request switch.
	On*	Buzzer reminder when doors are unlocked with request switch.
ANS BACK I-KEY LOCK	Horn Chirp	Horn chirp reminder when doors are locked with request switch.
	Buzzer*	Buzzer reminder when doors are locked with request switch.
	Off	No reminder when doors are locked with request switch.
HORN WITH KEYLESS LOCK	Off	Horn chirp reminder when doors are locked with Intelligent Key.
	On*	No horn chirp reminder when doors are locked with Intelligent Key.
HAZARD ANSWER BACK	Lock/Unlock*	Hazard warning lamp activation when doors are locked/unlocked with Intelligent Key or request switch.
	Unlock Only	Hazard warning lamp activation when doors are unlocked with Intelligent Key or request switch.
	Lock Only	Hazard warning lamp activation when doors are locked with Intelligent Key or request switch.
	Off	No hazard warning lamp activation when doors are locked/unlocked with Intelligent Key or request switch.
INSIDE ANT DIAGNOSIS	—	This function allows inside key antenna self-diagnosis.
CONFIRM KEY FOB ID	—	Intelligent Key ID code can be checked.
SHORT CRANKING OUTPUT	Start	70 msec
		100 msec
		200 msec
	End	—
LO- BATT OF KEY FOB WARN	On*	Intelligent Key low battery warning ON.
	Off	Intelligent Key low battery warning OFF.

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

Support Item	Setting		Description
AUTO LOCK SET	MODE7	5 min	Auto door lock time setting.
	MODE6	4 min	
	MODE5	3 min	
	MODE4	2 min	
	MODE3*	1 min	
	MODE2	30 sec	
	MODE1	Off	

*: Initial Setting

THEFT ALM

THEFT ALM : CONSULT Function (BCM - THEFT)

INFOID:0000000009606335

DATA MONITOR

Monitored Item	Description
REQ SW -DR [On/Off]	Indicates condition of door request switch LH.
REQ SW -AS [On/Off]	Indicates condition of door request switch RH.
REQ SW -BD/TR [On/Off]	Indicates condition of back door request switch.
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.
UNLK SEN -DR [On/Off]	Indicates condition of door unlock sensor.
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.
DOOR SW-RR [On/Off]	Indicates condition of rear door switch RH.
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH.
DOOR SW-BK [On/Off]	Indicates condition of back door switch.
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch.
CDL UNLOCK SW [On/Off]	Indicates condition of unlock signal from door lock and unlock switch.
KEY CYL LK-SW [On/Off]	Indicates condition of lock signal from door key cylinder switch.
KEY CYL UN-SW [On/Off]	Indicates condition of unlock signal from door key cylinder switch.
RKE-LOCK [On/Off]	Indicates condition of lock signal from Intelligent Key.
RKE-UNLOCK [On/Off]	Indicates condition of unlock signal from Intelligent Key.

ACTIVE TEST

Test Item	Description
VEHICLE SECURITY HORN	This test is able to check vehicle security horn operation [On].
FLASHER	This test is able to check turn signal lamp operation [LH/RH/Off].
THEFT IND	This test is able to check security indicator lamp operation [On/Off].
HEADLAMP(HI)	This test is able to check vehicle security lamp operation [On].

WORK SUPPORT

Support Item	Setting	Description
THEFT ALM TRG	—	Displays status of components that can trigger the theft alarm.
SECURITY ALARM SET	On	Security alarm ON.
	Off	Security alarm OFF.

IMMU

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

IMMU : CONSULT Function (BCM - IMMU)

INFOID:000000009606336

SELF DIAGNOSTIC RESULT

Refer to [BCS-46, "DTC Index"](#).

DATA MONITOR

Monitor Item [Unit]	Description
CONFIRM ID ALL [Yet/DONE]	Switches to DONE when an Intelligent Key is registered.
CONFIRM ID4 [Yet/DONE]	
CONFIRM ID3 [Yet/DONE]	
CONFIRM ID2 [Yet/DONE]	
CONFIRM ID1 [Yet/DONE]	
TP 4 [Yet/DONE]	DONE indicates the number of Intelligent Key ID which has been registered.
TP 3 [Yet/DONE]	
TP 2 [Yet/DONE]	
TP 1 [Yet/DONE]	
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.

ACTIVE TEST

Test Item	Description
THEFT IND	This test is able to check security indicator operation [On/Off].

ECM, IPDM E/R, BCM

< ECU DIAGNOSIS INFORMATION >

ECU DIAGNOSIS INFORMATION

ECM, IPDM E/R, BCM

List of ECU Reference

INFOID:000000009016101

ECU	Reference
IPDM E/R	PCS-13, "Reference Value"
	PCS-18, "Fail-safe"
	PCS-20, "DTC Index"
ECM	EC-62, "Reference Value"
	EC-73, "Fail Safe"
	EC-74, "DTC Inspection Priority Chart"
	EC-76, "DTC Index"
BCM	BCS-28, "Reference Value"
	BCS-44, "Fail-safe"
	BCS-46, "DTC Inspection Priority Chart"
	BCS-46, "DTC Index"

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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

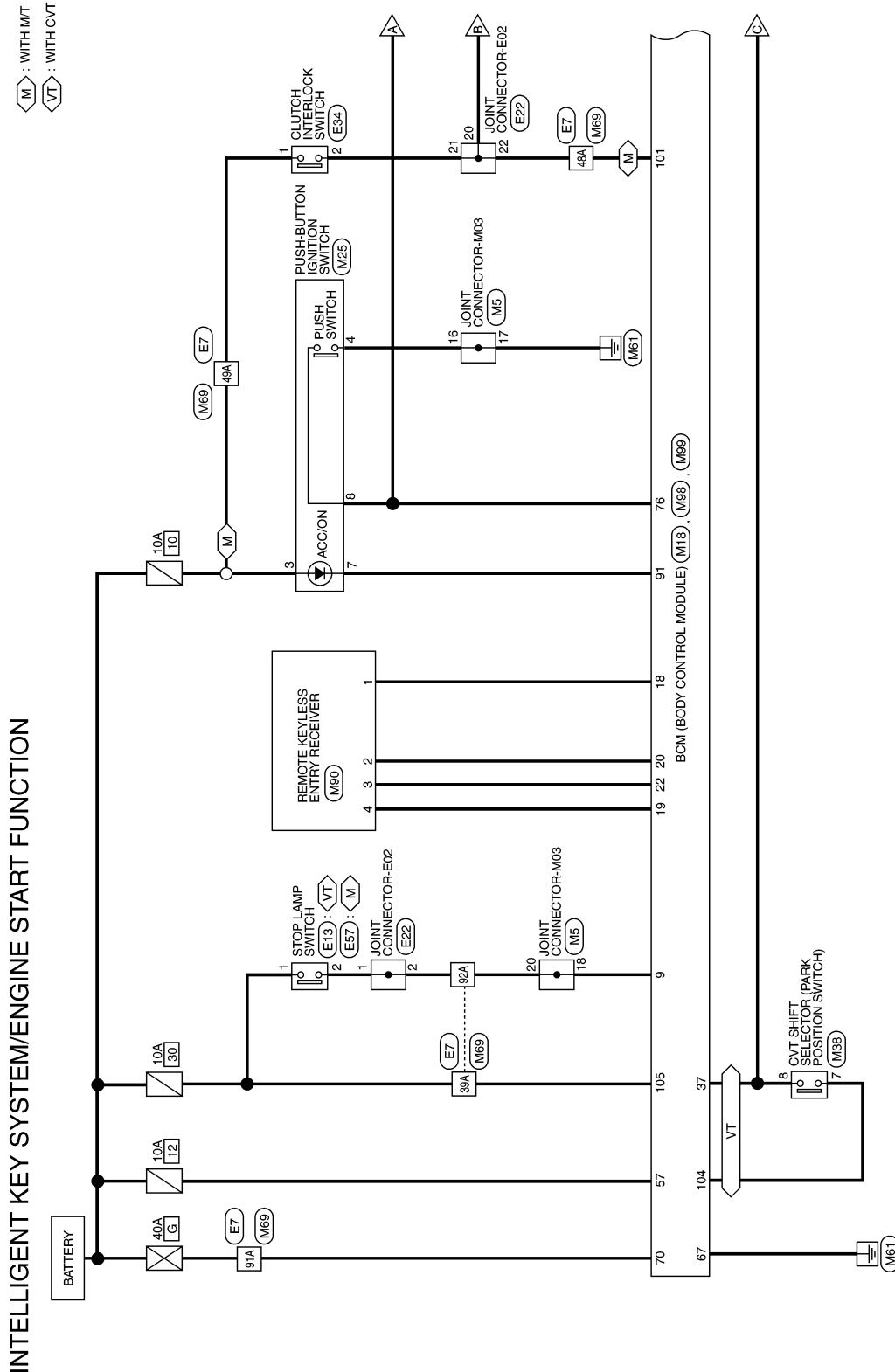
< WIRING DIAGRAM >

WIRING DIAGRAM

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

Wiring Diagram

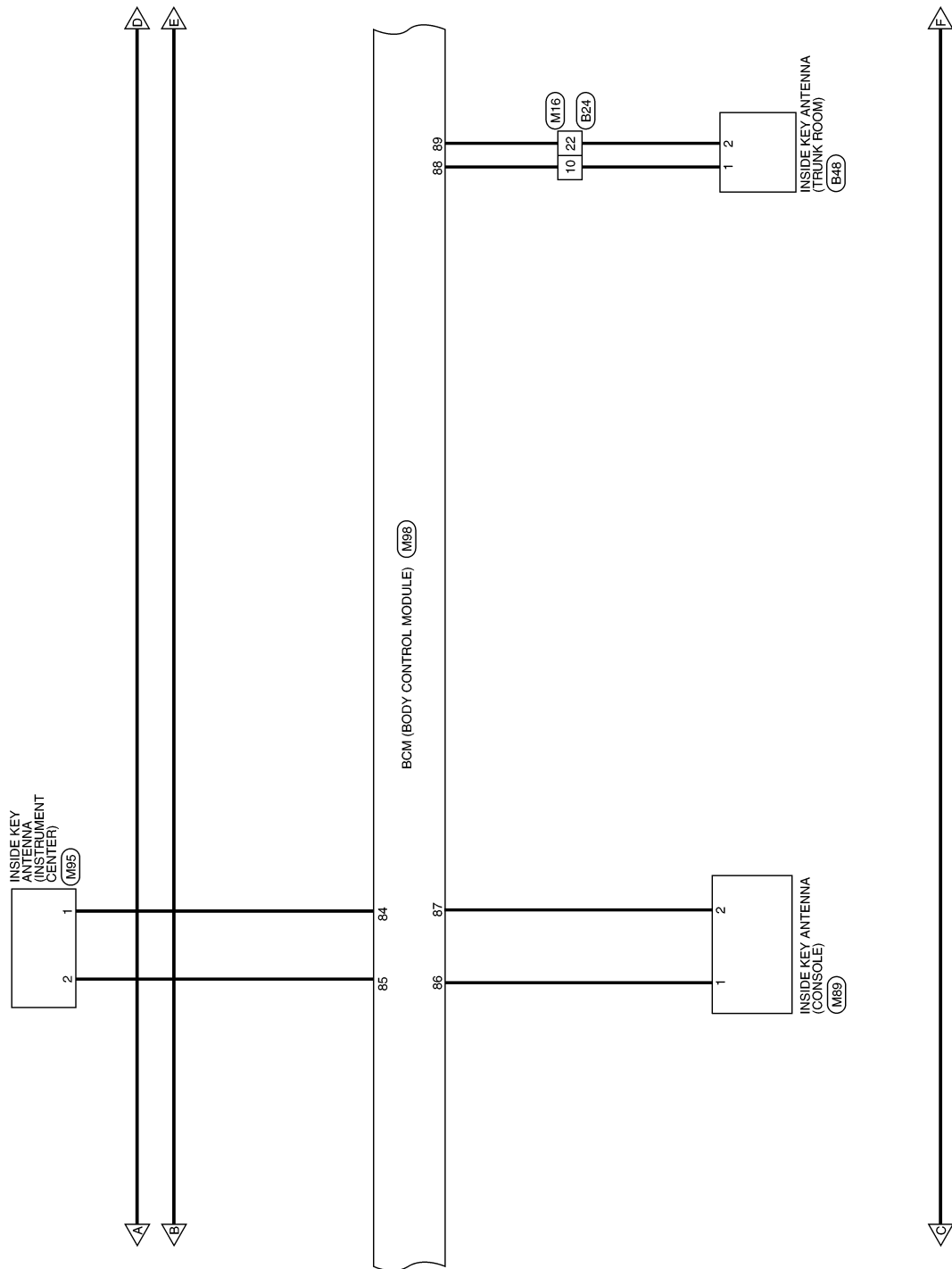
INFOID:000000009619367



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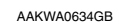
INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

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< WIRING DIAGRAM >



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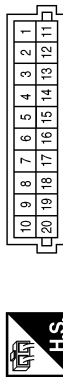


INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

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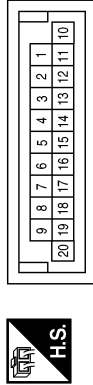
INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION CONNECTORS

Connector No.	M5
Connector Name	JOINT CONNECTOR-M03
Connector Color	BROWN



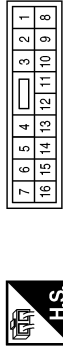
Terminal No.	Color of Wire	Signal Name
16	B	-
17	B	-
18	LG	-
20	R	-

Connector No.	M10
Connector Name	JOINT CONNECTOR-M01
Connector Color	BLUE



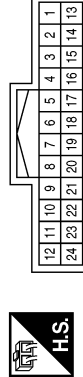
Terminal No.	Color of Wire	Signal Name
4	L	-
7	L	-
8	L	-
13	P	-
16	P	-
17	P	-

Connector No.	M15
Connector Name	WIRE TO WIRE
Connector Color	WHITE



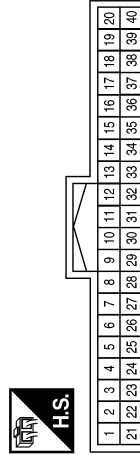
Terminal No.	Color of Wire	Signal Name
3	P	-

Connector No.	M16
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
10	V	-
15	W	-
16	BR	-
17	O	-
18	SB	-
22	LG	-

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



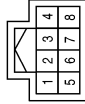
Terminal No.	Color of Wire	Signal Name
9	LG	BRAKE SW 1
18	V	KEYLESS TUNER AUTO LIGHT SENSOR GND
19	LG	KEYLESS TUNER POWER SUPPLY

Terminal No.	Color of Wire	Signal Name
20	G	KEYLESS TUNER SIGNAL
22	W	KEYLESS TUNER RSSI
23	R/Y	SECURITY INDICATOR OUTPUT
37	R	SHIFT P POSITION, PARKING POSITION SW
39	L	CAN-H
40	P	CAN-L

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

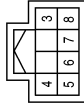
< WIRING DIAGRAM >

Connector No.	M38
Connector Name	CVT SHIFT SELECTOR
Connector Color	WHITE



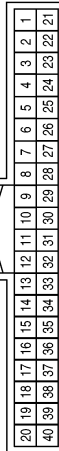
Terminal No.	Color of Wire	Signal Name
7	V	-
8	R	-

Connector No.	M25
Connector Name	PUSH-BUTTON IGNITION SWITCH
Connector Color	WHITE



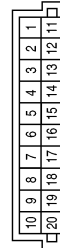
Terminal No.	Color of Wire	Signal Name
3	G	-
4	B	-
7	V	-
8	L	-

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	P	CAN-L
18	R/Y	SECURITY
21	B	GND (ILLUMINATION)
22	B	GND (POWER)
23	B	GND (CIRCUIT)
27	R/W	BAT

Connector No.	M51
Connector Name	JOINT CONNECTOR-M04
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	LG	-
12	R/W	-

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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

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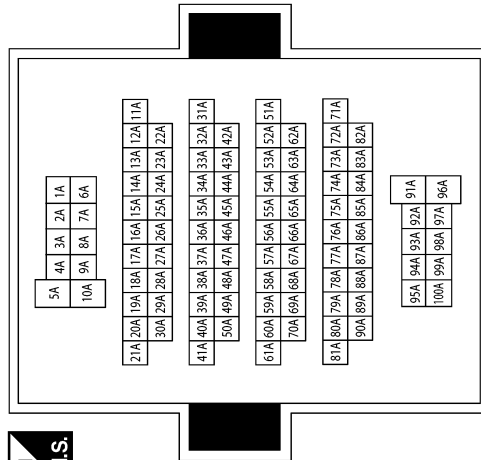
Connector No.	M89
Connector Name	INSIDE KEY ANTENNA (CONSOLE)
Connector Color	BLUE



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

Terminal No.	Color of Wire	Signal Name
1A	GR	-
20A	P	-
21A	L	-
39A	SB	-
41A	R/Y	-
43A	BR	-
47A	L	-
48A	V	-
49A	G	-
50A	BR	-
91A	G	-
92A	R	-
93A	O	-

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	WHITE

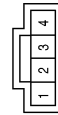


Connector No.	M95
Connector Name	INSIDE KEY ANTENNA (INSTRUMENT CENTER)
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
1	P	-
2	L	-

Connector No.	M90
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	V	-
2	G	-
3	W	-
4	LG	-

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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< WIRING DIAGRAM >

Connector No.	M99
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE



56	57	58	59	60	61	62	63	64
65	66	67	68	69	70			

Terminal No.	Color of Wire	Signal Name
86	G	ROOM ANTENNA 2 +
87	R	ROOM ANTENNA 2 -
88	V	ROOM ANTENNA 3 +
89	LG	ROOM ANTENNA 3 -
91	V	POWER POSITION LED (LOCK POSITION LED)
97	R/Y	STARTER RELAY OUTPUT
98	O	IGN RELAY OUTPUT (USM)
101	V	CLUTCH SW
102	BR	SHIFT N, P
104	V	AT DEVICE OUTPUT
105	SB	BRAKE SW2

Connector No.	M98
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

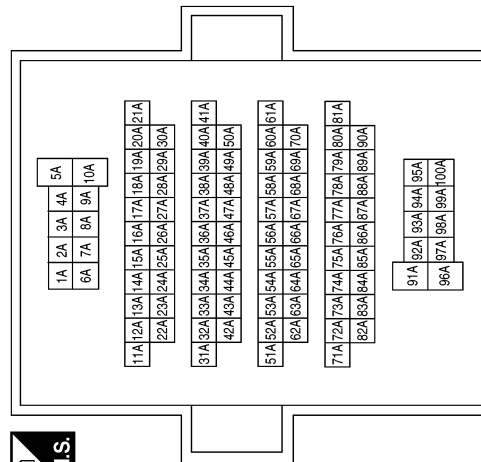


71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110

Terminal No.	Color of Wire	Signal Name
76	L	ENGINE START SW
84	P	ROOM ANTENNA 1 +
85	L	ROOM ANTENNA 1 -

Terminal No.	Color of Wire	Signal Name
1A	GR	-
20A	P	-
21A	L	-
39A	SB	-
41A	G	-
43A	R	-
47A	SB	-
48A	LG	-
49A	Y	-
50A	V	-
91A	Y	-
92A	LG	-
93A	L	-

Connector No.	E7
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Connector No.	M100
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



41	42	43	44	45	46	47	48	49
50	51	52	53	54	55			

Terminal No.	Color of Wire	Signal Name
43	P	DOOR SW BACK
45	O	DOOR SW (AS)
46	BR	DOOR SW (RR)
47	SB	DOOR SW (DR)
48	W	DOOR SW (RL)

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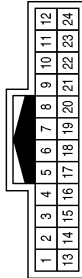
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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< WIRING DIAGRAM >

Connector No.	E8
Connector Name	WIRE TO WIRE
Connector Color	WHITE

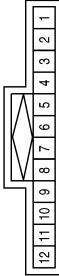
Terminal No.	Color of Wire	Signal Name
15	V	-

Connector No.	E13
Connector Name	STOP LAMP SWITCH (WITH CVT)
Connector Color	WHITE



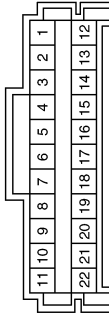

Terminal No.	Color of Wire	Signal Name
1	SB	-
2	LG	-

Connector No.	E14
Connector Name	JOINT CONNECTOR-E03
Connector Color	BLUE

Terminal No.	Color of Wire	Signal Name
1	P	-
5	P	-
8	L	-
12	L	-

Connector No.	E22
Connector Name	JOINT CONNECTOR-E02
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
1	LG	-
2	LG	-
20	R	-
21	V	-
22	LG	-

Connector No.	E34
Connector Name	CLUTCH INTERLOCK SWITCH
Connector Color	BROWN




Terminal No.	Color of Wire	Signal Name
1	Y	-
2	V	-

Connector No.	E41
Connector Name	STARTER RELAY
Connector Color	BLUE




Terminal No.	Color of Wire	Signal Name
1	G	-
2	LG	-
3	SB	-
5	L	-

AAKIA1269GB

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< WIRING DIAGRAM >

Connector No.	E44
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN



11	10	9
16	15	14
13	12	

Terminal No.	Color of Wire	Signal Name
13	R	CLUTCH I/L SW
15	LG	ST RLY COIL

Connector No.	E43
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK



5	4	3
8	7	6

Terminal No.	Color of Wire	Signal Name
3	SB	F/L IGNSW
6	R	STARTER MOTOR

Connector No.	E42
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK



1	2
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Terminal No.	Color of Wire	Signal Name
2	Y	F/L MAIN (+B2)

Connector No.	E47
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



84	83	82	81	80	79	78	77
92	91	90	89	88	87	86	85

Connector No.	E46
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



64	63	62	61	60	59	58	57	56	55	54	53
76	75	74	73	72	71	70	69	68	67	66	65

Connector No.	E45
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN



21	20	19	18	17
28	27	26	25	24
23	22			

Terminal No.	Color of Wire	Signal Name
80	R	DETENT SW
81	SB	PUSH START SW
90	L	IGN SIGNAL

Terminal No.	Color of Wire	Signal Name
60	B	GND (SIGNAL)
61	P	CAN-L
62	L	CAN-H

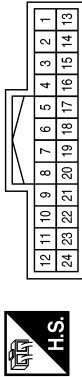
Terminal No.	Color of Wire	Signal Name
19	B	GND (POWER)
21	R	AT ECU (WITH CVT)

AAKIA1270GB

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< WIRING DIAGRAM >

Connector No.	F8
Connector Name	WIRE TO WIRE
Connector Color	WHITE



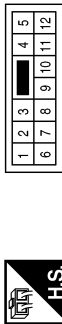
Terminal No.	Color of Wire	Signal Name
15	BR	—

Connector No.	E57
Connector Name	STOP LAMP SWITCH (WITH M/T)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	SB	—
2	LG	—

Connector No.	E55
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
6	GR	—
7	R	—

Connector No.	F52
Connector Name	TRANSMISSION RANGE SWITCH
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
7	R	—
10	BR	—

Connector No.	F42
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
40	BR	NPSW

Connector No.	F24
Connector Name	PARK/NEUTRAL POSITION (PNP) SWITCH
Connector Color	GREEN



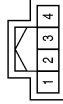
Terminal No.	Color of Wire	Signal Name
2	R	—
3	BR	—

AAKIA1271GB

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

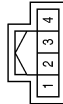
< WIRING DIAGRAM >

Connector No.	B8
Connector Name	FRONT DOOR SWITCH LH
Connector Color	WHITE



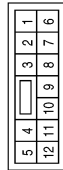
Terminal No.	3	Color of Wire	LG	Signal Name	—
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Connector No.	B6
Connector Name	REAR DOOR SWITCH LH
Connector Color	WHITE



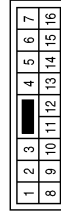
Terminal No.	3	Color of Wire	V	Signal Name	—
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Connector No.	F55
Connector Name	WIRE TO WIRE
Connector Color	GRAY



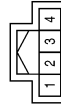
Terminal No.	6	Color of Wire	R	Signal Name	—
7	R				—

Connector No.	B23
Connector Name	WIRE TO WIRE
Connector Color	WHITE



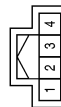
Terminal No.	3	Color of Wire	P	Signal Name	—
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Connector No.	B17
Connector Name	REAR DOOR SWITCH RH
Connector Color	WHITE



Terminal No.	3	Color of Wire	R	Signal Name	—
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Connector No.	B16
Connector Name	FRONT DOOR SWITCH RH
Connector Color	WHITE



Terminal No.	3	Color of Wire	L	Signal Name	—
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AAKIA1272GB

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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< WIRING DIAGRAM >

Connector No.	B52
Connector Name	WIRE TO WIRE
Connector Color	WHITE



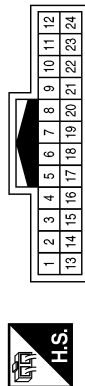
Terminal No.	Color of Wire	Signal Name
2	B	—

Connector No.	B48
Connector Name	INSIDE KEY ANTENNA (TRUNK ROOM)
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
1	V	—
2	LG	—

Connector No.	B24
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
10	V	—
15	V	—
16	R	—
17	L	—
18	LG	—
22	LG	—

Connector No.	D504
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	B	—

Connector No.	D503
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6	P	—

Connector No.	B53
Connector Name	WIRE TO WIRE
Connector Color	WHITE



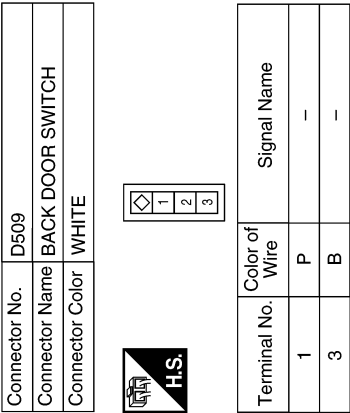
Terminal No.	Color of Wire	Signal Name
6	P	—

AAKIA1273GB

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< WIRING DIAGRAM >

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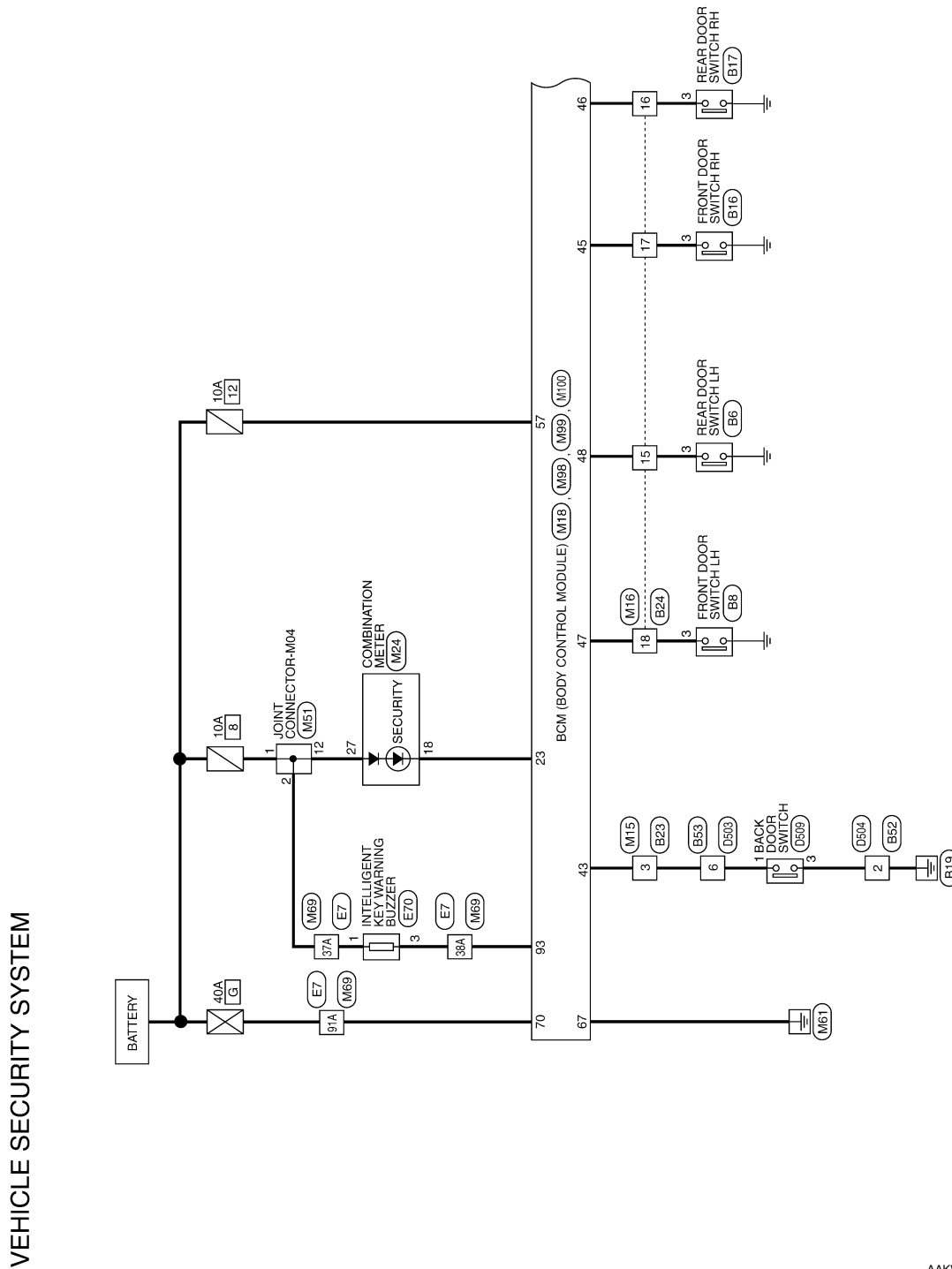
AAKIA1274GB

< WIRING DIAGRAM >

SECURITY CONTROL SYSTEM

Wiring Diagram

INFOID:0000000009016102



AAKWA0640GB

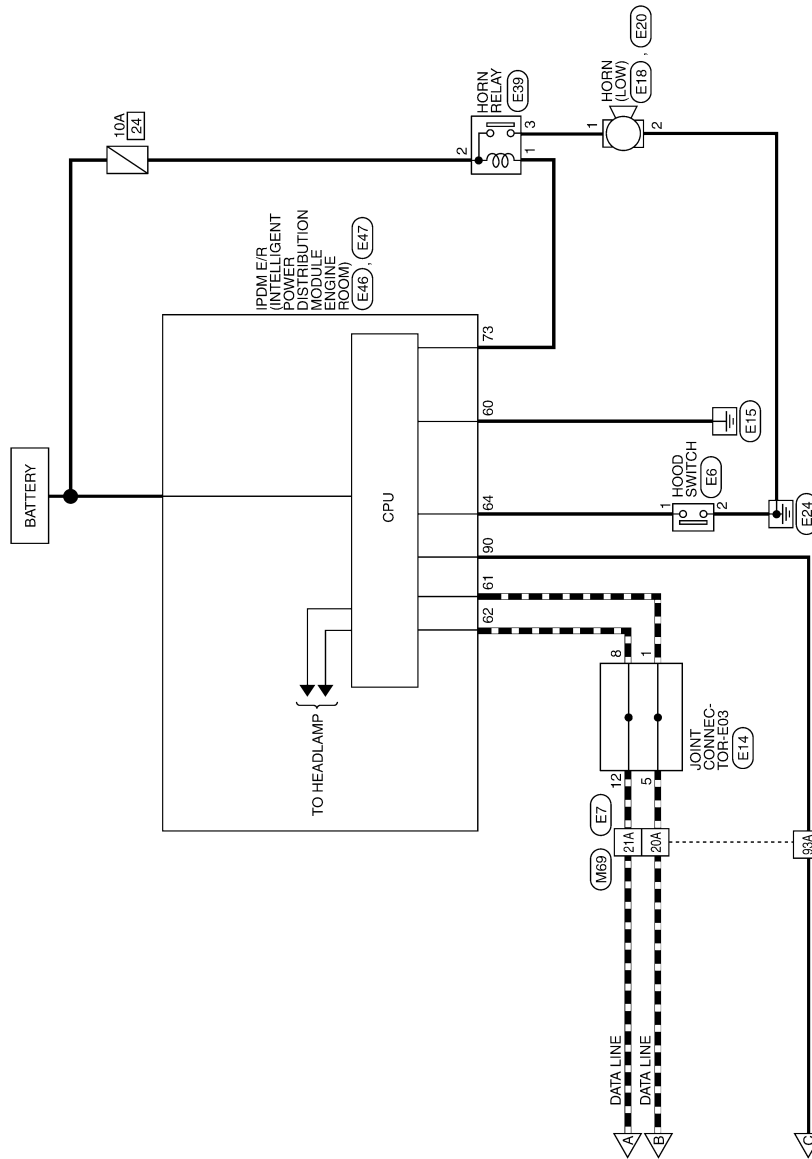
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SECURITY CONTROL SYSTEM

< WIRING DIAGRAM >



AAKWA0642GB

VEHICLE SECURITY SYSTEM CONNECTORS

Connector No.	M9
Connector Name	WIRE TO WIRE
Connector Color	WHITE

1	2	3	4	5
6	7	8	9	10
11	12			



Terminal No.	Color of Wire	Signal Name
9	B	-

Connector No.	M10
Connector Name	JOINT CONNECTOR-M01
Connector Color	BLUE

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



Terminal No.	Color of Wire	Signal Name
7	L	-
8	L	-
16	P	-
17	P	-

Connector No.	M15
Connector Name	WIRE TO WIRE
Connector Color	WHITE

7	6	5	4	3	2	1
16	15	14	13	12	11	10
9	8					



Terminal No.	Color of Wire	Signal Name
3	P	-

Connector No.	M16
Connector Name	WIRE TO WIRE
Connector Color	WHITE

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



Terminal No.	Color of Wire	Signal Name
15	W	-
16	BR	-
17	O	-
18	SB	-

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

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



Terminal No.	Color of Wire	Signal Name
7	W	KEY CYLINDER UNLOCK SW
8	GR	KEY CYLINDER LOCK SW
12	GR	CENTRAL DOOR LOCK SW
13	BR	CENTRAL DOOR UNLOCK SW

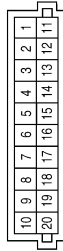
Terminal No.	Color of Wire	Signal Name
23	R/Y	SECURITY INDICATOR OUTPUT
39	L	CAN-H
40	P	CAN-L

AAKIA1286GB

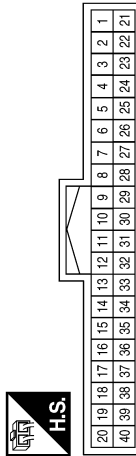
SECURITY CONTROL SYSTEM

< WIRING DIAGRAM >

Connector No.	M51
Connector Name	JOINT CONNECTOR-M04
Connector Color	GRAY



Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	V	-
12	R/W	-

Terminal No.	Color of Wire	Signal Name
18	R/Y	SECURITY
27	R/W	BAT

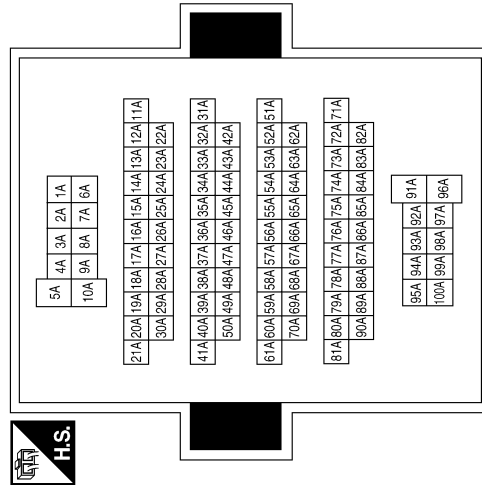
Connector No.	M81
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	BR	-
10	GR	-
11	B	-

Terminal No.	Color of Wire	Signal Name
20A	P	-
21A	L	-
37A	V	-
38A	R	-
91A	G	-
93A	O	-

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



AAKIA1287GB

SECURITY CONTROL SYSTEM

< WIRING DIAGRAM >

Connector No.	M99
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

56	57	58	59	60	61	62	63	64
65	66	67	68	69	70			



Terminal No.	Color of Wire	Signal Name
57	Y	BATTERY (FUSE)
67	B	GND
70	G	BATTERY (F/L)

Connector No.	M98
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110



Terminal No.	Color of Wire	Signal Name
93	R	SMART KEYLESS BUZZER OUTPUT
98	O	IGN RELAY OUTPUT 1 (USM)

Connector No.	M93
Connector Name	WIRE TO WIRE
Connector Color	WHITE

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



Terminal No.	Color of Wire	Signal Name
6	W	-
7	GR	-
18	GR	-
19	BR	-

Connector No.	E6
Connector Name	HOOD SWITCH
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	B	-

Connector No.	M100
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

41	42	43	44	45	46	47	48	49
50	51	52	53	54	55			



Terminal No.	Color of Wire	Signal Name
43	P	DOOR SW BACK
45	O	DOOR SW (AS)
46	BR	DOOR SW (RR)
47	SB	DOOR SW (DR)
48	W	DOOR SW (RL)

AAKIA1288GB

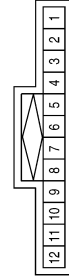
A B C D E F G H I J L M N O P

SEC

SECURITY CONTROL SYSTEM

< WIRING DIAGRAM >

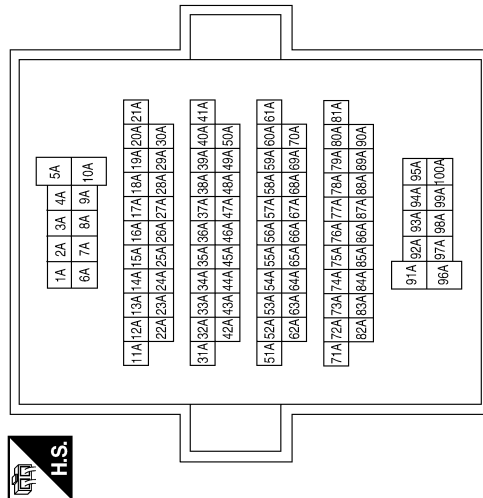
Connector No.	E14
Connector Name	JOINT CONNECTOR-E03
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
1	P	-
5	P	-
8	L	-
12	L	-

Terminal No.	Color of Wire	Signal Name
20A	P	-
21A	L	-
37A	W	-
38A	R	-
91A	Y	-
93A	L	-

Connector No.	E7
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Connector No.	E39
Connector Name	HORN RELAY
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	SB	-
2	L	-
3	G	-

Connector No.	E20
Connector Name	HORN (LOW)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
2	B	-

Connector No.	E18
Connector Name	HORN (LOW)
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	G	-

AAKIA1289GB

SECURITY CONTROL SYSTEM

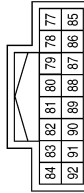
< WIRING DIAGRAM >

Connector No.	E70
Connector Name	INTELLIGENT KEY WARNING BUZZER
Connector Color	BROWN



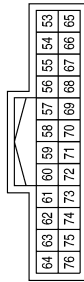
Terminal No.	Color of Wire	Signal Name
1	W	-
3	R	-

Connector No.	E47
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



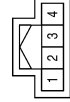
Terminal No.	Color of Wire	Signal Name
90	L	IGN SIGNAL

Connector No.	E46
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



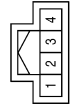
Terminal No.	Color of Wire	Signal Name
60	B	GND (SIGNAL)
61	P	CAN-L
62	L	CAN-H
64	LG	HOOD SW
73	SB	HORN RLY

Connector No.	B16
Connector Name	FRONT DOOR SWITCH RH
Connector Color	WHITE



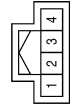
Terminal No.	Color of Wire	Signal Name
3	L	-

Connector No.	B8
Connector Name	FRONT DOOR SWITCH LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	LG	-

Connector No.	B6
Connector Name	REAR DOOR SWITCH LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	V	-

AAKIA1290GB

SECURITY CONTROL SYSTEM

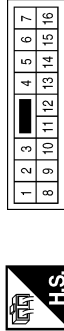
< WIRING DIAGRAM >

Connector No.	B17
Connector Name	REAR DOOR SWITCH RH
Connector Color	WHITE



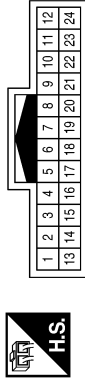
Terminal No.	Color of Wire	Signal Name
3	R	—

Connector No.	B23
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	P	—

Connector No.	B24
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
15	V	—
16	R	—
17	L	—
18	LG	—

Connector No.	B52
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	B	—

Connector No.	B53
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6	P	—

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



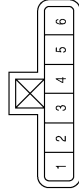
Terminal No.	Color of Wire	Signal Name
9	B	—

AAKIA1291GB

SECURITY CONTROL SYSTEM

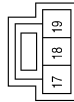
< WIRING DIAGRAM >

Connector No.	D14
Connector Name	FRONT DOOR LOCK ASSEMBLY LH
Connector Color	GRAY



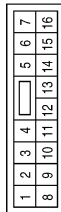
Terminal No.	Color of Wire	Signal Name
4	B	-
5	W	-
6	GR	-

Connector No.	D8
Connector Name	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
Connector Color	WHITE



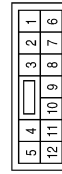
Terminal No.	Color of Wire	Signal Name
17	B	GND
18	GR	LOCK SW

Connector No.	D7
Connector Name	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
Connector Color	WHITE



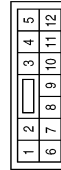
Terminal No.	Color of Wire	Signal Name
6	L	UNLOCK SW

Connector No.	D115
Connector Name	WIRE TO WIRE
Connector Color	WHITE



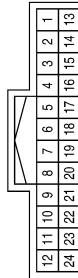
Terminal No.	Color of Wire	Signal Name
9	BR	-
10	GR	-
11	B	-

Connector No.	D105
Connector Name	POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	GR	-
2	BR	-
3	B	-

Connector No.	D16
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6	W	-
7	GR	-
18	GR	-
19	L	-

AAKIA1292GB

SECURITY CONTROL SYSTEM

< WIRING DIAGRAM >

Connector No.	D509
Connector Name	BACK DOOR SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	P	-
3	B	-

Connector No.	D504
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	B	-

Connector No.	D503
Connector Name	WIRE TO WIRE
Connector Color	WHITE



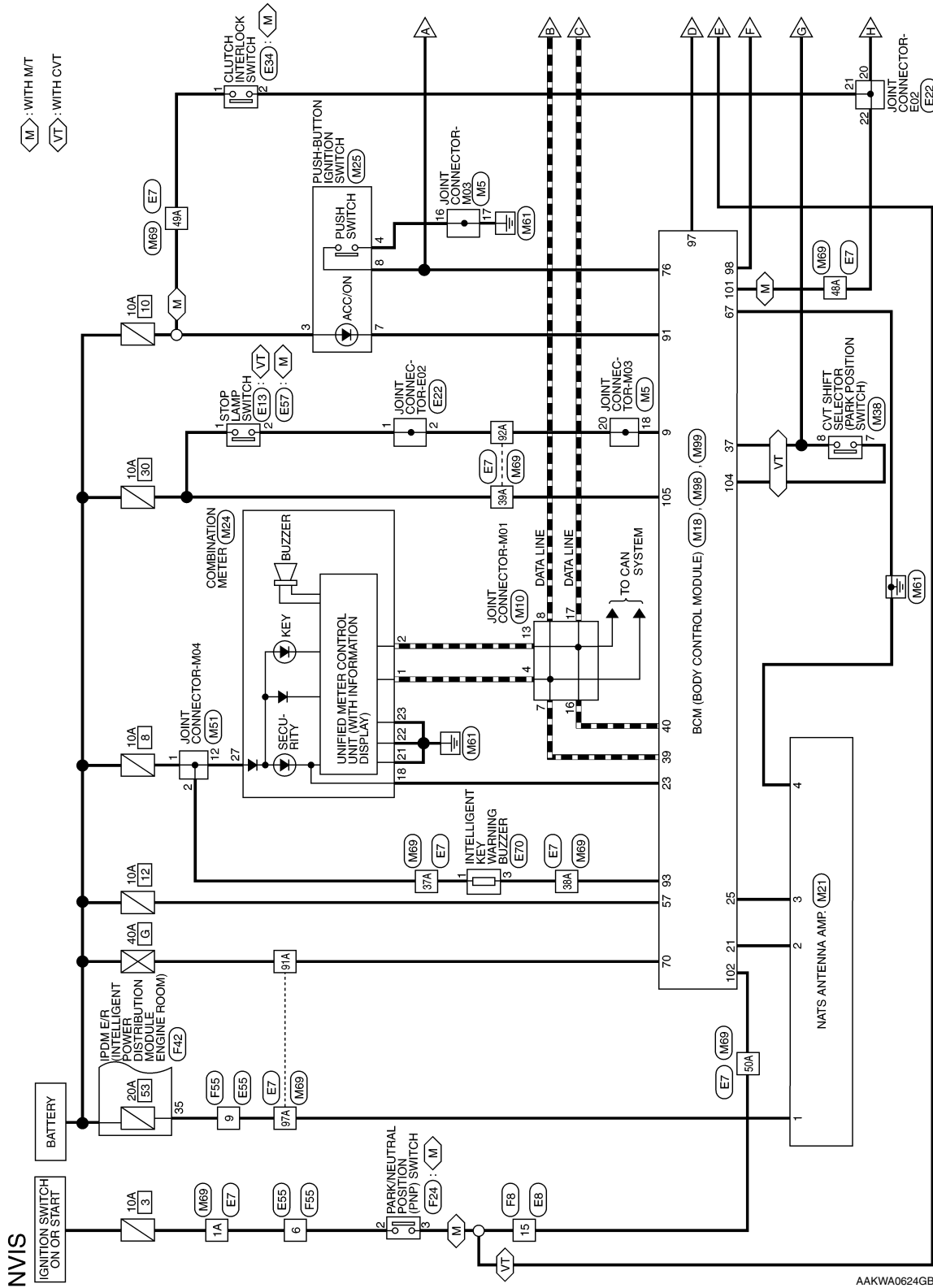
Terminal No.	Color of Wire	Signal Name
6	P	-

AAKIA1293GB

NVIS

Wiring Diagram

INFOID:000000009619368

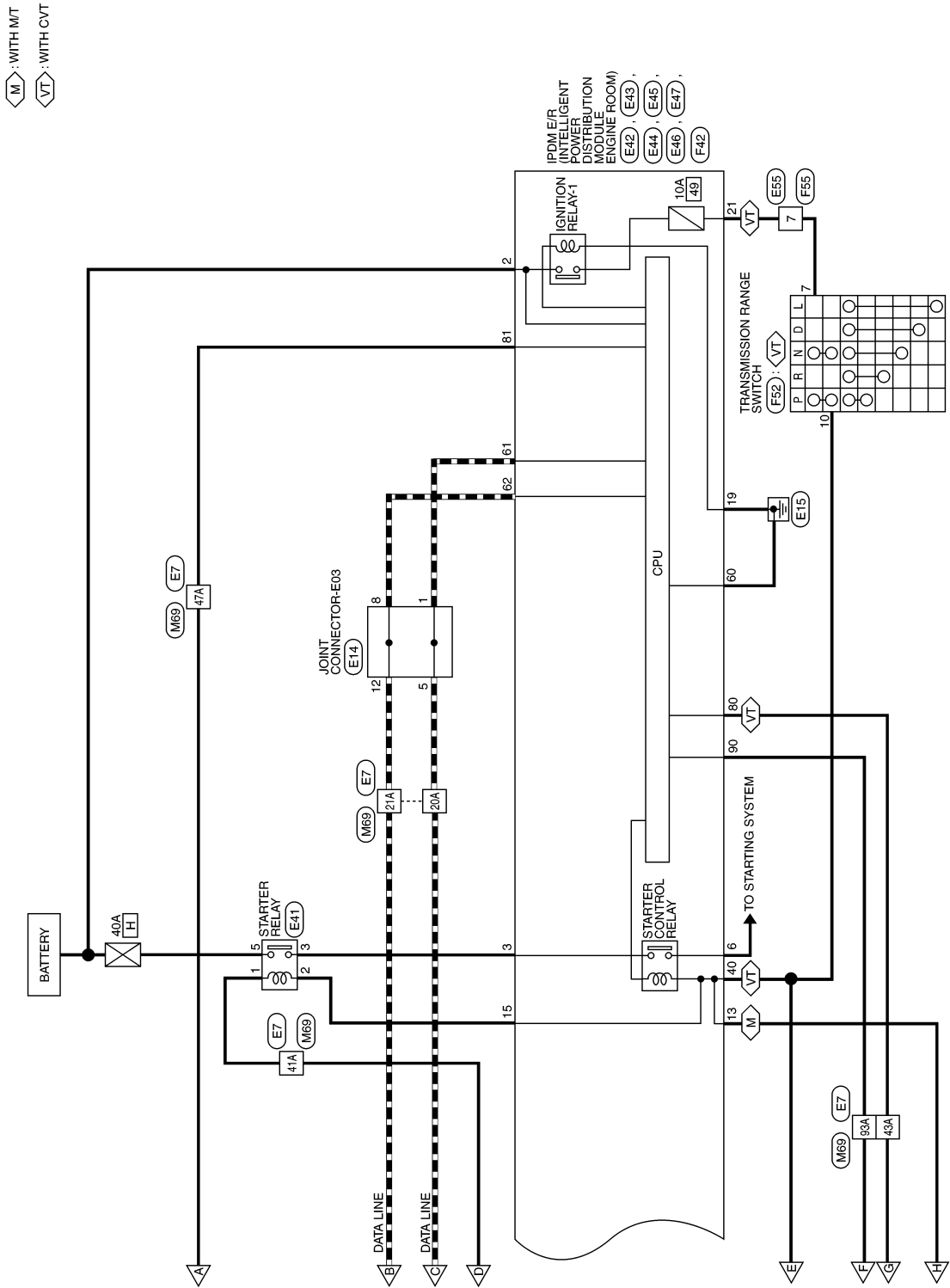


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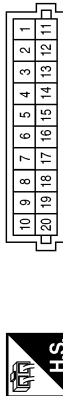
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AAKWA0625GB

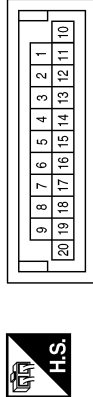
NVIS CONNECTORS

Connector No.	M5
Connector Name	JOINT CONNECTOR-M03
Connector Color	BROWN



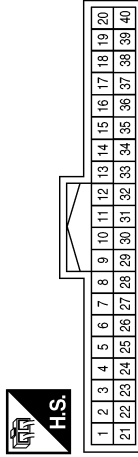
Terminal No.	Color of Wire	Signal Name
16	B	-
17	B	-
18	LG	-
20	R	-

Connector No.	M10
Connector Name	JOINT CONNECTOR-M01
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
4	L	-
7	L	-
8	L	-
13	P	-
16	P	-
17	P	-

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



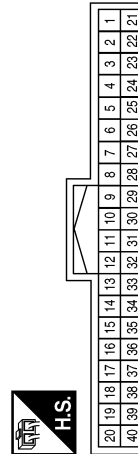
Terminal No.	Color of Wire	Signal Name
9	LG	BRAKE SW 1
21	P	IMMOBILIZER ONE WAY COMMUNICATION (CLOCK)
23	R/Y	SECURITY INDICATOR OUTPUT
25	LG	IMMOBILIZER TWO WAY COMMUNICATION
37	R	SHIFT P POSITION, PARKING POSITION SW
39	L	CAN-H
40	P	CAN-L

Connector No.	M21
Connector Name	NATS ANTENNA AMP.
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	BR	-
2	P	-
3	LG	-
4	B	-

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE

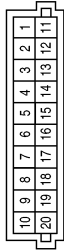


Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	P	CAN-L
18	R/Y	SECURITY
21	B	GND (ILLUMINATION)
22	B	GND (POWER)
23	B	GND (CIRCUIT)
27	R/W	BAT

AAKIA1258GB

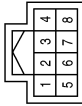
< WIRING DIAGRAM >

Connector No.	M51
Connector Name	JOINT CONNECTOR-M04
Connector Color	GRAY



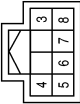
Terminal No.	Color of Wire	Signal Name
1	LG	-
2	V	-
12	R/W	-

Connector No.	M38
Connector Name	CVT SHIFT SELECTOR
Connector Color	WHITE



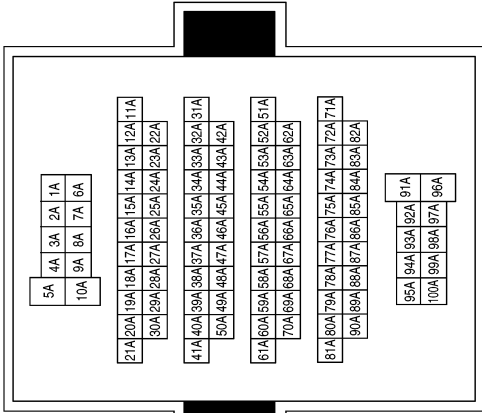
Terminal No.	Color of Wire	Signal Name
7	V	-
8	R	-

Connector No.	M25
Connector Name	PUSH-BUTTON IGNITION SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	G	-
4	B	-
7	V	-
8	L	-

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1A	GR	-
20A	P	-
21A	L	-
37A	V	-
38A	R	-
39A	SB	-
41A	R/Y	-
43A	BR	-
47A	L	-
48A	V	-
49A	G	-
50A	BR	-
91A	G	-
92A	R	-
93A	O	-
97A	BR	-

< WIRING DIAGRAM >

Connector No.	M99
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE



56	57	58	59	60	61	62	63	64
65	66	67	68	69	70			

Terminal No.	Color of Wire	Signal Name
57	Y	BATTERY (FUSE)
67	B	GND
70	G	BATTERY (F/L)

Terminal No.	Color of Wire	Signal Name
76	L	ENGINE START SW
91	V	POWER POSITION LED (LOCK POSITION LED)
93	R	SMART KEYLESS BUZZER OUTPUT
97	R/Y	STARTER RELAY OUTPUT
98	O	IGN RELAY OUTPUT1 (USM)
101	V	CLUTCH SW
102	BR	SHIFT N, P
104	V	AT DEVICE OUTPUT
105	SB	BRAKE SW2

Connector No.	M98
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE



71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110

Connector No.	E8
Connector Name	WIRE TO WIRE
Connector Color	WHITE

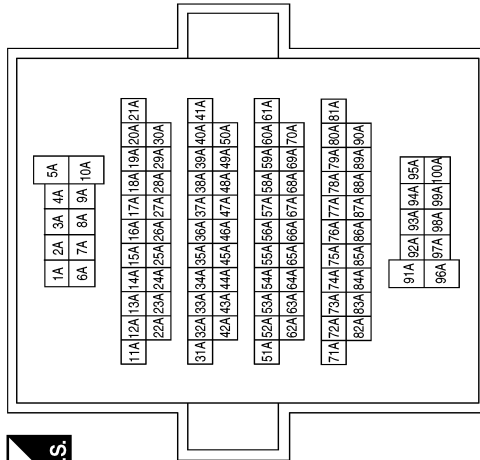


1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

Terminal No.	Color of Wire	Signal Name
15	V	-

Terminal No.	Color of Wire	Signal Name
1A	GR	-
20A	P	-
21A	L	-
37A	W	-
38A	R	-
39A	SB	-
41A	G	-
43A	R	-
47A	SB	-
48A	LG	-
49A	Y	-
50A	V	-
91A	Y	-
92A	LG	-
93A	L	-
97A	G/B	-

Connector No.	E7
Connector Name	WIRE TO WIRE
Connector Color	WHITE



AAKIA1260GB

< WIRING DIAGRAM >

Connector No.	E13
Connector Name	STOP LAMP SWITCH (WITH CVT)
Connector Color	WHITE



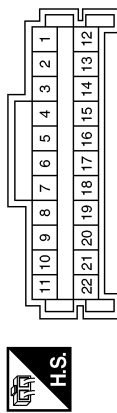
Terminal No.	Color of Wire	Signal Name
1	SB	-
2	LG	-

Connector No.	E14
Connector Name	JOINT CONNECTOR-E03
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
1	P	-
5	P	-
8	L	-
12	L	-

Connector No.	E22
Connector Name	JOINT CONNECTOR-E02
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	LG	-
2	LG	-
20	R	-
21	V	-
22	LG	-

Connector No.	E34
Connector Name	CLUTCH INTERLOCK SWITCH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	Y	-
2	V	-

Connector No.	E41
Connector Name	STARTER RELAY
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
1	G	-
2	LG	-
3	SB	-
5	L	-

Connector No.	E42
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
2	Y	F/L MAIN (+B2)

AAKIA1261GB

< WIRING DIAGRAM >

Connector No.	E45
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN

21	20	19	18	17
28	27	26	25	24
23	22			



Terminal No.	Color of Wire	Signal Name
19	B	GND (POWER)
21	R	AT ECU (WITH CVT)

Connector No.	E44
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN

11	10	9
16	15	14
13	12	



Terminal No.	Color of Wire	Signal Name
13	R	CLUTCH I/L SW
15	LG	ST RLY COIL

Connector No.	E43
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

5	4	3
8	7	6



Terminal No.	Color of Wire	Signal Name
3	SB	F/L IGNSW
6	R	STARTER MOTOR

Connector No.	E55
Connector Name	WIRE TO WIRE
Connector Color	GRAY

1	2	3	4	5
6	7	8	9	10
11	12			



Terminal No.	Color of Wire	Signal Name
6	GR	–
7	R	–
9	G/B	–

Connector No.	E47
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

84	83	82	81	80	79	78	77
92	91	90	89	88	87	86	85



Terminal No.	Color of Wire	Signal Name
80	R	DETENT SW
81	SB	PUSH START SW
90	L	IGN SIGNAL

Connector No.	E46
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

64	63	62	61	60	59	58	57	56	55	54	53
76	75	74	73	72	71	70	69	68	67	66	65

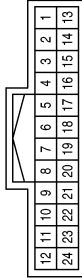


Terminal No.	Color of Wire	Signal Name
60	B	GND (SIGNAL)
61	P	CAN-L
62	L	CAN-H

AAKIA1262GB

< WIRING DIAGRAM >

Connector No.	F8
Connector Name	WIRE TO WIRE
Connector Color	WHITE

Terminal No.	15	Color of Wire	BR	Signal Name	—
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Connector No.	E70
Connector Name	INTELLIGENT KEY WARNING BUZZER
Connector Color	BROWN



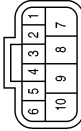

Terminal No.	1	Color of Wire	W	Signal Name	—
	3		R		—

Connector No.	E57
Connector Name	STOP LAMP SWITCH (WITH M/T)
Connector Color	BLACK



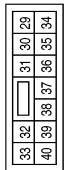

Terminal No.	1	Color of Wire	SB	Signal Name	—
	2		LG		—

Connector No.	F52
Connector Name	TRANSMISSION RANGE SWITCH
Connector Color	BLACK

Terminal No.	7	Color of Wire	R	Signal Name	—
	10		BR		—

Connector No.	F42
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

Terminal No.	35	Color of Wire	BR	Signal Name	ECM BAT
	40		BR		NPSW

Connector No.	F24
Connector Name	PARK/NEUTRAL POSITION (PNP) SWITCH
Connector Color	GREEN




Terminal No.	2	Color of Wire	R	Signal Name	—
	3		BR		—

AAKIA1263GB

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

Connector No.	F55
Connector Name	WIRE TO WIRE
Connector Color	GRAY

5	4	3	2	1
12	11	10	9	8
7	6			



Terminal No.	Color of Wire	Signal Name
6	R	-
7	R	-
9	BR	-

SEC

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

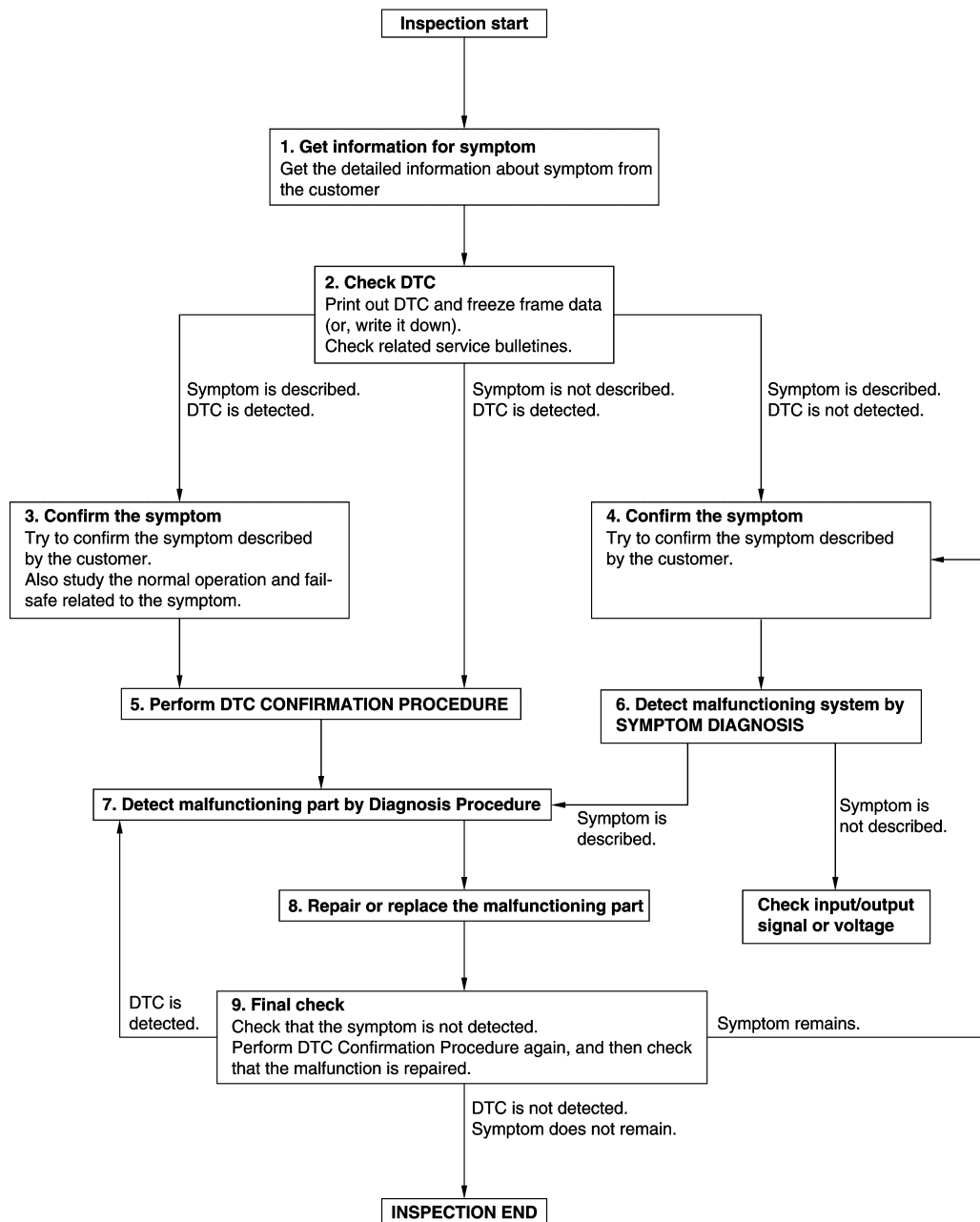
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:000000009016103

OVERALL SEQUENCE



JMKIA8652GB

DETAILED FLOW

Revision: April 2013

SEC-58

2014 Note

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

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-46, "DTC Inspection Priority Chart"](#) (BCM) or [PCS-20, "DTC Index"](#) (IPDM E/R) and determine trouble diagnosis order.

NOTE:

- Freeze frame data is useful if the DTC is not detected.
- Perform Component Function Check if DTC CONFIRMATION PROCEDURE is not included on Service Manual. This simplified check procedure is an effective alternative though DTC cannot be detected during this check.

If the result of Component Function Check is NG, it is the same as the detection of DTC by DTC CONFIRMATION PROCEDURE.

Is DTC detected?

YES >> GO TO 7.

NO >> Check 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

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

Inspect according to Diagnosis Procedure of the system.

Is malfunctioning part detected?

YES >> GO TO 8.

NO >> Check 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

< BASIC INSPECTION >

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT ECM

ECM : Description

INFOID:000000009016104

Performing the following procedure can automatically activate re-communication of ECM and BCM, but only when the ECM is replaced with a new one*.

*: New one means an ECM that has never been energized on-board.

(In this step, initialization procedure using CONSULT is not necessary)

NOTE:

- When the replaced ECM is not a brand new, the specified procedure (Initialization and registration) using CONSULT is necessary.
- If multiple keys are attached to the key holder, separate them before beginning work.
- Distinguish keys with unregistered key IDs from those with registered IDs.

ECM : Work Procedure

INFOID:000000009016105

1.PERFORM ECM RE-COMMUNICATING FUNCTION

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

>> GO TO 2.

2.PERFORM ADDITIONAL SERVICE WHEN REPLACING ECM

Refer to [EC-111, "Work Procedure"](#).

>> Inspection End.

SEC

P1610 LOCK MODE

< DTC/CIRCUIT DIAGNOSIS >

DTC/CIRCUIT DIAGNOSIS

P1610 LOCK MODE

Description

INFOID:000000009567408

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:000000009567409

DTC DETECTION LOGIC

NOTE:

If DTC P1610 is displayed with other DTC (for BCM or ENGINE), first perform the trouble diagnosis for other DTC.

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-62. "Diagnosis Procedure"](#).
NO >> Inspection End.

Diagnosis Procedure

INFOID:000000009567410

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, IMMUECM

< DTC/CIRCUIT DIAGNOSIS >

P1611 ID DISCORD, IMMUECM

DTC Logic

INFOID:000000009567411

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1611	ID DISCORD, IMMUECM	The ID verification results between BCM and ECM are invalid.	• 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-63, "Diagnosis Procedure"](#).
NO >> Inspection End.

Diagnosis Procedure

INFOID:000000009567412

1.PERFORM INITIALIZATION

Perform initialization of BCM and registration of all Intelligent Keys using CONSULT. Refer to the CONSULT Immobilizer mode and follow the on-screen instructions.

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-63, "DTC Logic"](#).

Is DTC detected?

- YES >> GO TO 3.
NO >> Inspection End

3.REPLACE BCM

1. Replace BCM. Refer to [BCS-67, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT. Refer to the CONSULT Immobilizer mode and follow the on-screen instructions.

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

- YES >> Inspection End.
NO >> GO TO 4.

4.REPLACE ECM

1. Replace ECM.
Refer to [EC-338, "Removal and Installation"](#).
2. Perform "ADDITIONAL SERVICE WHEN REPLACING ECM".
Refer to [EC-111, "Work Procedure"](#).

>> Inspection End.

P1612 CHAIN OF ECM-IMMU

< DTC/CIRCUIT DIAGNOSIS >

P1612 CHAIN OF ECM-IMMU

DTC Logic

INFOID:000000009567413

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-57, "DTC Logic"](#).
- If DTC P1612 is displayed with DTC U1010 (for BCM), first perform the trouble diagnosis for DTC U1010. Refer to [BCS-58, "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-64, "Diagnosis Procedure"](#).
NO >> Inspection End.

Diagnosis Procedure

INFOID:000000009567414

1.REPLACE BCM

1. Replace BCM. Refer to [BCS-67, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT. Refer to the CONSULT Immobilizer mode and follow the on-screen instructions.

Does the engine start?

- YES >> Inspection End.
NO >> GO TO 2.

2.REPLACE ECM

1. Replace ECM.
Refer to [EC-338, "Removal and Installation"](#).
2. Perform "ADDITIONAL SERVICE WHEN REPLACING ECM".
Refer to [EC-111, "Work Procedure"](#).

>> Inspection End.

B2192 ID DISCORD, IMMU-ECM

< DTC/CIRCUIT DIAGNOSIS >

B2192 ID DISCORD, IMMU-ECM

DTC Logic

INFOID:000000009567415

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-65, "Diagnosis Procedure"](#).
NO >> Inspection End.

Diagnosis Procedure

INFOID:000000009567416

1.PERFORM INITIALIZATION

Perform initialization of BCM and registration of all Intelligent Keys using CONSULT. Refer to the CONSULT Immobilizer mode and follow the on-screen instructions.

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-DIAGNOSIS 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-65, "DTC Logic"](#).

Is DTC detected?

- YES >> GO TO 3.
NO >> Inspection End

3.REPLACE BCM

1. Replace BCM. Refer to [BCS-67, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT. Refer to the CONSULT Immobilizer mode and follow the on-screen instructions.

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

- YES >> Inspection End.
NO >> GO TO 4.

4.REPLACE ECM

1. Replace ECM.
Refer to [EC-338, "Removal and Installation"](#).
2. Perform "ADDITIONAL SERVICE WHEN REPLACING ECM".
Refer to [EC-111, "Work Procedure"](#).

>> Inspection End.

B2193 CHAIN OF ECM-IMMU

< DTC/CIRCUIT DIAGNOSIS >

B2193 CHAIN OF ECM-IMMU

DTC Logic

INFOID:000000009567417

DTC DETECTION LOGIC

NOTE:

- If DTC B2193 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-57, "DTC Logic"](#).
- If DTC B2193 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-58, "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-66, "Diagnosis Procedure"](#).
NO >> Inspection End.

Diagnosis Procedure

INFOID:000000009567418

1.REPLACE BCM

1. Replace BCM. Refer to [BCS-67, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT. Refer to the CONSULT Immobilizer mode and follow the on-screen instructions.

Does the engine start?

- YES >> Inspection End.
NO >> GO TO 2.

2.REPLACE ECM

1. Replace ECM.
Refer to [EC-338, "Removal and Installation"](#).
2. Perform "ADDITIONAL SERVICE WHEN REPLACING ECM".
Refer to [EC-111, "Work Procedure"](#).

>> Inspection End.

B2195 ANTI-SCANNING

< DTC/CIRCUIT DIAGNOSIS >

B2195 ANTI-SCANNING

DTC Logic

INFOID:000000009567419

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-67, "Diagnosis Procedure"](#).
NO >> Inspection End.

Diagnosis Procedure

INFOID:000000009567420

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-67, "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-67, "DTC Logic"](#).

Is DTC detected?

- YES >> GO TO 4.
NO >> Inspection End.

4.REPLACE BCM

1. Replace BCM. Refer to [BCS-67, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT. Refer to the CONSULT Immobilizer mode and follow the on-screen instructions.

>> Inspection End.

B2198 NATS ANTENNA AMP.

< DTC/CIRCUIT DIAGNOSIS >

B2198 NATS ANTENNA AMP.

DTC Logic

INFOID:000000009567424

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. • BCM

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-68, "Diagnosis Procedure"](#).

NO >> Inspection End.

Diagnosis Procedure

INFOID:000000009567425

Regarding Wiring Diagram information, refer to [SEC-49, "Wiring Diagram"](#).

1.CHECK FUSE

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

Signal name	Fuse No.
Battery power supply	53 (20 A)

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the blown fuse after repairing the cause of blowing.

2.CHECK NATS ANTENNA AMP. POWER SUPPLY

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

(+)		(-)	Voltage (V) (Approx.)
NATS antenna amp.			
Connector	Terminal		
M21	1	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

3.CHECK NATS ANTENNA AMP. POWER SUPPLY CIRCUIT

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

B2198 NATS ANTENNA AMP.

< DTC/CIRCUIT DIAGNOSIS >

IPDM E/R		NATS antenna amp.		Continuity
Connector	Terminal	Connector	Terminal	
F42	35	M21	1	Yes

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-30, "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		
M21	4		Yes

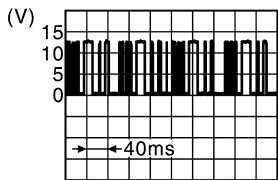
Is the inspection result normal?

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) (Approx.)
Connector	Terminal			
M21	2	Ground	IntelligentKey: Intelligent Key battery is removed Brake pedal: Depressed NOTE: Waveform varies each time when brake pedal is depressed	
			Brake pedal: Not depressed	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. harness connector and BCM connector.

NATS antenna amp.		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M21	2	M18	21	Yes

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

NATS antenna amp.		Ground	Continuity
Connector	Terminal		
M21	2		No

Is the inspection result normal?

YES >> GO TO 9.

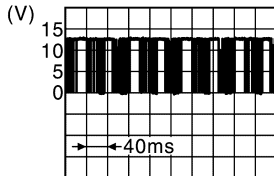
NO >> Repair or replace harness.

7. CHECK NATS ANTENNA AMP. COMMUNICATION SIGNAL 2

B2198 NATS ANTENNA AMP.

< DTC/CIRCUIT DIAGNOSIS >

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

(+)		(-)	Condition		Voltage (V) (Approx.)
NATS antenna amp.					
Connector	Terminal				
M21	3	Ground	IntelligentKey: Intelligent Key battery is removed	Brake pedal: Depressed NOTE: Waveform varies each time when brake pedal is depressed	(V)  JMK1A6233JP
				Brake pedal: Not depressed	12

Is the inspection result normal?

- YES >> Replace NATS antenna amp. Refer to [SEC-121, "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	
M21	3	M18	25	Yes

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

NATS antenna amp.		Ground	Continuity
Connector	Terminal		
M21	3		No

Is the inspection result normal?

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

9. REPLACE BCM

1. Replace BCM. Refer to [BCS-67, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT. Refer to the CONSULT Immobilizer mode and follow the on-screen instructions.

>> Inspection End

B2555 STOP LAMP

< DTC/CIRCUIT DIAGNOSIS >

B2555 STOP LAMP

DTC Logic

INFOID:000000009567426

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2555	STOP LAMP CIRCUIT	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. 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:000000009567427

Regarding Wiring Diagram information, refer to [SEC-24, "Wiring Diagram"](#).

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		
M98	105	Ground	Battery voltage

Is the inspection normal?

- YES >> GO TO 2.
NO-1 >> Check 10 A fuse [No. 30, 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		
E13 (CVT)	1	Ground	Battery voltage
E57 (MT)			

Is the inspection result normal?

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

B2555 STOP LAMP

< DTC/CIRCUIT DIAGNOSIS >

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				
M18	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-67. "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT. Refer to the CONSULT Immobilizer mode and follow the on-screen instructions.

>> 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	
E13 (CVT)	2	M18	9	Yes
E57 (MT)				

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

Stop lamp switch		Ground	Continuity
Connector	Terminal		No
E13 (CVT)	2		
E57 (MT)			

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

6.CHECK STOP LAMP SWITCH

Refer to [SEC-72. "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 7.

NO >> Replace stop lamp switch. Refer to [BR-19. "Exploded View"](#).

7.CHECK INTERMITTENT INCIDENT

Refer to [GI-41. "Intermittent Incident"](#).

>> Inspection End.

Component Inspection

INFOID:000000009567428

1.CHECK STOP LAMP SWITCH

1. Turn ignition switch OFF.

B2555 STOP LAMP

< DTC/CIRCUIT DIAGNOSIS >

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	No
			Depressed	Yes

Is the inspection result normal?

- YES >> Inspection End.
- NO >> Replace stop lamp switch. Refer to [BR-19. "Exploded View"](#).

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B2556 PUSH-BUTTON IGNITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

B2556 PUSH-BUTTON IGNITION SWITCH

DTC Logic

INFOID:000000009567429

DTC DETECTION LOGIC

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press push-button ignition switch under the following condition.
 - Brake pedal: Not depressed
2. Release push-button ignition switch and wait 100 seconds or more.
3. Check DTC in Self Diagnostic Result mode of BCM using CONSULT.

Is DTC detected?

YES >> Go to [SEC-74. "Diagnosis Procedure"](#).

NO >> Inspection End.

Diagnosis Procedure

INFOID:000000009567430

Regarding Wiring Diagram information, refer to [SEC-24. "Wiring Diagram"](#).

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		
M25	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	
M25	8	M98	76	Yes

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

Push-button ignition switch		Ground	Continuity
Connector	Terminal		
M25	8		No

B2556 PUSH-BUTTON IGNITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

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

3.REPLACE BCM

1. Replace BCM. Refer to [BCS-67. "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT. Refer to the CONSULT Immobilizer mode and follow the on-screen instructions.

>> 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		
M25	4		Yes

Is the inspection result normal?

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

5.CHECK PUSH-BUTTON IGNITION SWITCH

Refer to [SEC-75. "Component Inspection"](#).

Is the inspection result normal?

- YES >> GO TO 6.
NO >> Replace push-button ignition switch. Refer to [SEC-122. "Removal and Installation"](#).

6.CHECK INTERMITTENT INCIDENT

Refer to [GI-41. "Intermittent Incident"](#).

>> Inspection End.

Component Inspection

INFOID:000000009567431

SEC

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				
4	8	Push-button ignition switch	Pressed	Yes
			Not pressed	No

Is the inspection result normal?

- YES >> Inspection End.
NO >> Replace push-button ignition switch. Refer to [SEC-122. "Removal and Installation"](#).

B2557 VEHICLE SPEED

< DTC/CIRCUIT DIAGNOSIS >

B2557 VEHICLE SPEED

DTC Logic

INFOID:000000009567432

DTC DETECTION LOGIC

NOTE:

- If DTC B2557 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-57, "DTC Logic"](#).
- If DTC B2557 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-58, "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-76, "Diagnosis Procedure"](#).
NO >> Inspection End.

Diagnosis Procedure

INFOID:000000009567433

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-26, "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-20, "DTC Index"](#).
NO >> GO TO 3.

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-41, "Intermittent Incident"](#).

>> Inspection End.

B2601 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

B2601 SHIFT POSITION

DTC Logic

INFOID:000000009567434

DTC DETECTION LOGIC

NOTE:

- If DTC B2601 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-57, "DTC Logic"](#).
- If DTC B2601 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-58, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2601	SHIFT P SIGNAL	When there is a difference between P range signal from CVT shift selector (park position 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 (park position switch) circuit is open or shorted.] • IPDM E/R • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Shift the selector lever to the P position.
2. Turn ignition switch ON and wait 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-77, "Diagnosis Procedure"](#).
NO >> Inspection End.

Diagnosis Procedure

INFOID:000000009567435

Regarding Wiring Diagram information, refer to [SEC-24, "Wiring Diagram"](#).

1.CHECK CVT SHIFT SELECTOR CIRCUIT (BCM)

1. Turn ignition switch OFF.
2. Disconnect CVT shift selector (park position switch) connector.
3. Disconnect BCM connector.
4. Check continuity between CVT shift selector (park position switch) harness connector and BCM harness connector.

CVT shift selector (park position switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M38	8	M18	37	Yes

5. Check continuity between CVT shift selector (park position switch) harness connector and ground.

CVT shift selector (park position switch)		Ground	Continuity
Connector	Terminal		
M38	8		No

Is the inspection result normal?

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

B2601 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

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

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

CVT shift selector (park position switch)		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M38	8	E47	80	Yes

Is the inspection result normal?

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

3. REPLACE BCM

1. Replace BCM. Refer to [BCS-67. "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT. Refer to the CONSULT Immobilizer mode and follow the on-screen instructions.
3. Perform DTC CONFIRMATION PROCEDURE for DTC B2601. Refer to [SEC-77. "DTC Logic"](#).

Is DTC B2601 detected again?

- YES >> Replace IPDM E/R. Refer to [PCS-30. "Removal and Installation"](#).
NO >> Inspection End.

B2602 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

B2602 SHIFT POSITION

DTC Logic

INFOID:000000009567436

DTC DETECTION LOGIC

NOTE:

- If DTC B2602 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-57, "DTC Logic"](#).
- If DTC B2602 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-58, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2602	SHIFT P DIAG	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 (The CAN communication line is open or shorted.) • Harness or connectors [CVT shift selector (park position switch) circuit is open or shorted.] • CVT shift selector (park position switch) • Combination meter

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-79, "Diagnosis Procedure"](#).

NO >> Inspection End.

Diagnosis Procedure

INFOID:000000009567437

Regarding Wiring Diagram information, refer to [SEC-24, "Wiring Diagram"](#).

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-26, "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-20, "DTC Index"](#).

NO >> GO TO 3.

3.CHECK CVT SHIFT SELECTOR POWER SUPPLY

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

B2602 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

(+)		(-)	Voltage (V) (Approx.)
CVT shift selector (park position switch)			
Connector	Terminal		
M38	7	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 (park position switch) harness connector and BCM harness connector.

CVT shift selector (park position switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M38	7	M98	104	Yes

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

CVT shift selector (park position switch)		Ground	Continuity
Connector	Terminal		
M38	7		No

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

5. REPLACE BCM

1. Replace BCM. Refer to [BCS-67, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT. Refer to the CONSULT Immobilizer mode and follow the on-screen instructions.

>> Inspection End.

6. CHECK CVT SHIFT SELECTOR CIRCUIT

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

CVT shift selector (park position switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M38	8	M18	37	Yes

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

CVT shift selector (park position switch)		Ground	Continuity
Connector	Terminal		
M38	8		No

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness.

7. CHECK CVT SHIFT SELECTOR (PARK POSITION SWITCH)

Refer to [SEC-81, "Component Inspection"](#).

Is the inspection result normal?

B2602 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

YES >> GO TO 8.

NO >> Replace CVT shift selector. Refer to [TM-227, "Removal and Installation"](#).

8.CHECK INTERMITTENT INCIDENT

Refer to [GI-41, "Intermittent Incident"](#).

>> Inspection End.

Component Inspection

INFOID:0000000009567438

1.CHECK CVT SHIFT SELECTOR (PARK POSITION SWITCH)

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

CVT shift selector (park position switch)		Condition		Continuity
Terminal				
7	8	Selector lever: P position	Selector button: Released	No
			Selector button: Pressed	Yes
		Selector lever: Other than P position		

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace CVT shift selector. Refer to [TM-227, "Removal and Installation"](#).

SEC

B2603 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

B2603 SHIFT POSITION

DTC Logic

INFOID:000000009567439

DTC DETECTION LOGIC

NOTE:

- If DTC B2603 is displayed with DTC B2601, first perform the trouble diagnosis for DTC B2601. Refer to [SEC-77, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible causes
B2603	SHIFT POSITION	BCM detects the following status when ignition switch is in the ON position. • Transmission range switch signal: approx. 0 V • CVT shift selector (park position switch) signal: approx. 0 V	• Harness or connector [CVT shift selector (park position switch) circuit is open or shorted.] • Harness or connectors (Transmission range switch circuit is open or shorted.) • CVT shift selector (park position 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-82, "Diagnosis Procedure"](#).
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE 2

1. Shift the selector lever to the position other than P and N, 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-82, "Diagnosis Procedure"](#).
NO >> Inspection End.

Diagnosis Procedure

INFOID:000000009567440

Regarding Wiring Diagram information, refer to [SEC-24, "Wiring Diagram"](#).

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

Signal name	Fuse No.
Ignition power supply	49 (10 A)

Is the inspection result normal?

B2603 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

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

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) (Approx.)
Transmission range switch			
Connector	Terminal		
F52	7	Ground	Battery voltage

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	
F52	7	E45	21	Yes

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-30. "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				
M98	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	
F52	10	M98	102	Yes

Is the inspection result normal?

B2603 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

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

7. CHECK TRANSMISSION RANGE SWITCH

Refer to [SEC-85. "Component Inspection \(Transmission Range Switch\)".](#)

Is the inspection result normal?

- YES >> GO TO 12.
NO >> Replace transmission range switch.

8. CHECK CVT SHIFT SELECTOR POWER SUPPLY

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

(+)		(-)	Voltage (V) (Approx.)
CVT shift selector (park position switch)			
Connector	Terminal		
M38	7	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 (park position switch) harness connector and BCM harness connector.

CVT shift selector (park position switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M38	7	M98	104	Yes

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

CVT shift selector (park position switch)		Ground	Continuity
Connector	Terminal		
M38	7		No

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 (park position switch) harness connector and BCM harness connector.

CVT shift selector (park position switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M38	8	M18	37	Yes

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

CVT shift selector (park position switch)		Ground	Continuity
Connector	Terminal		
M38	8		No

Is the inspection result normal?

B2603 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

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

11.CHECK CVT SHIFT SELECTOR (PARK POSITION SWITCH)

Refer to [SEC-85. "Component Inspection \[CVT Shift Selector \(Park Position Switch\)\]"](#).

Is the inspection result normal?

- YES >> GO TO 13.
NO >> Replace CVT shift selector. Refer to [TM-227. "Removal and Installation"](#).

12.CHECK INTERMITTENT INCIDENT

Refer to [GI-41. "Intermittent Incident"](#).

>> Inspection End.

13.REPLACE BCM

1. Replace BCM. Refer to [BCS-67. "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT. Refer to the CONSULT Immobilizer mode and follow the on-screen instructions.

>> Inspection End.

Component Inspection (Transmission Range Switch)

INFOID:0000000009567441

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			
7	10	P or N position	Yes
		Other than above	No

Is the inspection result normal?

- YES >> Inspection End
NO >> Replace transmission range switch.

Component Inspection [CVT Shift Selector (Park Position Switch)]

INFOID:0000000009567442

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 (park position switch) terminals.

CVT shift selector (detention switch)		Condition		Continuity
Terminal				
7	8	Selector lever: P position	Selector button: Released	No
			Selector button: Pressed	Yes
		Selector lever: Other than P position		

Is the inspection result normal?

- YES >> Inspection End.
NO >> Replace CVT shift selector. Refer to [TM-227. "Removal and Installation"](#).

B2604 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

B2604 SHIFT POSITION

DTC Logic

INFOID:000000009567443

DTC DETECTION LOGIC

NOTE:

- If DTC B2604 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-57, "DTC Logic"](#).
- If DTC B2604 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-58, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2604	SHIFT PN DIAG CAN	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 (The CAN communication line is open or shorted.) • Harness or connectors (Transmission range switch circuit is open or shorted.) • TCM • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

- YES >> Go to [SEC-86, "Diagnosis Procedure"](#).
NO >> Inspection End.

Diagnosis Procedure

INFOID:000000009567444

Regarding Wiring Diagram information, refer to [SEC-24, "Wiring Diagram"](#).

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-111, "DTC Index"](#).
NO >> GO TO 2.

2.CHECK FUSE

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

Signal name	Fuse No.
Ignition power supply	49 (10 A)

Is the inspection result normal?

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

3.CHECK TRANSMISSION RANGE SWITCH POWER SUPPLY

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

B2604 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

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

(+)		(-)	Voltage (V) (Approx.)
Transmission range switch			
Connector	Terminal		
F52	7	Ground	Battery voltage

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	
F52	7	E45	21	Yes

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-30, "Removal and Installation"](#).
NO >> Repair or replace harness.

5.CHECK BCM INPUT SIGNAL

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

(+)		(-)	Condition		Voltage (V) (Approx.)
BCM					
Connector	Terminal				
M98	102	Ground	Selector lever	P or N position	Battery voltage
				Other than above	0

Is the inspection result normal?

- YES >> GO TO 9.
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	
F52	10	M98	102	Yes

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

Transmission range switch		Ground	Continuity
Connector	Terminal		
F52	10		No

Is the inspection result normal?

B2604 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

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

7.CHECK TRANSMISSION RANGE SWITCH

Refer to [SEC-88. "Component Inspection"](#).

Is the inspection result normal?

- YES >> GO TO 8.
NO >> Replace transmission range switch.

8.CHECK INTERMITTENT INCIDENT

Refer to [GI-41. "Intermittent Incident"](#).

>> Inspection End.

9.REPLACE BCM

1. Replace BCM. Refer to [BCS-67. "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT. Refer to the CONSULT Immobilizer mode and follow the on-screen instructions.

>> Inspection End.

Component Inspection

INFOID:000000009567445

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			
7	10	P or N position	Yes
		Other than above	No

Is the inspection result normal?

- YES >> Inspection End.
NO >> Replace transmission range switch.

B2605 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

B2605 SHIFT POSITION

DTC Logic

INFOID:000000009567446

DTC DETECTION LOGIC

NOTE:

- If DTC B2605 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-57, "DTC Logic"](#).
- If DTC B2605 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-58, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2605	SHIFT PN DIAG IPDM	When ignition switch is ON, P/N position signal input from transmission range switch and P/N position signal (CAN) input from IPDM E/R do not match.	• Harness or connectors (The 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-89, "Diagnosis Procedure"](#).
NO >> Inspection End.

Diagnosis Procedure

INFOID:000000009567447

SEC

Regarding Wiring Diagram information, refer to [SEC-24, "Wiring Diagram"](#).

1.CHECK IPDM E/R INPUT SIGNAL

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

(+)		(-)	Condition		Voltage (V) (Approx.)
IPDM E/R					
Connector	Terminal				
F42	40	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 2.

2.CHECK IPDM E/R INPUT SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Disconnect transmission range switch connector.

B2605 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

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	
F42	40	F52	10	Yes

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
F42	40		No

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

3.CHECK BCM INPUT SIGNAL

1. Check voltage between BCM harness connector and ground.

(+)		(-)	Condition		Voltage (V) (Approx.)
BCM					
Connector	Terminal				
M98	102	Ground	Selector lever	P or N position	Battery voltage
				Other than above	0

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4.CHECK BCM INPUT SIGNAL CIRCUIT

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

BCM		Transmission range switch		Continuity
Connector	Terminal	Connector	Terminal	
M98	102	F52	10	Yes

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

BCM		Ground	Continuity
Connector	Terminal		
M98	102		No

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

5.REPLACE BCM

1. Replace BCM. Refer to [BCS-67. "Removal and Installation"](#).
2. Perform initialization of BCM using CONSULT. Refer to the CONSULT Immobilizer mode and follow the on-screen instructions.
3. Perform DTC CONFIRMATION PROCEDURE for B2605. Refer to [SEC-89. "DTC Logic"](#).

Is DTC B2605 detected again?

YES >> Replace IPDM E/R. Refer to [PCS-30. "Removal and Installation"](#).

NO >> Inspection End.

B2608 STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

B2608 STARTER RELAY

DTC Logic

INFOID:000000009567448

DTC DETECTION LOGIC

NOTE:

- If DTC B2608 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-57, "DTC Logic"](#).
- If DTC B2608 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-58, "DTC Logic"](#).
- If DTC B2608 is displayed with other DTC (BCM), first perform the trouble diagnosis for other DTC detected.

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 (The CAN communication line is open or shorted.) • Harness or connectors (Starter relay circuit is open or shorted.) • IPDM E/R • Starter relay

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000009567449

SEC

Regarding Wiring Diagram information, refer to [SEC-24, "Wiring Diagram"](#).

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-20, "DTC Index"](#).
NO >> GO TO 2.

2.CHECK STARTER RELAY POWER SUPPLY CIRCUIT

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

(+) BCM		(-)	Condition	Voltage (V) (Approx.)
Connector	Terminal			
M98	97	Ground	CVT selector lever	N or P position Battery voltage
				Other than above 0

Is the inspection result normal?

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

B2608 STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

3.CHECK STARTER RELAY CIRCUIT

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

Starter relay		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E41	1	M98	97	Yes

5. Check continuity between starter relay harness connector and ground.

Starter relay		Ground	Continuity
Connector	Terminal		
E41	1		No

Is the inspection result normal?

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

4.CHECK STARTER RELAY

Refer to [SEC-92, "Component Inspection"](#).

Is the inspection result normal?

- YES >> GO TO 5.
NO >> Replace starter relay.

5.REPLACE BCM

1. Replace BCM. Refer to [BCS-67, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT. Refer to the CONSULT Immobilizer mode and follow the on-screen instructions.
3. Perform DTC CONFIRMATION PROCEDURE for B2605. Refer to [SEC-89, "DTC Logic"](#).

Is DTC B2605 detected again?

- YES >> Replace IPDM E/R. Refer to [PCS-30, "Removal and Installation"](#).
NO >> Inspection End.

Component Inspection

INFOID:000000009567450

1.CHECK STARTER RELAY

1. Turn ignition switch OFF.
2. Disconnect starter relay.
3. Check continuity between starter relay terminals.

Starter relay		Condition	Continuity
Terminal			
3	5	12 V direct current supply between terminals 1 and 2	Yes
		No current supply	No

Is the inspection result normal?

- YES >> Inspection End.
NO >> Replace starter relay.

B260F ENGINE STATUS

< DTC/CIRCUIT DIAGNOSIS >

B260F ENGINE STATUS

Description

INFOID:000000009567451

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

DTC Logic

INFOID:000000009567452

DTC DETECTION LOGIC

NOTE:

- If DTC B260F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-57, "DTC Logic"](#).
- If DTC B260F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-58, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260F	ECM CAN COMM	BCM has not yet received the engine status signal from ECM when ignition switch is in the ON position.	• Harness or connectors (The 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-93, "Diagnosis Procedure"](#).
NO >> Inspection End.

Diagnosis Procedure

INFOID:000000009567453

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-93, "DTC Logic"](#).

Is DTC detected?

- YES >> GO TO 2.
NO >> Inspection End.

2.REPLACE ECM

1. Replace ECM.
Refer to [EC-338, "Removal and Installation"](#).
2. Perform "ADDITIONAL SERVICE WHEN REPLACING ECM".
Refer to [EC-111, "Work Procedure"](#).

>> Inspection End.

B261F ASCD CLUTCH SWITCH

< DTC/CIRCUIT DIAGNOSIS >

B261F ASCD CLUTCH SWITCH

DTC Logic

INFOID:000000009606317

DTC DETECTION LOGIC

NOTE:

- If DTC B261F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-57, "DTC Logic"](#).
- If DTC B261F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-58, "DTC Logic"](#).

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition	Possible cause
B261F	ASCD CNCL/CLTCH SW (ASCD clutch interlock switch)	BCM detects the following status for 10 seconds 3 times • Clutch interlock switch input: 0 V • Vehicle speed: 40 km/h (24.8 MPH) or more	• Harness or connectors. (CAN communication line is open or shorted.) • Harness or connectors. (Clutch interlock switch circuit is open or shorted) • Clutch interlock 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 (total of 3 times).
5. 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:000000009606318

Regarding Wiring Diagram information, refer to [SEC-24, "Wiring Diagram"](#).

1.CHECK DTC OF COMBINATION METER

Check DTC in "Self Diagnostic Result" mode of "METER/M&A" using CONSULT.

Refer to [MWI-20, "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	10 (10 A)

Is the inspection result normal?

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

B261F ASCD CLUTCH SWITCH

< DTC/CIRCUIT DIAGNOSIS >

3.CHECK CLUTCH INTERLOCK SWITCH POWER SUPPLY

1. Disconnect clutch interlock switch connector.
2. Turn ignition switch ON.
3. Check voltage between clutch interlock switch harness connector and ground.

(+)		(-)	Voltage (V) (Approx.)
Clutch interlock switch			
Connector	Terminal		
E34	1	Ground	Battery voltage

Is the inspection result normal?

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

4.CHECK CLUTCH INTERLOCK SWITCH SIGNAL

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

(+)		(-)	Condition		Voltage
BCM					
Connector	Terminal				
M98	101	Ground	Clutch pedal	Released	6 – 16 V
				Depressed	0 – 1.5 V

Is the inspection result normal?

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

5.REPLACE BCM

1. Replace BCM. Refer to [BCS-67, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT. Refer to the CONSULT Immobilizer mode and follow the on-screen instructions.

>> Inspection End

6.CHECK CLUTCH INTERLOCK SWITCH CIRCUIT

1. Turn ignition switch OFF.
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	
E34	2	M98	101	Yes

Is the inspection result normal?

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

7.CHECK CLUTCH INTERLOCK SWITCH

Refer to [SEC-96, "Component Inspection"](#).

Is the inspection result normal?

- YES >> GO TO 8.
NO >> Replace clutch interlock switch. Refer to [CL-10, "Exploded View"](#).

8.CHECK INTERMITTENT INCIDENT

Refer to [GI-41, "Intermittent Incident"](#).

B261F ASCD CLUTCH SWITCH

< DTC/CIRCUIT DIAGNOSIS >

>> Inspection End

Component Inspection

INFOID:0000000009606319

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				
1	2	Clutch pedal	Not depressed	No
			Depressed	Yes

Is the inspection result normal?

YES >> Inspection End

NO >> Replace clutch interlock switch. Refer to [CL-10, "Exploded View"](#).

B2620 PARK/NEUTRAL POSITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

B2620 PARK/NEUTRAL POSITION SWITCH

DTC Logic

INFOID:000000009606320

NOTE:

- If DTC B2620 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-57, "DTC Logic"](#).
- If DTC B2620 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-58, "DTC Logic"](#).

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition	Possible cause
B2620	NEUTRAL SW (Neutral switch)	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 (total of 3 times).
5. 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:000000009606321

SEC

Regarding Wiring Diagram information, refer to [SEC-49, "Wiring Diagram"](#).

1.CHECK DTC OF COMBINATION METER

Check DTC in "Self Diagnostic Result" mode of "METER/M&A" using CONSULT.
Refer to [MWI-20, "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	3 (10 A)

Is the inspection result normal?

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

B2620 PARK/NEUTRAL POSITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

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		
F24	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
BCM					
Connector	Terminal				
M98	102	Ground	Shift lever	Neutral position	Battery voltage
				Except neutral position	0 – 1.5 V

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 6.

5.REPLACE BCM

1. Replace BCM. Refer to [BCS-67, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT. Refer to the CONSULT Immobilizer mode and follow the on-screen instructions.

>> 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	
F24	3	M98	102	
				Yes

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness.

7.CHECK PARK/NEUTRAL POSITION SWITCH

Refer to [SEC-99, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 8.

NO >> Replace park/neutral position switch. Refer to [TM-18, "Removal and Installation"](#).

B2620 PARK/NEUTRAL POSITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

8.CHECK INTERMITTENT INCIDENT

Refer to [GI-41, "Intermittent Incident"](#).

>> Inspection End

Component Inspection

INFOID:000000009606322

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	Yes
			Except neutral position	No

Is the inspection result normal?

YES >> Inspection End

NO >> Replace park/neutral position switch. Refer to [TM-18, "Removal and Installation"](#).

SEC

B26E8 CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

B26E8 CLUTCH INTERLOCK SWITCH

DTC Logic

INFOID:000000009606323

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition	Possible cause
B26E8	CLUTCH SW (Clutch switch)	BCM detects the following conditions for 2 seconds or more. • Clutch pedal position switch: ON (Clutch pedal is released) • Clutch interlock switch: ON (Clutch pedal is depressed)	• Harness or connector (Clutch interlock switch circuit is open or shorted) • Harness or connector (Clutch pedal position switch circuit is open or shorted) • Clutch interlock switch • Clutch pedal position 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-100, "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-100, "Diagnosis Procedure"](#).

NO >> Inspection End

Diagnosis Procedure

INFOID:000000009634425

Regarding Wiring Diagram information, refer to [SEC-24, "Wiring Diagram"](#).

1.CHECK DTC OF COMBINATION METER

Check DTC in "Self Diagnostic Result" mode of "METER/M&A" using CONSULT.

Refer to [MWI-20, "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	10 (10 A)

Is the inspection result normal?

B26E8 CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

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

3.CHECK CLUTCH INTERLOCK SWITCH POWER SUPPLY

1. Disconnect clutch interlock switch connector.
2. Turn ignition switch ON.
3. Check voltage between clutch interlock switch harness connector and ground.

(+)		(-)	Voltage (V) (Approx.)
Clutch interlock switch			
Connector	Terminal		
E34	1	Ground	Battery voltage

Is the inspection result normal?

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

4.CHECK CLUTCH INTERLOCK SWITCH SIGNAL

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

(+)		(-)	Condition		Voltage
BCM					
Connector	Terminal				
M98	101	Ground	Clutch pedal	Released	6 – 16 V
				Depressed	0 – 1.5 V

Is the inspection result normal?

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

5.REPLACE BCM

1. Replace BCM. Refer to [BCS-67, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT. Refer to the CONSULT Immobilizer mode and follow the on-screen instructions.

>> Inspection End

6.CHECK CLUTCH INTERLOCK SWITCH CIRCUIT

1. Turn ignition switch OFF.
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	
E34	2	M98	101	Yes

Is the inspection result normal?

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

7.CHECK CLUTCH INTERLOCK SWITCH

Refer to [SEC-96, "Component Inspection"](#).

Is the inspection result normal?

- YES >> GO TO 8.
NO >> Replace clutch interlock switch. Refer to [CL-10, "Exploded View"](#).

8.CHECK INTERMITTENT INCIDENT

B26E8 CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

Refer to [GI-41, "Intermittent Incident"](#).

>> Inspection End

Component Inspection (Clutch Interlock Switch)

INFOID:000000009606325

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				
1	2	Clutch pedal	Depressed	Yes
			Not depressed	No

Is the inspection result normal?

YES >> Inspection End

NO >> Replace clutch interlock switch. Refer to [CL-10, "Exploded View"](#).

B26F3 STARTER CONTROL RELAY

< DTC/CIRCUIT DIAGNOSIS >

B26F3 STARTER CONTROL RELAY

DTC Logic

INFOID:000000009567454

DTC DETECTION LOGIC

NOTE:

- If DTC B26F3 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-57, "DTC Logic"](#).
- If DTC B26F3 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-58, "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 (The CAN communication line is open or shorted.) • IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press push-button ignition switch under the following conditions to start engine.
 - Selector lever: In the P position
 - Brake pedal: Not 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-103, "Diagnosis Procedure"](#).
NO >> Inspection End.

Diagnosis Procedure

INFOID:000000009567455

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-20, "DTC Index"](#).
NO >> GO TO 2.

2.CHECK INTERMITTENT INCIDENT

Refer to [GI-41, "Intermittent Incident"](#).

>> Inspection End.

B26F4 STARTER CONTROL RELAY

< DTC/CIRCUIT DIAGNOSIS >

B26F4 STARTER CONTROL RELAY

DTC Logic

INFOID:000000009567456

DTC DETECTION LOGIC

NOTE:

- If DTC B26F4 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-57, "DTC Logic"](#).
- If DTC B26F4 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-58, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26F4	START CONT RLY 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 (CAN).	• Harness or connectors (The CAN communication line is open or shorted.) • IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

- YES >> Go to [SEC-104, "Diagnosis Procedure"](#).
NO >> Inspection End.

Diagnosis Procedure

INFOID:000000009567457

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-20, "DTC Index"](#).
NO >> GO TO 2.

2.CHECK INTERMITTENT INCIDENT

Refer to [GI-41, "Intermittent Incident"](#).

>> Inspection End.

B26F7 BCM

< DTC/CIRCUIT DIAGNOSIS >

B26F7 BCM

DTC Logic

INFOID:000000009567458

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-105, "Diagnosis Procedure"](#).
NO >> Inspection End.

Diagnosis Procedure

INFOID:000000009567459

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-105, "DTC Logic"](#).

Is DTC B26F7 detected again?

- YES >> GO TO 2.
NO >> Inspection End.

2.REPLACE BCM

1. Replace BCM. Refer to [BCS-67, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT. Refer to the CONSULT Immobilizer mode and follow the on-screen instructions.

>> Inspection End.

B26FB CLUTCH SWITCH

< DTC/CIRCUIT DIAGNOSIS >

B26FB CLUTCH SWITCH

DTC Logic

INFOID:0000000009606327

DTC DETECTION LOGIC

NOTE:

- If DTC B26FB is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-57, "DTC Logic"](#).
- If DTC B26FB is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [BCS-58, "DTC Logic"](#).

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition	Possible cause
B26FB	CLUTCH SWITCH (Clutch switch)	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) • 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-106, "Diagnosis Procedure"](#).
NO >> Inspection End

Diagnosis Procedure

INFOID:0000000009606328

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-106, "DTC Logic"](#).

Is DTC detected?

- YES >> GO TO 2.
NO >> Inspection End

2.REPLACE ECM

Replace ECM. Refer to [EC-338, "Removal and Installation"](#)

>> Inspection End

B26FC KEY REGISTRATION

< DTC/CIRCUIT DIAGNOSIS >

B26FC KEY REGISTRATION

DTC Logic

INFOID:000000009567460

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. Refer to the CONSULT Immobilizer mode and follow the on-screen instructions.
2. Check DTC in Self Diagnostic Result mode of BCM using CONSULT.

Is DTC detected?

YES >> Go to [SEC-107, "Diagnosis Procedure"](#)
NO >> Inspection End.

Diagnosis Procedure

INFOID:000000009567461

1.REPLACE INTELLIGENT KEY

1. Prepare Intelligent Key that matches the vehicle.
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT. Refer to the CONSULT Immobilizer mode and follow the on-screen instructions.
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-67, "Removal and Installation"](#).
2. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT. Refer to the CONSULT Immobilizer mode and follow the on-screen instructions.

>> Inspection End.

B210B STARTER CONTROL RELAY

< DTC/CIRCUIT DIAGNOSIS >

B210B STARTER CONTROL RELAY

DTC Logic

INFOID:000000009567462

DTC DETECTION LOGIC

NOTE:

If DTC B210B is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-57, "DTC Logic"](#).

CONSULT Display	DTC Detection Condition	Possible Cause
START CONT RLY ON [B210B]	When comparing the following items, IPDM E/R detects that starter control relay is stuck in the ON position for 1 second or more. • Starter control relay signal (CAN) from BCM • Starter relay status signal (CAN) from BCM • Starter control relay and starter relay status signal (IPDM E/R input) • Starter control relay control signal (IPDM E/R output) • Transmission range switch signal input	IPDM E/R

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait 1 second or more.
3. Turn ignition switch ON.
4. Perform Self Diagnostic Result of IPDM E/R using CONSULT.

Is DTC B210B displayed?

- YES >> Refer to [SEC-108, "Diagnosis Procedure"](#).
NO >> Inspection End.

Diagnosis Procedure

INFOID:000000009567463

1. PERFORM SELF DIAGNOSTIC RESULT

Perform Self Diagnostic Result of IPDM E/R using CONSULT.

Is display history of DTC B210B CRNT?

- YES >> Replace IPDM E/R. Refer to [PCS-30, "Removal and Installation"](#).
NO >> Refer to [GI-41, "Intermittent Incident"](#).

B210C STARTER CONTROL RELAY

< DTC/CIRCUIT DIAGNOSIS >

B210C STARTER CONTROL RELAY

DTC Logic

INFOID:000000009567464

DTC DETECTION LOGIC

NOTE:

- If DTC B210C is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-57. "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.

CONSULT Display	DTC Detection Condition	Possible Cause
STR CONT RLY OFF CIRC [B210C]	When comparing the following items, IPDM E/R detects that starter control relay is stuck in the OFF position for 1 second or more. • Starter control relay signal (CAN) from BCM • Starter relay status signal (CAN) from BCM • Starter control relay and starter relay status signal (IPDM E/R input) • Starter control relay control signal (IPDM E/R output)	• IPDM E/R • BCM • Battery

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait 1 second or more.
3. Turn ignition switch ON.
4. Perform Self Diagnostic Result of IPDM E/R using CONSULT.

Is DTC B210C displayed?

- YES >> Refer to [SEC-109. "Diagnosis Procedure"](#).
NO >> Inspection End.

Diagnosis Procedure

INFOID:000000009567465

Regarding Wiring Diagram information, refer to [SEC-24. "Wiring Diagram"](#).

1. PERFORM SELF DIAGNOSTIC RESULT

Perform Self Diagnostic Result of IPDM E/R using CONSULT.

Is display history of DTC B210C CRNT?

- YES >> GO TO 2.
NO >> Refer to [GI-41. "Intermittent Incident"](#).

2.CHECK STARTER CONTROL RELAY CONTROL CIRCUITS VOLTAGE

Check voltage between IPDM E/R connectors and ground.

IPDM E/R		Ground	Voltage (Approx.)
Connector	Terminal		
E44 (WITH M/T)	13	—	Battery voltage
F42 (WITH CVT)	40		

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-30. "Removal and Installation"](#).
NO (WITH M/T)>>GO TO 3.
NO (WITH CVT)>>GO TO 4.

B210C STARTER CONTROL RELAY

< DTC/CIRCUIT DIAGNOSIS >

3. CHECK STARTER CONTROL RELAY CONTROL CIRCUIT CONTINUITY

1. Disconnect IPDM E/R connector E44 and clutch interlock switch connector E34.
2. Check continuity between IPDM E/R connector E44 and clutch interlock switch connector E34.

IPDM E/R		Clutch interlock switch		Continuity
Connector	Terminal	Connector	Terminal	
E44	13	E34	2	Yes

3. Disconnect BCM connector M98.
4. Check continuity between IPDM E/R connector E44 and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E44	13	—	No

Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-67. "Removal and Installation"](#).
NO >> Repair or replace harness or connectors.

4. CHECK STARTER CONTROL RELAY CONTROL CIRCUIT CONTINUITY

1. Disconnect IPDM E/R connector F42 and transmission range switch connector F52.
2. Check continuity between IPDM E/R connector F42 and transmission range switch connector F52.

IPDM E/R		Transmission range switch		Continuity
Connector	Terminal	Connector	Terminal	
F42	40	F52	10	Yes

3. Disconnect BCM connector M98.
4. Check continuity between IPDM E/R connector F42 and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
F42	40	—	No

Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-67. "Removal and Installation"](#).
NO >> Repair or replace harness or connectors.

B210D STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

B210D STARTER RELAY

DTC Logic

INFOID:0000000009567466

DTC DETECTION LOGIC

NOTE:

If DTC B210D is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-57, "DTC Logic"](#).

CONSULT Display	DTC Detection Condition	Possible Cause
STARTER RLY ON CIRC [B210D]	When comparing the following items, IPDM E/R detects that starter control relay is stuck in the ON position for 5 second or more. • Starter control relay signal (CAN) from BCM • Starter relay status signal (CAN) from BCM • Starter control relay and starter relay status signal (IPDM E/R input) • Starter control relay control signal (IPDM E/R output)	• Harness or connectors (starter motor relay control circuit open or short) • IPDM E/R • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait 1 second or more.
3. Turn ignition switch ON.
4. Perform Self Diagnostic Result of IPDM E/R using CONSULT.

Is DTC B210D displayed?

- YES >> Refer to [SEC-111, "Diagnosis Procedure"](#).
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000009567467

Regarding Wiring Diagram information, refer to [SEC-24, "Wiring Diagram"](#).

SEC

1. PERFORM SELF DIAGNOSTIC RESULT

Perform Self Diagnostic Result of IPDM E/R using CONSULT.

Is display history of DTC B210D CRNT?

- YES >> GO TO 2.
NO >> Refer to [GI-41, "Intermittent Incident"](#).

2.CHECK STARTER CONTROL RELAY CONTROL CIRCUITS VOLTAGE

Check voltage between IPDM E/R connectors and ground.

IPDM E/R		Ground	Voltage (Approx.)
Connector	Terminal		
E44	13	—	Battery voltage
F42	40		

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-30, "Removal and Installation"](#).
NO (WITH M/T)>>GO TO 3.
NO (WITH CVT)>>GO TO 4.

3.CHECK STARTER CONTROL RELAY CONTROL CIRCUIT CONTINUITY

1. Disconnect IPDM E/R connectors E44, BCM connector M98, clutch interlock switch connector E34.

B210D STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

2. Check continuity between IPDM E/R connector E44 and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E44	13	—	No

Is the inspection result normal?

- YES >> Refer to [SEC-91, "Diagnosis Procedure"](#).
NO >> Repair or replace harness or connectors.

4. CHECK STARTER CONTROL RELAY CONTROL CIRCUIT CONTINUITY

1. Disconnect IPDM E/R connectors F42, BCM connector M98, transmission range switch connector F52.
2. Check continuity between IPDM E/R connector F42 and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
F42	40	—	No

Is the inspection result normal?

- YES >> Refer to [SEC-91, "Diagnosis Procedure"](#).
NO >> Repair or replace harness or connectors.

B210E STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

B210E STARTER RELAY

DTC Logic

INFOID:000000009567469

DTC DETECTION LOGIC

NOTE:

- If DTC B210E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-57, "DTC Logic"](#).
- If DTC B210E is displayed with DTC B2605, first perform the trouble diagnosis for DTC B2605. Refer to [SEC-89, "DTC Logic"](#).
- When IPDM E/R power supply voltage is low (Approx. 7 - 8 V for about 1 second), the DTC B210F may be detected.

CONSULT Display	DTC Detection Condition	Possible Cause
STARTER RELAY OFF [B210E]	When comparing the following items, IPDM E/R detects that starter control relay is stuck in the OFF position for 5 second or more. • Starter control relay signal (CAN) from BCM • Starter relay status signal (CAN) from BCM • Starter control relay and starter relay status signal (IPDM E/R input) • Starter control relay control signal (IPDM E/R output)	• IPDM E/R • BCM • Battery

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION

1. Turn ignition switch ON.
2. Turn ignition switch OFF and wait 1 second or more.
3. Turn ignition switch ON.
4. Perform Self Diagnostic Result of IPDM E/R using CONSULT.

Is DTC B210E displayed?

- YES >> Refer to [SEC-113, "Diagnosis Procedure"](#).
NO >> Inspection End.

Diagnosis Procedure

INFOID:000000009567470

SEC

Regarding Wiring Diagram information, refer to [SEC-24, "Wiring Diagram"](#).

1. PERFORM SELF DIAGNOSTIC RESULT

Perform Self Diagnostic Result of IPDM E/R using CONSULT.

Is display history of DTC B210E CRNT?

- YES >> GO TO 2.
NO >> Refer to [GI-41, "Intermittent Incident"](#).

2.CHECK STARTER CONTROL RELAY CONTROL CIRCUITS VOLTAGE

Check voltage between IPDM E/R connectors and ground.

IPDM E/R		Ground	Voltage (Approx.)
Connector	Terminal		
E44	13	—	Battery voltage
F42	40		

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-30, "Removal and Installation"](#).
NO (WITH M/T)>>GO TO 3.

B210E STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

NO (WITH CVT)>>GO TO 4.

3.CHECK STARTER CONTROL RELAY CONTROL CIRCUIT CONTINUITY

1. Disconnect IPDM E/R connector E44 and clutch interlock switch connector E34.
2. Check continuity between IPDM E/R connector E44 and clutch interlock switch connector E34.

IPDM E/R		Clutch interlock switch		Continuity
Connector	Terminal	Connector	Terminal	
E44	13	E34	2	Yes

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-67, "Removal and Installation"](#).

NO >> Repair or replace harness or connectors.

4.CHECK STARTER CONTROL RELAY CONTROL CIRCUIT CONTINUITY

1. Disconnect IPDM E/R connector F42 and transmission range switch connector F52.
2. Check continuity between IPDM E/R connector F42 and transmission range switch connector F52.

IPDM E/R		Transmission range switch		Continuity
Connector	Terminal	Connector	Terminal	
F42	40	F52	10	Yes

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-67, "Removal and Installation"](#).

NO >> Repair or replace harness or connectors.

B210F SHIFT POSITION/CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

B210F SHIFT POSITION/CLUTCH INTERLOCK SWITCH

DTC Logic

INFOID:000000009567472

DTC DETECTION LOGIC

NOTE:

If DTC B210F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-57, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210F	INTRLCK/PNP SW ON	IPDM E/R detects a difference between the following signals • P/N position signal from transmission range switch and P/N position signal (CAN) from BCM	• Harness or connectors (The 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 the 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:000000009567473

Regarding Wiring Diagram information, refer to [SEC-24, "Wiring Diagram"](#).

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-46, "DTC Index"](#).
NO >> GO TO 2.

2.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	
F42	40	F52	10	Yes

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

B210F SHIFT POSITION/CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

(+)		(-)	Continuity
IPDM E/R			
Connector	Terminal		
F42	40	Ground	No

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-30. "Removal and Installation"](#).
NO >> Repair or replace harness.

B2110 SHIFT POSITION/CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

B2110 SHIFT POSITION/CLUTCH INTERLOCK SWITCH

DTC Logic

INFOID:000000009567474

DTC DETECTION LOGIC

NOTE:

If DTC B2110 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [BCS-57, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210F	INTRLCK/PNP SW OFF	IPDM E/R detects a difference between the following signals • P/N position signal from transmission range switch and P/N position signal (CAN) from BCM	• Harness or connectors (The 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 the 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-117, "Diagnosis Procedure"](#).
NO >> Inspection End.

Diagnosis Procedure

INFOID:000000009567475

Regarding Wiring Diagram information, refer to [SEC-24, "Wiring Diagram"](#).

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-46, "DTC Index"](#).
NO >> GO TO 2.

2.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	
F42	40	F52	10	Yes

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

B2110 SHIFT POSITION/CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

(+) IPDM E/R		(-)	Continuity
Connector	Terminal		
F42	40	Ground	No

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-30. "Removal and Installation"](#).
NO >> Repair or replace harness.

ENGINE DOES NOT START WHEN INTELLIGENT KEY IS INSIDE OF VEHICLE

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

ENGINE DOES NOT START WHEN INTELLIGENT KEY IS INSIDE OF VEHICLE

Description

INFOID:0000000009567487

Engine does not start when push-button ignition switch is pressed while carrying Intelligent Key.

NOTE:

- Check that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- The engine start function, door lock function, power distribution system, and NATS-IVIS/NVIS in the Intelligent Key system are closely related to each other regarding control. The vehicle security function can operate only when the door lock and power distribution system are operating normally.

Conditions of Vehicle (Operating Conditions)

- “ENGINE START BY I-KEY” setting in “WORK SUPPORT” mode of “INTELLIGENT KEY” of “BCM” is ON.
- One or more of Intelligent Keys with registered Intelligent Key ID is in the vehicle.

Diagnosis Procedure

INFOID:0000000009567488

1.PERFORM WORK SUPPORT

Perform “INSIDE ANT DIAGNOSIS” in “Work Support” mode of “INTELLIGENT KEY” of “BCM” using CONSULT.

Refer to [BCS-21, "INTELLIGENT KEY : CONSULT Function \(BCM - INTELLIGENT KEY\)"](#).

>> GO TO 2.

2.PERFORM SELF-DIAGNOSIS RESULT

Select “Self Diagnostic Result” mode of “BCM”, and check whether or not DTC of inside key antenna is detected.

Is DTC detected?

- YES >> Perform the trouble diagnosis for detected DTC. Refer to [BCS-46, "DTC Index"](#).
- NO >> GO TO 3.

3.CHECK PUSH-BUTTON IGNITION SWITCH

Check push-button ignition switch.

Refer to [SEC-75, "Component Inspection"](#).

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-41, "Intermittent Incident"](#).
- NO >> GO TO 1.

SECURITY INDICATOR LAMP DOES NOT TURN ON OR BLINK

< SYMPTOM DIAGNOSIS >

SECURITY INDICATOR LAMP DOES NOT TURN ON OR BLINK

Description

INFOID:000000009567489

Security indicator lamp does not blink when power supply position is other than the ON position.

NOTE:

- Before performing the diagnosis, perform "Work Flow". Refer to [SEC-58, "Work Flow"](#).
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.

Conditions of Vehicle (Operating Conditions)

Power supply position is other than the ON position.

Diagnosis Procedure

INFOID:000000009567490

1.CHECK SECURITY INDICATOR LAMP

Check security indicator lamp.

Refer to [SEC-15, "VEHICLE SECURITY SYSTEM : System Description"](#).

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-41, "Intermittent Incident"](#).

NO >> GO TO 1.

NATS ANTENNA AMP.

< REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION

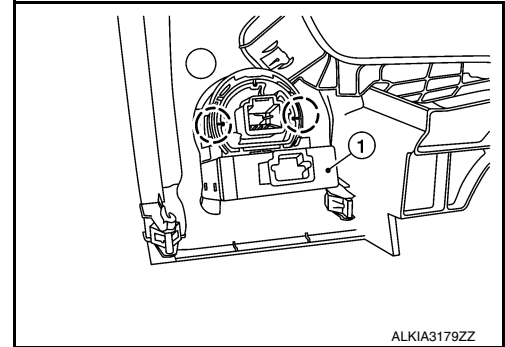
NATS ANTENNA AMP.

Removal and Installation

INFOID:000000009541301

REMOVAL

1. Remove cluster lid A. Refer to [IP-21, "Removal and Installation"](#).
2. Release pawls and remove NATS antenna amp. (1).
⊖: Pawl



INSTALLATION

Installation is in the reverse order of removal.

NOTE:

- If NATS antenna amp. is not installed correctly, NVIS (NATS) system will not operate properly and "SELF-DIAG RESULTS" on CONSULT screen will show "LOCK MODE" or "CHAIN OF IMMUNO-KEY".
- Initialization is not necessary when only the NATS antenna amp. is replaced with a new one.

SEC

PUSH-BUTTON IGNITION SWITCH

< REMOVAL AND INSTALLATION >

PUSH-BUTTON IGNITION SWITCH

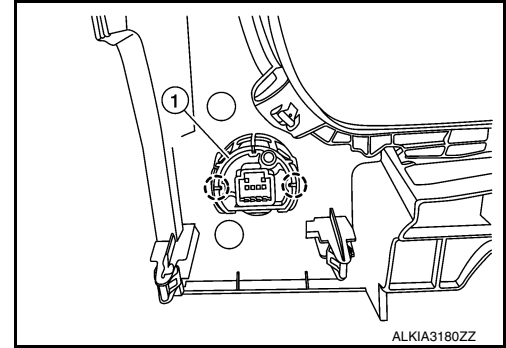
Removal and Installation

INFOID:000000009541302

REMOVAL

1. Remove NATS antenna amp. Refer to [SEC-121. "Removal and Installation"](#).
2. Release pawls and remove push-button ignition switch (1).

(1): Pawl



INSTALLATION

Installation is in the reverse order of removal.

REMOTE KEYLESS ENTRY RECEIVER

< REMOVAL AND INSTALLATION >

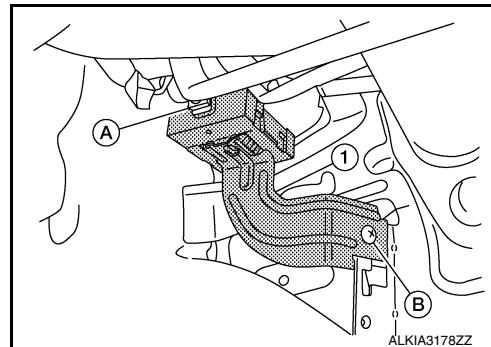
REMOTE KEYLESS ENTRY RECEIVER

Removal and Installation

INFOID:000000009541303

REMOVAL

1. Remove the glove box assembly. Refer to [IP-25. "Removal and Installation"](#).
2. Disconnect the harness connector (A) from remote keyless entry receiver (1).
3. Remove screw (B) and remove remote keyless entry receiver.



INSTALLATION

Installation is in the reverse order of removal.

SEC