SECTION SEC
SECURITY CONTROL SYSTEM

CONTENTS

WITH INTELLIGENT KEY SYSTEM

PRECAUTION 4

PRECAUTIONS 4
Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER" 4
Precaution for Work 4

PREPARATION 5

PREPARATION 5
Special Service Tool 5

SYSTEM DESCRIPTION 6

COMPONENT PARTS 6
Component Parts Location 6
NATS Antenna Amp. 8

SYSTEM 9

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION 9
INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION : System Diagram 9
INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION : System Description 9

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS ... 11
NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS : System Diagram 12
NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS : System Description 12

VEHICLE SECURITY SYSTEM 14
VEHICLE SECURITY SYSTEM : System Diagram 14
VEHICLE SECURITY SYSTEM : System Description 14

DIAGNOSIS SYSTEM (BCM) 18

COMMON ITEM 18
COMMON ITEM : CONSULT Function (BCM - COMMON ITEM) 18

INTELLIGENT KEY 18
INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY) 18

IMMU 21
IMMU : CONSULT Function (BCM - IMMU) 21

THEFT ALM 21
THEFT ALM : CONSULT Function (BCM - THEFT ALM) 21

DIAGNOSIS SYSTEM (IPDM E/R) 23
CONSULT Function (IPDM E/R) 23

ECU DIAGNOSIS INFORMATION 28

ECM, IPDM E/R, BCM 28
List of ECU Reference 28

WIRING DIAGRAM 29

ENGINE START FUNCTION 29
Wiring Diagram 29

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS 41
Wiring Diagram 41

VEHICLE SECURITY SYSTEM 49
Wiring Diagram 49

BASIC INSPECTION 60

DIAGNOSIS AND REPAIR WORK FLOW 60
Work Flow 60

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT 63

ECM 63

ECM : Description 63
ECM : Work Procedure 63

BCM 63
BCM : Description 63
BCM : Work Procedure 63

DTC/CIRCUIT DIAGNOSIS 65

P161D IMMOBILIZER 65
DTC Description 65
Diagnosis Procedure 65

P161E IMMOBILIZER 66
DTC Description 66
Diagnosis Procedure 66

P161F IMMOBILIZER 67
DTC Description 67
Diagnosis Procedure 67

B2192 ID DISCORD, BCM-ECM 68
DTC Description 68
Diagnosis Procedure 68

B2193 CHAIN OF BCM-ECM 70
DTC Description 70
Diagnosis Procedure 70

B2195 ANTI-SCANNING 72
DTC Description 72
Diagnosis Procedure 72

B2198 NATS ANTENNA AMP. 74
DTC Description 74
Diagnosis Procedure 74

B2556 PUSH-BUTTON IGNITION SWITCH 76
DTC Description 76
Diagnosis Procedure 76
Component Inspection 77

B2557 VEHICLE SPEED 78
DTC Description 78
Diagnosis Procedure 78

B2602 SHIFT POSITION 80
DTC Description 80
Diagnosis Procedure 80
Component Inspection 82

B2604 SHIFT POSITION 83
DTC Description 83
Diagnosis Procedure 83
Component Inspection 85

B2608 STARTER RELAY 86
DTC Description 86
Diagnosis Procedure 86

B260F ENGINE STATUS 87
DTC Description 87
Diagnosis Procedure 87

B261E VEHICLE TYPE 89
DTC Description 89
Diagnosis Procedure 89

B26FC KEY REGISTRATION 91
DTC Description 91
Diagnosis Procedure 91

B27D1 START CUT RELAY OFF 92
DTC Description 92
Diagnosis Procedure 92
Component Inspection 94

B27D2 START CUT RELAY ON 95
DTC Description 95
Diagnosis Procedure 95
Component Inspection 97

HEADLAMP FUNCTION 98
Component Function Check 98
Diagnosis Procedure 98

HORN FUNCTION 99
Component Function Check 99
Component Inspection 99

SECURITY INDICATOR LAMP 100
Component Function Check 100
Diagnosis Procedure 100

SYMPTOM DIAGNOSIS 102

INTELLIGENT KEY SYSTEM SYMPTOMS 102
Diagnosis Procedure 102

ENGINE CAN NOT START 103
Description 103
Diagnosis Procedure 103

ENGINE DOES NOT START WHEN INTELLIGENT KEY IS INSIDE OF VEHICLE 104
Description 104
Diagnosis Procedure 104

ENGINE DOES NOT START WHEN INTELLIGENT KEY IS INSIDE OF VEHICLE (ONE KEY) 106
Description 106
Diagnosis Procedure 106

DOOR DOES NOT LOCK/UNLOCK AND ENGINE DOES NOT START (REQ SW/PUSH SW) (ONE KEY) 107
Description 107
Diagnosis Procedure 107

REMOVAL AND INSTALLATION 109

NATS ANTENNA AMP. 109
Exploded View 109

Removal and Installation 109
PUSH-BUTTON IGNITION SWITCH 111
Exploded View 111
Removal and Installation 111

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, it is recommended that all maintenance and repair be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper repair, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see 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 Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery or batteries, 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.

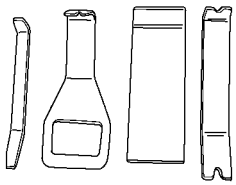
PREPARATION

PREPARATION

Special Service Tool

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The actual shape of the tools may differ from those illustrated here.

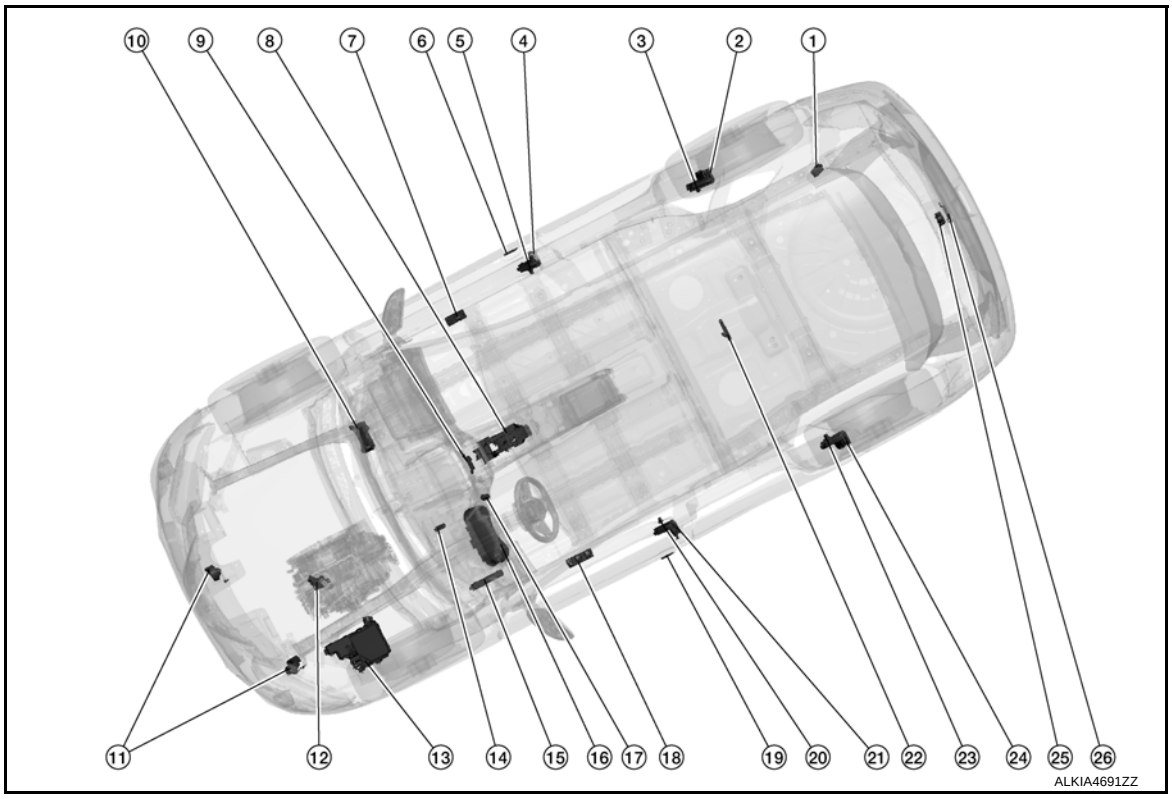
Tool number (TechMate No.) Tool name	Description
— (J-46534) Trim Tool Set  AWJIA0483ZZ	Removing trim components

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

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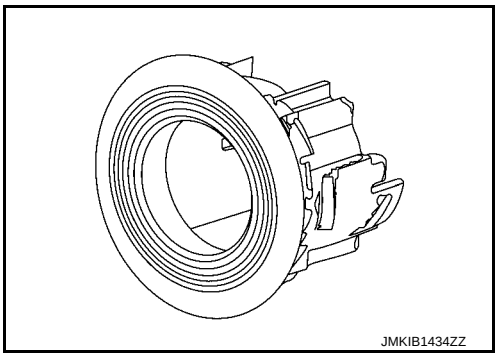
No.	Component	Function
1.	Remote keyless entry receiver	Remote keyless entry receiver receives button operation signal and key ID signal of Intelligent Key and then transmits them to BCM. Refer to DLK-19, "Remote Keyless Entry Receiver".
2.	Rear door lock actuator RH	Rear door lock actuator locks/unlocks the rear door latch assembly.
3.	Rear door switch RH	Refer to DLK-22, "Rear Door Switch".
4.	Front door lock actuator RH	Front door lock actuator locks/unlocks the front door latch assembly.
5.	Front door switch RH	Refer to DLK-21, "Front Door Switch".
6.	Outside key antenna RH	Outside key antenna (RH) detects whether Intelligent Key is outside the vehicle or not and then transmits the signal to the BCM. Refer to DLK-20, "Outside Key Antenna (RH)".
7.	Power window and door lock/unlock switch RH	Door lock and unlock switch transmits door lock/unlock operation signal to BCM.
8.	CVT shift selector	CVT shift selector detects the shift lever status, transmits park position switch signal to the BCM.
9.	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-19, "Inside Key Antenna (Instrument Center)".
10.	HPCM	Receives various information which is transmitted from each vehicle control unit, and controls the vehicle comprehensively.Shuts off the main relay when a malfunction is detected in the Li-ion battery. Refer to HBC-18, "HPCM".
11.	Horns	Horns are operated when the panic button on the Intelligent Key is pressed or the alarm is activated.

No.	Component	Function
12.	Transmission range switch	Refer to TM-17, "CVT CONTROL SYSTEM : Transmission Range Switch".
13.	IPDM E/R	Refer to PCS-6, "Component Parts Location".
14.	Stop lamp switch	Refer to BRC-15, "Brake Pedal Position Switch / Stop Lamp Switch".
15.	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-5, "BODY CONTROL SYSTEM : Component Parts Location" for detailed installation location.
16.	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-5, "METER SYSTEM : Component Parts Location".
17.	Push-button ignition switch/NATS antenna amp	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. Refer to SEC-8, "NATS Antenna Amp.".
18.	Main power window and door lock/unlock switch (Front power window and door lock/unlock switch RH similar)	Door lock and unlock switch is integrated into the main power window and door lock/unlock switch. Door lock and unlock switch transmits door lock/unlock operation signal to BCM. Refer to PWC-7, "Main Power Window And Door Lock/Unlock Switch".
19.	Outside key antenna LH	Outside key antenna (LH) detects whether Intelligent Key is outside the vehicle or not, and then transmits the signal to the BCM. Refer to DLK-20, "Outside Key Antenna (LH)".
20.	Front door switch LH	Door switch detects door open/close condition and then transmits ON/OFF signal to BCM.
21.	Front door lock assembly LH	Door key cylinder switch is integrated into front door lock assembly (driver side). Door key cylinder switch detects door LOCK/UNLOCK operation using mechanical key, and then transmits the operation signal to BCM. Refer to DLK-22, "Front Door Lock Assembly (LH)".
22.	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-20, "Inside Key Antenna (Console)".
23.	Rear door switch LH	Door switch detects door open/close condition and then transmits ON/OFF signal to BCM.
24.	Rear door lock actuator LH	Rear door lock actuator locks/unlocks the rear door latch assembly.
25.	Back door lock assembly	Back door lock actuator locks/unlocks the back door latch assembly.
26.	Outside key antenna (rear bumper)	Outside key antenna (Rear bumper) detects whether Intelligent Key is outside the vehicle or not, and then transmits the signal to the BCM. Refer to DLK-20, "Outside Key Antenna (Rear Bumper)".

NATS Antenna Amp.

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

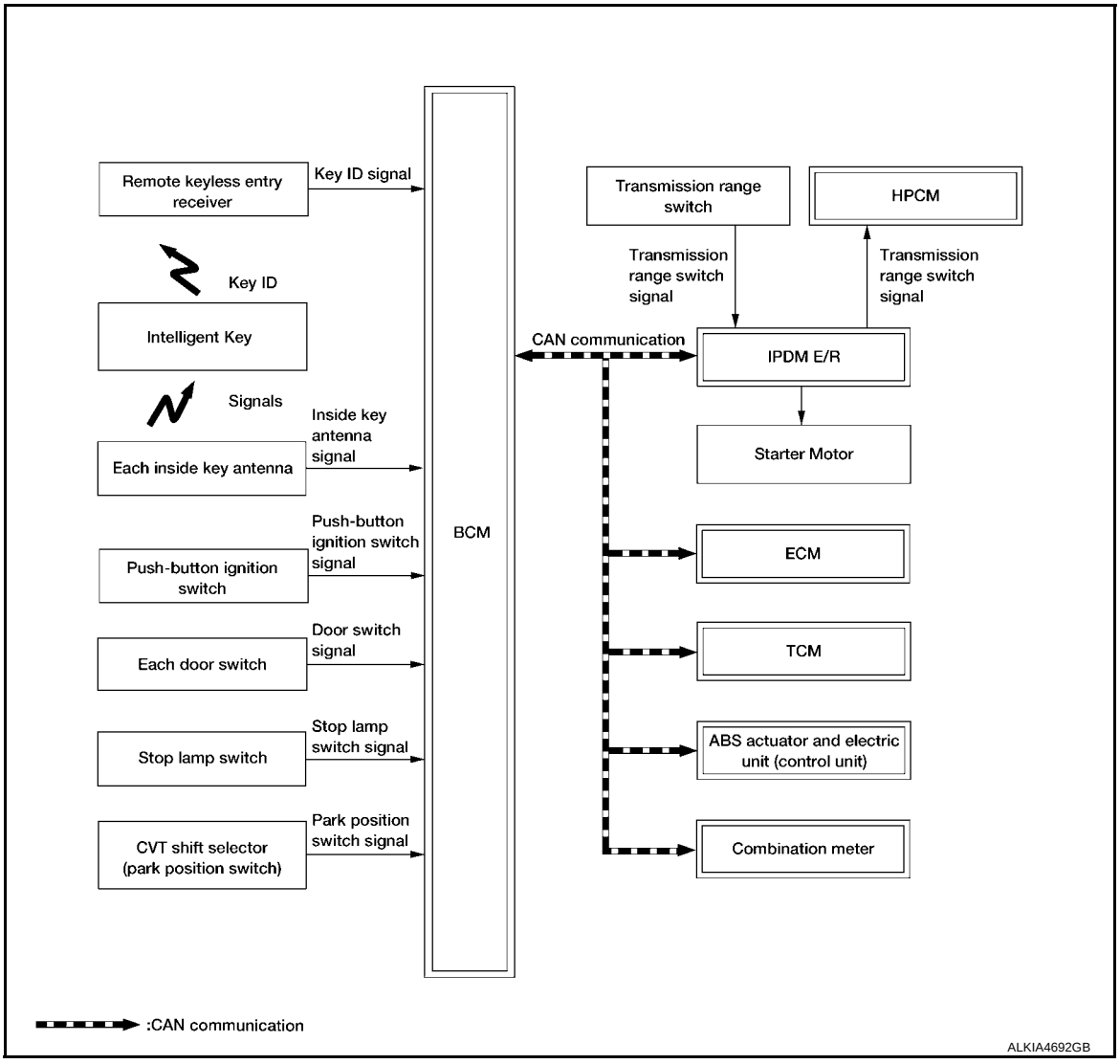

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SYSTEM

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION : System Diagram

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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION : System Description

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SYSTEM DESCRIPTION

- The engine start function of Intelligent Key system makes it possible to start and stop the engine without using the key, based on the electronic ID verification. The electronic ID verification is performed between BCM and Intelligent Key when the push-button ignition switch is pressed while the Intelligent Key is within the detection area of inside key antenna.
  NOTE:
  The driver should carry the Intelligent Key at all times.
- Intelligent Key has 2 IDs [Intelligent Key ID and NVIS (NATS) ID]. It can perform the door lock/unlock operation and the push-button ignition switch operation when the registered Intelligent Key is carried.
- When Intelligent Key battery is discharged, engine can be started by operating push-button ignition switch after contacting Intelligent Key backside to push-button ignition switch. At that time, the NVIS (NATS) ID verification is performed.
- If the ID is successfully verified, 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-12, "NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS : System Description" for any functions other than engine start function of Intelligent Key system.

PRECAUTIONS FOR INTELLIGENT KEY SYSTEM

The transponder [the chip for NVIS (NATS) ID verification] is integrated into the Intelligent Key.
In that case, the NVIS (NATS) ID verification can be performed when Intelligent Key backside is contacted to push-button ignition switch. If verification result is OK, engine can be started.

OPERATION WHEN INTELLIGENT KEY IS CARRIED

1. When the push-button ignition switch is pressed, 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 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. BCM detects that the selector lever position and brake pedal operating condition.
7. BCM transmits the starter request signal to IPDM E/R and turns the starter relay in IPDM E/R ON if BCM judges that the engine start condition* is satisfied.
8. IPDM E/R turns the starter control relay ON when receiving the starter request signal.
9. Power supply is supplied through the starter relay and the starter control relay to operate the starter motor.
   CAUTION:
   If a malfunction is detected in the Intelligent Key system, the “KEY” warning lamp in the combination meter illuminates. At that time, the engine cannot be started.
10. When BCM receives feedback signal from ECM indicating that the engine is started, the BCM transmits a stop signal to IPDM E/R and stops cranking by turning OFF the starter motor relay. (If engine start is unsuccessful, cranking stops automatically within 5 seconds.)
    CAUTION:
    When the Intelligent Key is carried outside of the vehicle (inside key antenna detection area) while the power supply is in the ACC or ON position, even if the engine start condition* is satisfied, the engine cannot be started.

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

OPERATION RANGE

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

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

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

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

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

NOTE:

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

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

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

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

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

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

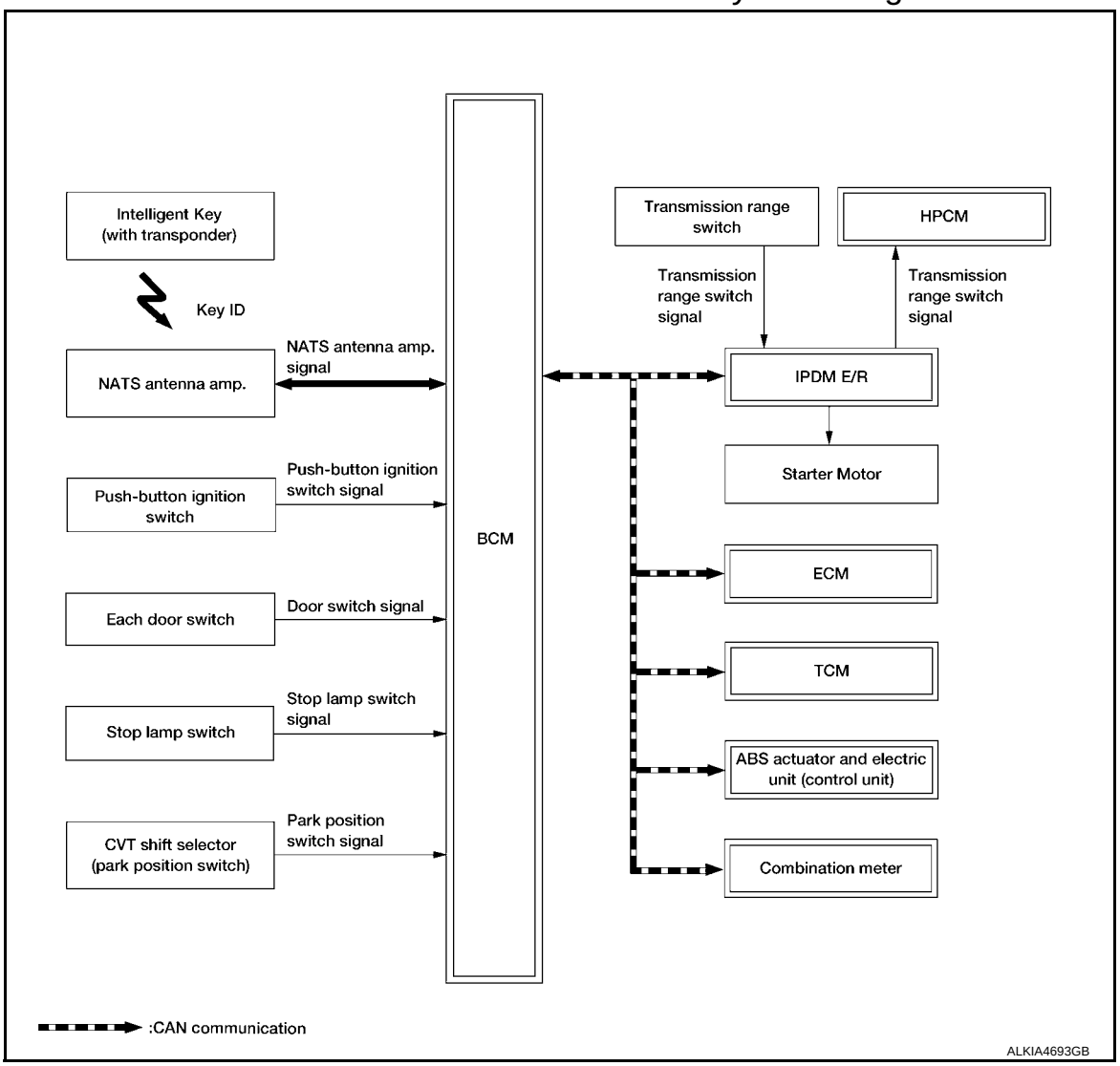
Emergency stop operation

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

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS : System Diagram

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NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS : System Description

INFOID:0000000014625296

SYSTEM DESCRIPTION

- The NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS [NVIS (NATS)] prevents the engine from being started by Intelligent Key whose ID is not registered to the vehicle (BCM). It has higher protection against auto theft involving the duplication of mechanical keys.
- The ignition key integrated in the Intelligent Key cannot start the engine. When the Intelligent Key battery is discharged, the NVIS (NATS) ID verification is performed between the transponder integrated with Intelligent Key and BCM via NATS antenna amp. when the Intelligent Key backside is contacted to push-button ignition switch. If the verification results are OK, the engine start operation can be performed by the push-button ignition switch operation.
- Locate the security indicator lamp and apply the anti-theft system equipment sticker that warns that the NVIS (NATS) is on-board the model.
- Security indicator lamp always blinks when the power supply position is any position other than ON.
- Up to 4 Intelligent Keys can be registered (including the standard ignition key) upon request from the owner.
- Specified registration is required when replacing ECM, BCM or Intelligent Key.
- Possible symptom of NVIS (NATS) malfunction is “Engine cannot start”. The engine can not be started because of other than NVIS (NATS) malfunction, so start the trouble diagnosis according to SEC-60, "Work Flow".
- If ECM other than genuine part is installed, the engine cannot be started. For ECM replacement procedure, refer to EC-595, "Removal and Installation".

PRECAUTIONS FOR KEY REGISTRATION

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

SECURITY INDICATOR LAMP

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

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

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

1. When brake pedal is depressed while selector lever is in the P (Park) position, BCM activates NATS antenna amp. that is located behind push-button ignition switch.
2. When Intelligent Key (transponder built-in) backside is contacted to push-button ignition switch, BCM starts NVIS (NATS) ID verification between BCM and Intelligent Key (transponder built-in) via NATS antenna amp.
3. When the NVIS (NATS) ID verification result is OK, buzzer in combination meter sounds and BCM transmits the result to ECM.
4. 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. BCM detects that the selector lever position is P (Park) or N (Neutral).
7. BCM transmits starter request signal to IPDM E/R and turns the starter relay in IPDM E/R ON if BCM judges that the engine start condition* is satisfied.
8. IPDM E/R turns the starter control relay ON when receiving the starter request signal.
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 the table “POWER SUPPLY POSITION CHANGE TABLE BY PUSH-BUTTON IGNITION SWITCH OPERATION” below.

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

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

NOTE:

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

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

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

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

Power supply position	Engine start/stop condition		Push-button ignition switch operation frequency
	Selector lever	Brake pedal operation condition	
LOCK → START ACC → START ON → START	P (Park) or N (Neutral) position	Depressed	1
Engine is running → OFF	—	—	1

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

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

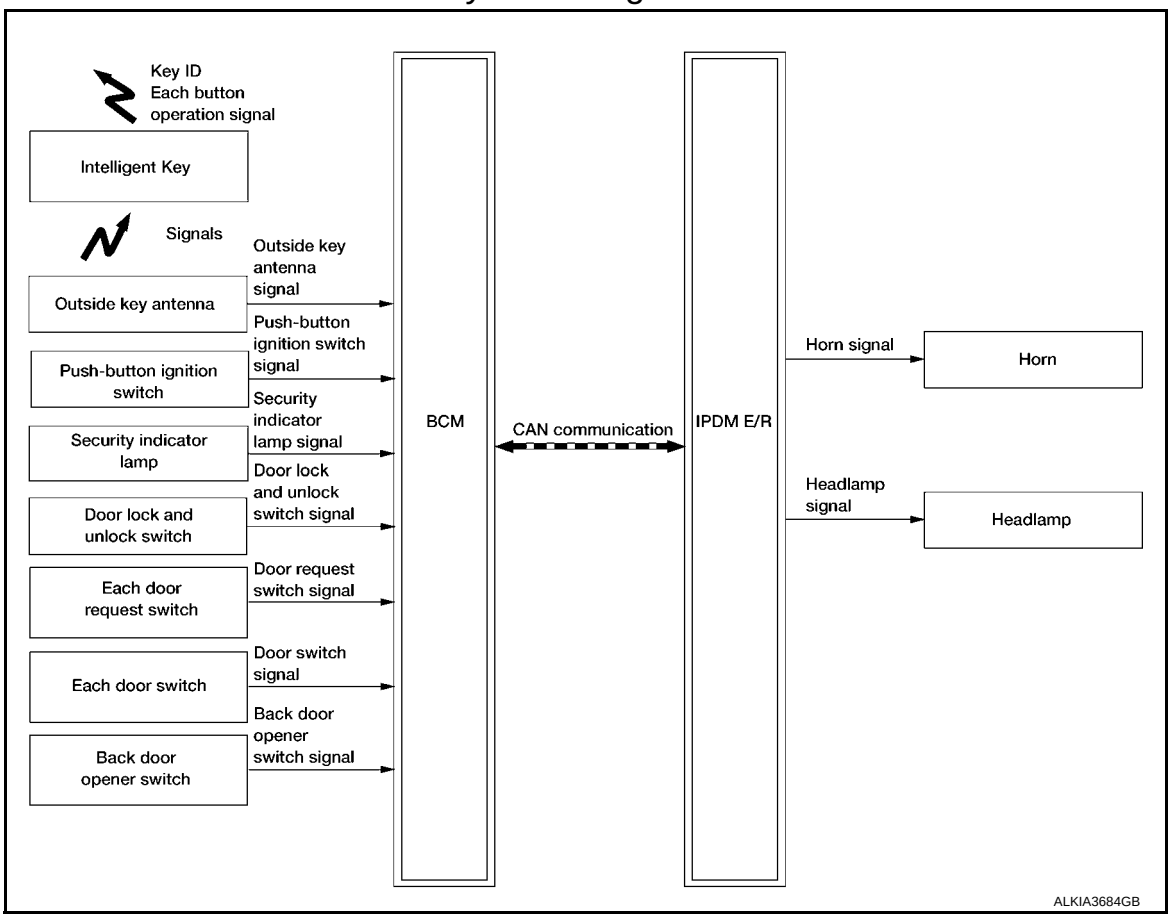
Emergency stop operation

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

VEHICLE SECURITY SYSTEM

VEHICLE SECURITY SYSTEM : System Diagram

INFOID:0000000014625297



VEHICLE SECURITY SYSTEM : System Description

INFOID:0000000014625298

- The vehicle security system has two alarm functions (theft warning alarm and panic alarm) and reduces the possibility of a theft or mischief by activating horns and headlamps intermittently.

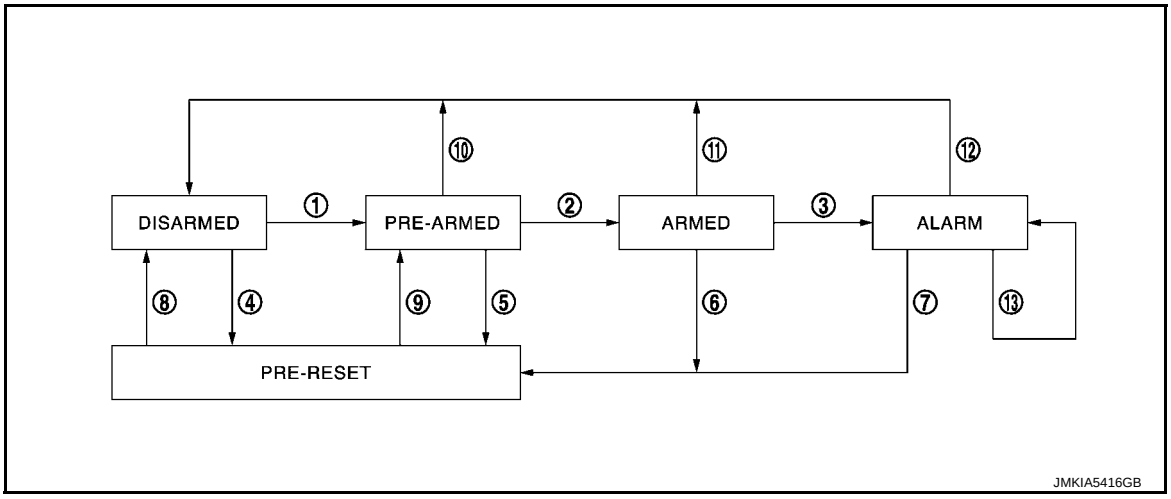
- The panic alarm does not start when the theft warning alarm is activating and the panic alarm stops when the theft warning alarm is activated.
  The priority of the functions are as per the following:

Priority	Function
1	Theft warning alarm
2	Panic alarm

THEFT WARNING ALARM

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

Operation Flow



No.	System state	Switching condition		
1	DISARMED to PRE-ARMED	When all conditions of A and one condition of B is satisfied.	A	B
			• Power supply position: OFF/LOCK • All doors: Closed	All doors are locked by: • Door key cylinder LOCK switch • LOCK button of Intelligent Key • Door request switch
2	PRE-ARMED to ARMED	When all of the following conditions are satisfied for 30 seconds.	• Power supply position: OFF/LOCK • All doors: Locked	
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	When all conditions of A and one condition of B is satisfied.	A	B
			• Power supply position: OFF/LOCK • All doors: Closed	All doors are locked by: • Door key cylinder LOCK switch • LOCK button of Intelligent Key • Door request switch
5	PRE-ARMED to PRE-RESET	No conditions.		
6	ARMED to PRE-RESET	No conditions.		
7	ALARM to PRE-RESET			

No.	System state	Switching condition	
8	PRE-RESET to DISARMED	When one of the following conditions is satisfied.	• Power supply position: ACC/ON/CRANKING/RUN • Door key cylinder UNLOCK switch: ON • UNLOCK button of Intelligent Key: ON • Door request switch: ON • Back door opener switch: ON • UNLOCK switch of door lock and unlock switch: ON • Any door: Open
9	PRE-RESET to PRE-ARMED	When all of the following conditions are satisfied.	• Power supply position: OFF/LOCK • All doors: Closed
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 • AUTO BACK DOOR button of Intelligent Key: ON • Door request switch: ON • Back door opener switch: ON • Any door: Open
11	ARMED to DISARMED	When one of the following conditions is satisfied.	• Power supply position: ACC/ON/CRANKING/RUN • Door key cylinder UNLOCK switch: ON • UNLOCK button of Intelligent Key: ON • AUTO BACK DOOR button of Intelligent Key: ON • Door request switch: ON • Back door opener switch: ON
12	ALARM to DISARMED		
13	RE-ALARM	When one of the following 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-9, "INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION : System Description".
- To open back door by operating back door opener switch, Intelligent Key must be within the detection area of outside key antenna. For details, refer to SEC-9, "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 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.

PANIC ALARM

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

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

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000015246331

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	HEADLAMP			×	×	×		
Wiper and washer	WIPER			×	×	×		
Turn signal and hazard warning lamps	FLASHER			×	×			
Intelligent Key system	INTELLIGENT KEY		×	×	×	×		
Combination switch	COMB SW			×				
BCM	BCM	×	×			×	×	×
Immobilizer	IMMU		×	×	×			
Interior room lamp battery saver	BATTERY SAVER			×	×			
Back door open	TRUNK			×				
Vehicle security system	THEFT ALM			×	×	×		
RAP system	RETAINED PWR			×				
Signal buffer system	SIGNAL BUFFER			×	×			

INTELLIGENT KEY

INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY)

INFOID:0000000015246332

SELF DIAGNOSTIC RESULT

Refer to BCS-48, "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 pedal position switch.
BRAKE SW 2 [On/Off]		Indicates condition of stop lamp switch.
DETE/CANCL SW [On/Off]	×	Indicates condition of park position switch.
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.
NEUTRAL SW -IPDM [On/Off]		Indicates condition of transmission range switch received from IPDM E/R on CAN communication line.
SFT PN -IPDM [On/Off]		Indicates condition of P (park) or N (neutral) position from TCM on CAN communication line.
STARTER RELAY -IPDM [On/Off]		Indicates condition of starter relay received 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.
ST/INH RELAY - IPDM [On/Off]		Indicates condition of starter relay and starter control relay status signal from IPDM E/R.
REVERSE SIGNAL -IPDM [On/Off]		Indicates condition of transmission range switch received from IPDM E/R on CAN communication line.
CRANKING PERMIT -ECM [PERMIT]		Indicates condition of engine start possibility from ECM on CAN communication line.
STARTER CUT RELAY -ECM [On/Off]		Indicates condition of starter cut relay 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.
IGN REQ -IPDM [On/Off]		Indicates condition of ignition request from IPDM E/R on CAN communication line.
STARTER REQ -IPDM [On/Off]		Indicates condition of starter request received from IPDM E/R 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.
DOOR STAT -RR [LOCK/READY/UNLK]	×	Indicates condition of rear right side door status.
DOOR STAT -RL [LOCK/READY/UNLK]	×	Indicates condition of rear left 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.
I-KEY OK FLAG [Key ON/Key OFF]	×	Indicates condition of Intelligent Key OK flag.
PRBT ENG STRT [Set/Reset]		Indicates condition of engine start prohibit.
ID AUTHENT CANCEL TIMER [STOP]		Indicates condition of Intelligent Key ID authentication.
CRNK PRBT TMR [On/Off]		Indicates condition of crank prohibit timer.
AUT CRANK TMR [On/Off]		Indicates condition of automatic engine crank timer from Intelligent Key.
CRNK PRBT TME [sec]		Indicates condition of engine crank prohibit time.

Monitor Item [Unit]	Main	Description
AUT CRANK TMR [sec]		Indicates condition of automatic engine crank time from Intelligent Key.
CRANKING TME [sec]		Indicates condition of engine cranking time from Intelligent Key.
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-LOCK [On/Off]		Indicates condition of lock signal from Intelligent Key.
RKE-UNLOCK [On/Off]		Indicates condition of unlock signal from Intelligent Key.
RKE-PANIC [On/Off]		Indicates condition of panic signal from Intelligent Key.
RKE-MODE CHG [On/Off]		Indicates condition of mode change signal from Intelligent Key.

ACTIVE TEST

Test Item	Description
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation [On/Off].
INSIDE BUZZER	This test is able to check combination meter warning chime operation [Buzzer 1/Buzzer 2/Buzzer 3/Off].
INDICATOR	This test is able to check combination meter warning lamp operation [KEY ON/KEY IND/Off].
ENGINE SW ILLUMI	This test is able to check push-button ignition switch START indicator operation [On/Off].
FLASHER	This test is able to check flasher operation [LH/RH/Off].
HORN	This test is able to check horn operation [On].
ENGINE START REQUEST	This test is able to check that BCM is sending starter request signal to IPDM E/R via CAN communication [MODE 1/MODE 2/MODE 3/Off].
STARTER CUT RELAY	This test is able to check starter control relay operation [On/Off].
AUTO ACC 2	This test is able to check that BCM is sending ACC power to audio unit or AV control unit [On/Off].
AUTO ACC 1	This test is able to check that BCM is controlling accessory relay-1 [Off/MODE 1/MODE 2/MODE 3].
TRUNK LUGGAGE LAMP TEST	This test is able to check luggage room lamp test operation [On/Off].

WORK SUPPORT

Support Item	Setting		Description
INSIDE ANT DIAGNOSIS	—		This function allows inside key antenna self-diagnosis.
LOCK/UNLOCK BY I-KEY	On*		Door lock/unlock by I-Key ON.
	Off		Door lock/unlock by I-Key OFF.
ENGINE START BY I-KEY	On*		Engine start with I-Key enabled.
	Off		Engine start with I-Key disabled.
AUTO LOCK SET	Mode 1	OFF	Auto door lock operation time can be changed in this mode.
	Mode 2	30 sec.	
	Mode 3*	1 min.	
	Mode 4	2 min.	
	Mode 5	3 min.	
	Mode 6	4 min.	
	Mode 7	5 min.	
IGN/ACC BATTERY SAVER	On*		Battery saver system ON.
	Off		Battery saver system OFF.
ANSWER BACK	On*		Buzzer or horn reminder for door request switch and I-Key ON.
	Off		Buzzer or horn reminder for door request switch and I-Key OFF.

Support Item	Setting	Description
ANSWER BACK I-KEY LOCK UNLOCK	BUZZER	I-Key buzzer reminder for door request switch.
	HORN	Horn sound for door request switch.
	Off	Reminder for door request switch OFF.
	INVALID	Not used.
ANSWER BACK KEYLESS LOCK UNLOCK	On*	Horn and hazard lamp reminder for I-Key ON.
	Off	Hazard lamp reminder for I-Key ON.

IMMU

IMMU : CONSULT Function (BCM - IMMU)

INFOID:0000000015246333

SELF DIAGNOSTIC RESULT

Refer to BCS-48, "DTC Index".

DATA MONITOR

Monitor Item [Unit]	Description
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].

THEFT ALM

THEFT ALM : CONSULT Function (BCM - THEFT ALM)

INFOID:0000000015246334

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.
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].
HEADLAMP(HI)	This test is able to check vehicle security lamp operation [On].

WORK SUPPORT

Support Item	Setting	Description
SECURITY ALARM SET	On	Security alarm ON.
	Off	Security alarm OFF.

DIAGNOSIS SYSTEM (IPDM E/R)

CONSULT Function (IPDM E/R)

INFOID:0000000015246335

APPLICATION ITEM

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

Direct Diagnostic Mode	Description
ECU Identification	The IPDM E/R part number is displayed.
Self Diagnostic Result	The IPDM E/R self diagnostic results are displayed.
Data Monitor	The IPDM E/R input/output data is displayed in real time.
Active Test	The IPDM E/R activates outputs to test components.
Configuration	• The vehicle specification can be read and saved. • The vehicle specification can be written when replacing IPDM E/R.
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

ECU IDENTIFICATION

The IPDM E/R part number is displayed.

SELF DIAGNOSTIC RESULT

Refer to PCS-28, "DTC Index".

DATA MONITOR

Monitor Item [Unit]	Description
REVERSE SIGNAL [Open/Close]	Indicates condition of transmission range switch R (Reverse) position.
IGN RELAY [Open/Close]	Indicates condition of ignition relay-1.
PUSH SW [Open/Close]	Indicates condition of push-button ignition switch.
INTERLOCK/PNP SW [Open/Close]	Indicates condition of transmission range switch P (Park) and N (Neutral) positions.
OIL PRESSURE SW [Open/Close]	Indicates condition of oil pressure switch.
LED H/L RH STATUS [Open/Close]	Indicates condition of LED headlamp RH ON/OFF status judged by IPDM E/R.
LED H/L LH STATUS [Open/Close]	Indicates condition of LED headlamp LH ON/OFF status judged by IPDM E/R.
HOOD SW [Open/Close]	Indicates condition of hood switch.
HORN RELAY [OFF/ ON]	Indicates condition of horn relay.
FRONT WIPER HI/LO RELAY [OFF/ON]	Indicates condition of front wiper high relay.
FRONT WIPER RELAY [OFF/ON]	Indicates condition of front wiper relay.
IGN RELAY OFF STATUS [OFF/ON]	Indicates condition of ignition relay-1 OFF status.
IGN RELAY ON STATUS [OFF/ON]	Indicates condition of ignition relay-1 ON status.
STARTER RELAY [OFF/ON]	Indicates condition of starter relay.
FR FOG LAMP LH [%]	Indicates condition of front fog lamp LH.
FR FOG LAMP RH [%]	Indicates condition of front fog lamp RH.
PARKING LAMP [%]	Indicates condition of parking lamp.
TAIL LAMP LH [%]	Indicates condition of tail lamp LH.
TAIL LAMP RH [%]	Indicates condition of tail lamp RH.
DAYTIME RUNNING LIGHT LH [%]	Indicates condition of daytime running light LH.
DAYTIME RUNNING LIGHT RH [%]	Indicates condition of daytime running light RH.
HEADLAMP (HI) LH [%]	Indicates condition of headlamp high beam LH.

Monitor Item [Unit]	Description
HEADLAMP (HI) RH [%]	Indicates condition of headlamp high beam RH.
HEADLAMP (LO) LH [%]	Indicates condition of headlamp low beam LH.
HEADLAMP (LO) RH [%]	Indicates condition of headlamp low beam RH.
FRONT FOG LAMP [Off/On]	Indicates condition of front fog lamps.
BATTERY VOLTAGE [V]	Indicates condition of battery voltage.
COOLING FAN DUTY [%]	Indicates condition of cooling fans.
HOOD SW (CAN) [OPEN/CLOSE]	Indicates condition of hood switch.
FRONT WIPER [STOP/LOW/HIGH]	Indicates condition of front wiper motor.
FR WIPER STOP POSITION [STOP P/ACTIVE P]	Indicates condition of front wiper motor stop.
HEADLAMP (HI) [Off/On]	Indicates condition of headlamp high beams.
HEADLAMP (LO) [Off/On]	Indicates condition of headlamp low beams.
IGNITION RELAY STATUS [Off/On]	Indicates condition of ignition relay-1.
IGN RELAY MONITOR [Off/On]	Indicates condition of ignition relay-1 feedback.
IGNITION POWER SUPPLY [Off/On]	Indicates condition of ignition relay-1.
INTERLOCK/PNP SW (CAN) [Off/On]	Indicates condition of transmission range switch P (Park) and N (Neutral) positions.
PUSH-BUTTON IGN SW (CAN) [Off/On]	Indicates condition of push-button ignition switch.
TAIL LAMP [Off/On]	Indicates condition of tail lamps.
REVERSE SIGNAL (CAN) [Off/On]	Indicates condition of transmission range switch R (Reverse) position.
ST&ST CONT RELAY STATUS [Off/ST R On]	Indicates condition of starter cut and starter relays.
STARTER MOTOR STATUS [Off/On]	Indicates condition of starter motor.
STARTER RELAY (CAN) [LOW/HIGH]	Indicates condition of starter relay.
IPDM NOT SLEEP [NO RDY/RDY]	Indicates condition of IPDM E/R sleep status.
DTRL REQ [Off/On]	Indicates condition of daytime running light request.
CRANKING ENABLE-TCM [NG/OK]	Indicates condition of crank enable from TCM.
CRANKING ENABLE-ECM [NG/OK]	Indicates condition of crank enable from ECM.
CAN DIAGNOSIS [NG/OK]	Indicates condition of CAN diagnosis.
FRONT FOG LAMP REQ [Off/On]	Indicates condition of front fog lamp request.
HIGH BEAM REQ [Off/On]	Indicates condition of headlamp high beam request.
HORN CHIRP [Off/On]	Indicates condition of horn relay request.
COOLING FAN REQ [%]	Indicates condition of cooling fan request.
ENGINE STATUS [STOP/RUN/IDLING]	Indicates condition of engine status.
TURN SIGNAL REQ [Off/LH/RH]	Indicates condition of turn signal request.
FR WIPER REQ [RETURN/LOW/HIGH]	Indicates condition of front wiper motor request.
SHIFT POSITION [P/R/N/D/L]	Indicates condition of transmission range switch positions.
LOW BEAM REQ [Off/On]	Indicates condition of headlamp low beam request.
POSITION LIGHT REQ [Off/On]	Indicates condition of parking lamp request.
IGNITION SW [Off/On]	Indicates condition of ignition switch.
VEHICLE SPEED (METER) [mph/km/h]	Indicates vehicle speed.
STARTER OPERATION COUNT [Numerical]	Displays number of times starter motor is energized.
H/P F/PUMP OPERATN COUNT [Numerical]	Displays number of times high pressure fuel pump is energized.
P LAMP CIRC MALFUNCTN [0 – 1]	Monitors number of times smart FET reaches retry upper limit for the parking lamp circuit. **NOTE:** When number of retry counts is 20, count is 1.

Monitor Item [Unit]	Description
NMB P LAMP CIRC RETRY [0 – 20]	Monitors number of times smart FET permits retry of parking lamp circuit. **NOTE:** When number of short circuit counts is 5 and the ignition switch OFF to ON operation is detected, count is 1.
NMB P LAMP CIRC SHORT [0 – 5]	Monitors number of times smart FET detects over current of parking lamp circuit.
DTRL LH CIRC MALFUNCTN [0 – 1]	Monitors number of times smart FET reaches retry upper limit for daytime running light (left) circuit. **NOTE:** When number of retry counts is 20, count is 1.
NMB DTRL LH CIRC RETRY [0 – 20]	Monitors number of times smart FET permits retry of daytime running light (left) circuit. **NOTE:** When number of short circuit counts is 5 and the ignition switch OFF to ON operation is detected, count is 1.
NMB DTRL LH CIRC SHORT [0 – 5]	Monitors number of times smart FET detects over current of daytime running light (left) circuit.
DTRL RH CIRC MALFUNCTN [0 – 1]	Monitors number of times smart FET reaches retry upper limit for daytime running light (right) circuit. **NOTE:** When number of retry counts is 20, count is 1.
NMB DTRL RH CIRC RETRY [0 – 20]	Monitors number of times smart FET permits retry of daytime running light (right) circuit. **NOTE:** When number of short circuit counts is 5 and the ignition switch OFF to ON operation is detected, count is 1.
NMB DTRL RH CIRC SHORT [0 – 5]	Monitors number of times smart FET detects over current of daytime running light (right) circuit.
F FOG LH CIRC MALFUNCTN [0 – 1]	Monitors number of times smart FET reaches retry upper limit for front fog lamp (left) circuit. **NOTE:** When number of retry counts is 20, count is 1.
NMB F FOG LH CIRC RETRY [0 – 20]	Monitors number of times smart FET permits retry of front fog lamp (left) circuit. **NOTE:** When number of short circuit counts is 5 and the ignition switch OFF to ON operation is detected, count is 1.
NMB F FOG LH CIRC SHORT [0 – 5]	Monitors number of times smart FET detects over current of front fog lamp (left) circuit.
F FOG RH CIRC MALFUNCTN [0 – 1]	Monitors number of times smart FET reaches retry upper limit for front fog lamp (right) circuit. **NOTE:** When number of retry counts is 20, count is 1.
NMB F FOG RH CIRC RETRY [0 – 20]	Monitors number of times smart FET permits retry of front fog lamp (right) circuit. **NOTE:** When number of short circuit counts is 5 and the ignition switch OFF to ON operation is detected, count is 1.
NMB F FOG RH CIRC SHORT [0 – 5]	Monitors number of times smart FET detects over current of front fog lamp (right) circuit.
HL (HI) LH CIRC MALFUNCTN [0 – 1]	Monitors number of times smart FET reaches retry upper limit for headlamp (HI) (left) circuit. **NOTE:** When number of retry counts is 20, count is 1.

Monitor Item [Unit]	Description
NMB HL (HI) LH CIRC RETRY [0 – 20]	Monitors number of times smart FET permits retry of headlamp (HI) (left) circuit. **NOTE:** When number of short circuit counts is 5 and the ignition switch OFF to ON operation is detected, count is 1.
NMB HL (HI) LH CIRC SHORT [0 – 5]	Monitors number of times smart FET detects over current of headlamp (HI) (left) circuit.
HL (HI) RH CIRC MALFUNCTN [0 – 1]	Monitors number of times smart FET reaches retry upper limit for headlamp (HI) (right) circuit. **NOTE:** When number of retry counts is 20, count is 1.
NMB HL (HI) RH CIRC RETRY [0 – 20]	Monitors number of times smart FET permits retry of headlamp (HI) (right) circuit. **NOTE:** When number of short circuit counts is 5 and the ignition switch OFF to ON operation is detected, count is 1.
NMB HL (HI) RH CIRC SHORT [0 – 5]	Monitors number of times smart FET detects over current of headlamp (HI) (right) circuit.
HL (LO) LH CIRC MALFUNCTN [0 – 1]	Monitors number of times smart FET reaches retry upper limit for headlamp (LO) (left) circuit. **NOTE:** When number of retry counts is 20, count is 1.
NMB HL (LO) LH CIRC RETRY [0 – 20]	Monitors number of times smart FET permits retry of headlamp (LO) (left) circuit. **NOTE:** When number of short circuit counts is 5 and the ignition switch OFF to ON operation is detected, count is 1.
NMB HL (LO) LH CIRC SHORT [0 – 5]	Monitors number of times smart FET detects over current of headlamp (LO) (left) circuit.
HL (LO) RH CIRC MALFUNCTN [0 – 1]	Monitors number of times smart FET reaches retry upper limit for headlamp (LO) (right) circuit. **NOTE:** When number of retry counts is 20, count is 1.
NMB HL (LO) RH CIRC RETRY [0 – 20]	Monitors number of times smart FET permits retry of headlamp (LO) (right) circuit. **NOTE:** When number of short circuit counts is 5 and the ignition switch OFF to ON operation is detected, count is 1.
NMB HL (LO) RH CIRC SHORT [0 – 5]	Monitors number of times smart FET detects over current of headlamp (LO) (right) circuit.
T LAMP LH CIRC MALFUNCTN [0 – 1]	Monitors number of times smart FET reaches retry upper limit for tail lamp (left) circuit. **NOTE:** When number of retry counts is 20, count is 1.
NMB T LAMP LH CIRC RETRY [0 – 20]	Monitors number of times smart FET permits retry of tail lamp (left) circuit. **NOTE:** When number of short circuit counts is 5 and the ignition switch OFF to ON operation is detected, count is 1.
NMB T LAMP LH CIRC SHORT [0 – 5]	Monitors number of times smart FET detects over current of tail lamp (left) circuit.
T LAMP RH CIRC MALFUNCTN [0 – 1]	Monitors number of times smart FET reaches retry upper limit for tail lamp (right) circuit. **NOTE:** When number of retry counts is 20, count is 1.

Monitor Item [Unit]	Description
NMB T LAMP RH CIRC RETRY [0 – 20]	Monitors number of times smart FET permits retry of tail lamp (right) circuit. **NOTE:** When number of short circuit counts is 5 and the ignition switch OFF to ON operation is detected, count is 1.
NMB T LAMP RH CIRC SHORT [0 – 5]	Monitors number of times smart FET detects over current of tail lamp (right) circuit.

ACTIVE TEST

Test item	Description
HORN	This test is able to check horn operation [Off/On].
FRONT WIPER	This test is able to check wiper motor operation [Off/Low/High].
COMPRESSOR	This test is able to check A/C compressor operation [Off/On].
COOLING FAN (DUAL)	This test is able to check cooling fan operation [Off/LO/HI].
HEADLAMP (HI)	This test is able to check headlamp high beam operation [Off/On].
HEADLAMP (LO)	This test is able to check headlamp low beam operation [Off/On].
FRONT FOG LAMP	This test is able to check front fog lamp operation [Off/On].
DAYTIME RUNNING LAMP	This test is able to check daytime running lamp operation [Off/On].
PARKING LAMP	This test is able to check parking lamp operation [Off/On].
TAIL LAMP	This test is able to check tail lamp operation [Off/On].

CONFIGURATION

Refer to PCS-36, "Description".

CAN DIAG SUPPORT MNTR

Refer to LAN-23, "CAN Diagnostic Support Monitor".

ECU DIAGNOSIS INFORMATION

ECM, IPDM E/R, BCM

List of ECU Reference

INFOID:0000000014625304

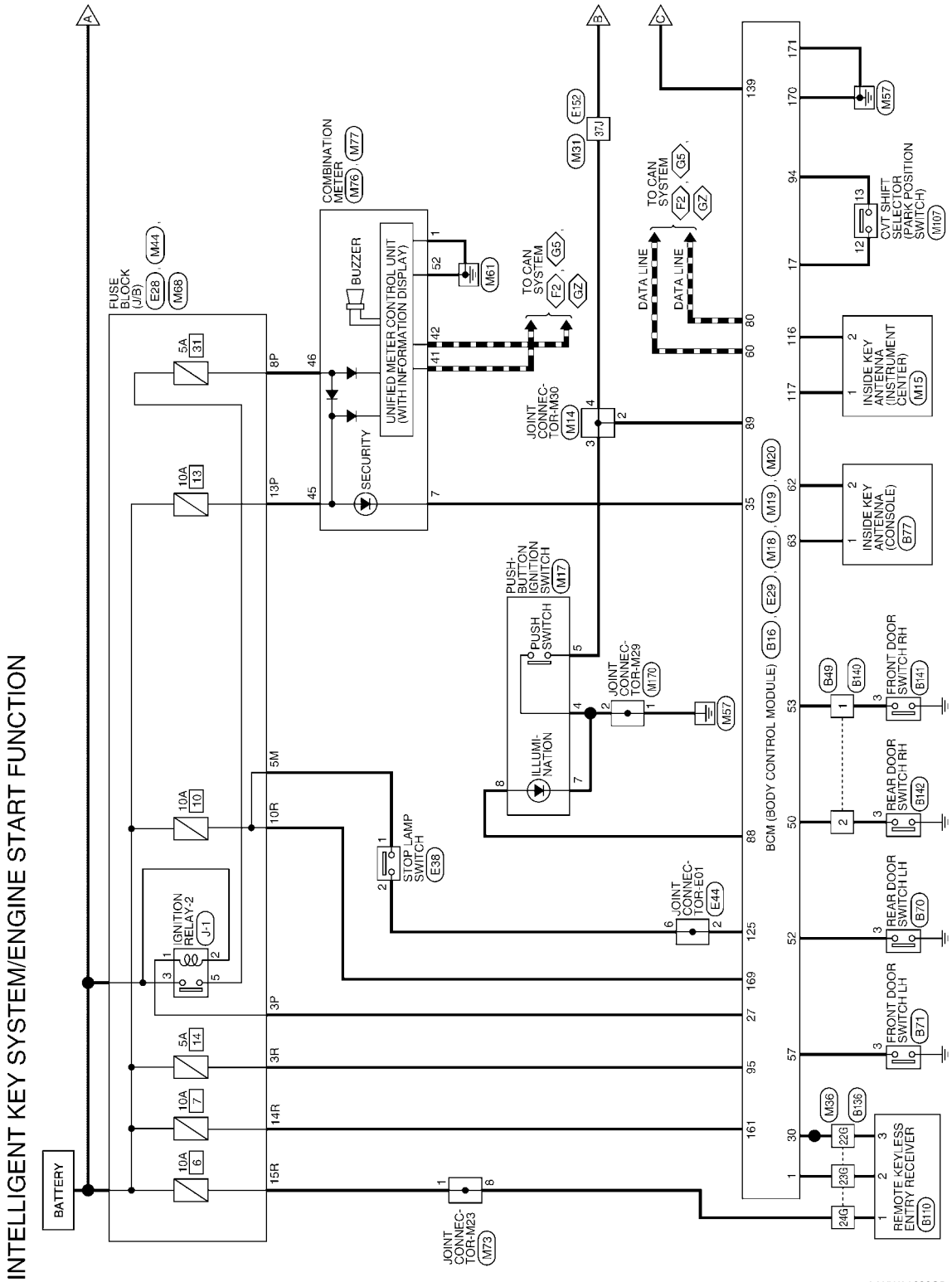
ECU	Reference
ECM	EC-87, "Reference Value"
	EC-103, "Fail-safe"
	EC-107, "DTC Inspection Priority Chart"
	EC-109, "DTC Index"
IPDM E/R	PCS-17, "Reference Value"
	PCS-26, "Fail-safe"
	PCS-28, "DTC Index"
BCM	BCS-28, "Reference Value"
	BCS-46, "Fail-safe"
	BCS-47, "DTC Inspection Priority Chart"
	BCS-48, "DTC Index"

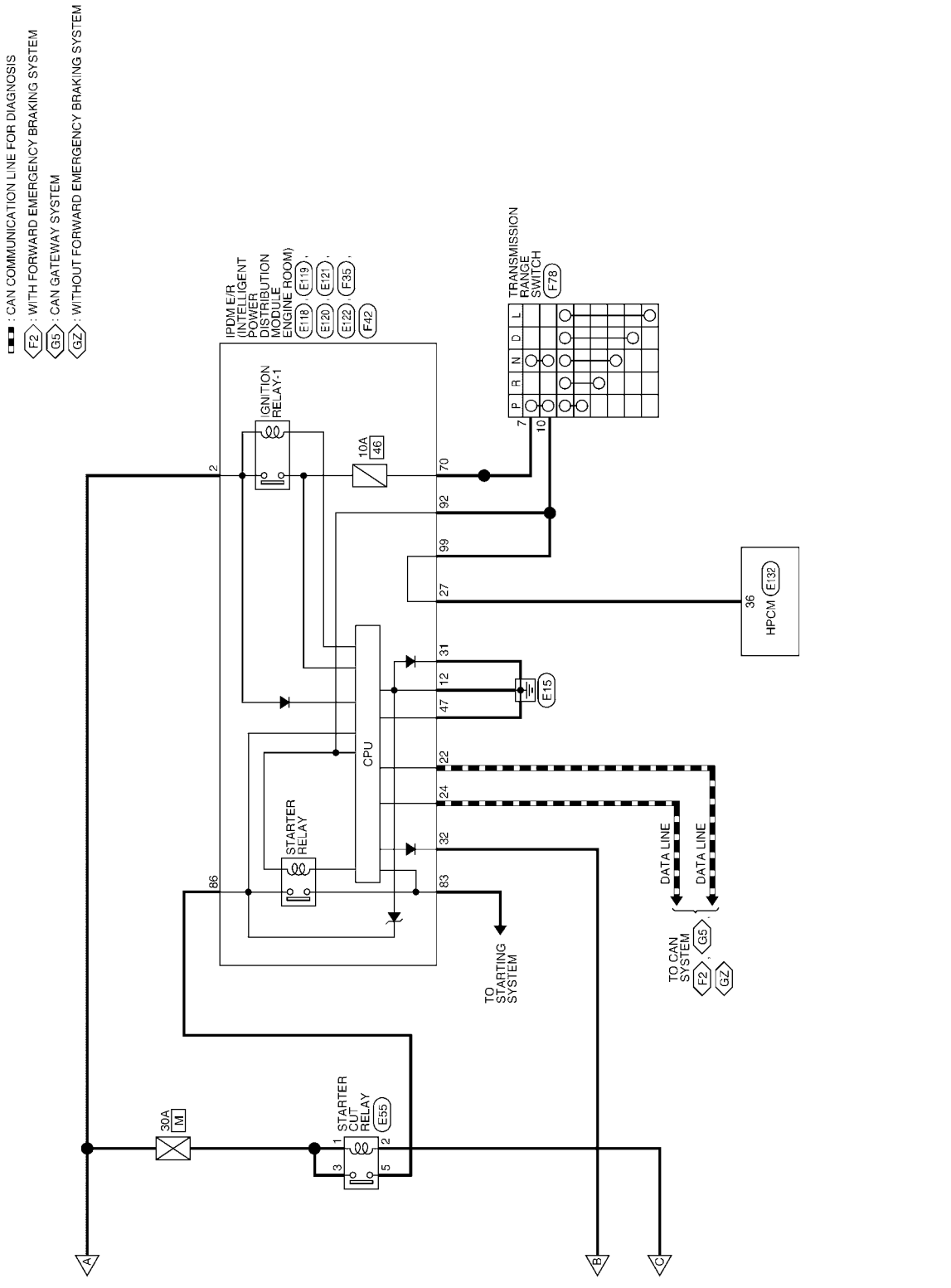
WIRING DIAGRAM

ENGINE START FUNCTION

Wiring Diagram

INFOID:0000000014625305




: CAN COMMUNICATION LINE FOR DIAGNOSIS
F2 : WITH FORWARD EMERGENCY BRAKING SYSTEM
G5 : CAN GATEWAY SYSTEM
GZ : WITHOUT FORWARD EMERGENCY BRAKING SYSTEM
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) E118, E119, E120, E121, E122, F35, F42
TRANSMISSION RANGE SWITCH F78
P R N D L
7
10
IGNITION RELAY-1
10A 46
2
70
92
99
27
36 HPCM E132
31
12
47
E15
CPU
22
24
32
83
DATA LINE
DATA LINE
TO CAN SYSTEM G5, F2, GZ
STARTER RELAY
86
TO STARTING SYSTEM
30A M
STARTER CUT RELAY E55
1
2
3
5
A
B
C
AAKWA1637GB

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION CONNECTORS

Connector No.	B16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH
Connector Color	GREEN

H.S.

60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61

Terminal No.	Color of Wire	Signal Name
41	–	–
42	–	–
43	–	–
44	–	–
45	–	–
46	R	SES BACKDOOR BUTTON SW
47	–	–
48	–	–
49	G	NO TOUCH TGATE SENSOR
50	W	RR DOOR SW
51	LG	TGATE SW
52	R	RL DOOR SW
53	SB	AS DOOR2 SW
54	–	–
55	LA/G	RR AUTOSTOP SW
56	Y	TGATE OPENER SW
57	SB	DR DOOR2 SW
58	–	–
59	–	–
60	L	CAN-H
61	V	SES EXT REAR ANTENNA B
62	Y	SES INT MIDDLE ANTENNA B
63	L	SES INT MIDDLE ANTENNA A
64	LG	SES EXT REAR ANTENNA A
65	–	–
66	–	–
67	–	–
68	–	–
69	–	–
70	–	–
71	–	–
72	–	–
73	–	–
74	–	–
75	–	–
76	–	–
77	V	SHIFT LOCK RLY

78	–	–
79	LA/W	STOP LAMP3
80	P	CAN-L

Connector No.	B49
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	SB	TO BODY NO. 2 HARNESS
2	W	TO BODY NO. 2 HARNESS
3	LA/W	TO BODY NO. 2 HARNESS
4	V	TO BODY NO. 2 HARNESS
5	SB	TO BODY NO. 2 HARNESS
6	LA/BR	TO BODY NO. 2 HARNESS
7	P	TO BODY NO. 2 HARNESS
8	LA/W	TO BODY NO. 2 HARNESS
9	LA/BR	TO BODY NO. 2 HARNESS
10	R	TO BODY NO. 2 HARNESS
11	LA/G	TO BODY NO. 2 HARNESS
12	LA/P	TO BODY NO. 2 HARNESS
13	–	TO BODY NO. 2 HARNESS
14	–	TO BODY NO. 2 HARNESS
15	G	TO BODY NO. 2 HARNESS
16	V	TO BODY NO. 2 HARNESS

Connector No.	B70
Connector Name	REAR DOOR SWITCH LH
Connector Type	TH04FW-NH
Connector Color	WHITE

H.S.

1	2	3	4

Terminal No.	Color of Wire	Signal Name
1	–	–
2	–	–
3	R	I RL DOOR SW
4	–	–

Connector No.	B71
Connector Name	FRONT DOOR SWITCH LH
Connector Type	TH04FW-NH
Connector Color	WHITE

H.S.

1	2	3	4

Terminal No.	Color of Wire	Signal Name
1	–	–
2	–	–
3	SB	I DR DOOR2 SW
4	–	–

Connector No.	B77
Connector Name	INSIDE KEY ANTENNA (CONSOLE)
Connector Type	RK02FGY
Connector Color	GRAY

H.S.

1	2

Terminal No.	Color of Wire	Signal Name
1	L	SES INT MIDDLE ANTENNA A
2	Y	SES INT MIDDLE ANTENNA B

Connector No.	B110
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Type	AAC04FB
Connector Color	BLACK

H.S.

1	2	3	4

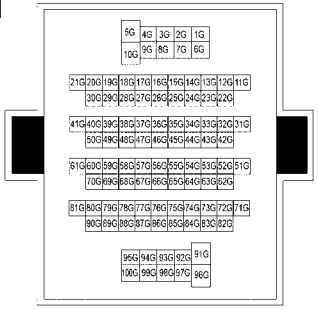
Terminal No.	Color of Wire	Signal Name
1	W	BATTERY
2	L	LIN 3D
3	P	O GND AUTOLIGHT SENSOR
4	–	–

AAKIA4518GB

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION CONNECTORS

Connector No.	B136
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4
Connector Color	WHITE

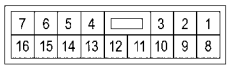
H.S.



Terminal No.	Color of Wire	Signal Name
1G	LA/GR	TO MAIN HARNESS
2G	LA/P	TO MAIN HARNESS
3G	Y	TO MAIN HARNESS
4G	L	TO MAIN HARNESS
5G	G	TO MAIN HARNESS
6G	LA/BR	TO MAIN HARNESS
7G	BR	TO MAIN HARNESS
8G	LA/L	TO MAIN HARNESS
9G	LA/R	TO MAIN HARNESS
10G	R	TO MAIN HARNESS
11G	G	TO MAIN HARNESS
12G	Y	TO MAIN HARNESS
13G	BR	TO MAIN HARNESS
14G	–	TO MAIN HARNESS
15G	Y	TO MAIN HARNESS
16G	–	TO MAIN HARNESS
17G	–	TO MAIN HARNESS
18G	R	TO MAIN HARNESS
19G	R	TO MAIN HARNESS
20G	W	TO MAIN HARNESS
21G	P	TO MAIN HARNESS
22G	P	TO MAIN HARNESS
23G	L	TO MAIN HARNESS
24G	W	TO MAIN HARNESS
25G	L	TO MAIN HARNESS
26G	–	TO MAIN HARNESS
27G	–	TO MAIN HARNESS
28G	–	TO MAIN HARNESS
29G	SB	TO MAIN HARNESS
30G	–	TO MAIN HARNESS
31G	–	TO MAIN HARNESS
32G	–	TO MAIN HARNESS
33G	–	TO MAIN HARNESS
34G	V	TO MAIN HARNESS
35G	BR	TO MAIN HARNESS
36G	SHIELD	TO MAIN HARNESS
37G	LG	TO MAIN HARNESS
38G	V	TO MAIN HARNESS
39G	SHIELD	TO MAIN HARNESS
40G	G	TO MAIN HARNESS
41G	R	TO MAIN HARNESS
42G	–	TO MAIN HARNESS
43G	–	TO MAIN HARNESS
44G	BG	TO MAIN HARNESS
45G	SHIELD	TO MAIN HARNESS
46G	W	TO MAIN HARNESS
47G	R	TO MAIN HARNESS
48G	SHIELD	TO MAIN HARNESS
49G	L	TO MAIN HARNESS
50G	Y	TO MAIN HARNESS
51G	–	TO MAIN HARNESS
52G	–	TO MAIN HARNESS
53G	–	TO MAIN HARNESS
54G	–	TO MAIN HARNESS
55G	–	TO MAIN HARNESS
56G	–	TO MAIN HARNESS
57G	–	TO MAIN HARNESS
58G	–	TO MAIN HARNESS
59G	–	TO MAIN HARNESS
60G	GR	TO MAIN HARNESS
61G	V	TO MAIN HARNESS
62G	–	TO MAIN HARNESS
63G	–	TO MAIN HARNESS
64G	–	TO MAIN HARNESS
65G	–	TO MAIN HARNESS
66G	–	TO MAIN HARNESS
67G	–	TO MAIN HARNESS
68G	–	TO MAIN HARNESS
69G	–	TO MAIN HARNESS
70G	–	TO MAIN HARNESS
71G	–	TO MAIN HARNESS
72G	–	TO MAIN HARNESS
73G	–	TO MAIN HARNESS
74G	–	TO MAIN HARNESS
75G	–	TO MAIN HARNESS
76G	–	TO MAIN HARNESS
77G	–	TO MAIN HARNESS
78G	LA/R	TO MAIN HARNESS
79G	LA/V	TO MAIN HARNESS
80G	LA/B	TO MAIN HARNESS
81G	LA/L	TO MAIN HARNESS
82G	–	TO MAIN HARNESS
83G	–	TO MAIN HARNESS
84G	–	TO MAIN HARNESS
85G	–	TO MAIN HARNESS
86G	–	TO MAIN HARNESS
87G	–	TO MAIN HARNESS
88G	–	TO MAIN HARNESS
89G	–	TO MAIN HARNESS
90G	–	TO MAIN HARNESS
91G	R	TO MAIN HARNESS
92G	BR	TO MAIN HARNESS
93G	W	TO MAIN HARNESS
94G	LA/V	TO MAIN HARNESS
95G	V	TO MAIN HARNESS
96G	G	TO MAIN HARNESS
97G	P	TO MAIN HARNESS
98G	GR	TO MAIN HARNESS
99G	LA/Y	TO MAIN HARNESS
100G	Y	TO MAIN HARNESS

Connector No.	B140
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS
Connector Color	WHITE

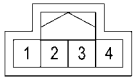
H.S.



Terminal No.	Color of Wire	Signal Name
1	GR	TO BODY HARNESS
2	W	TO BODY HARNESS
3	LA/Y	TO BODY HARNESS
4	V	TO BODY HARNESS
5	SB	TO BODY HARNESS
6	LA/BR	TO BODY HARNESS
7	LA/V	TO BODY HARNESS
8	L	TO BODY HARNESS
9	Y	TO BODY HARNESS
10	R	TO BODY HARNESS
11	V	TO BODY HARNESS
12	LG	TO BODY HARNESS
13	L	TO BODY HARNESS
14	Y	TO BODY HARNESS
15	LA/GR	TO BODY HARNESS
16	LA/LG	TO BODY HARNESS

Connector No.	B141
Connector Name	FRONT DOOR SWITCH RH
Connector Type	TH04FW-NH
Connector Color	WHITE

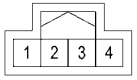
H.S.



Terminal No.	Color of Wire	Signal Name
1	–	–
2	–	–
3	GR	I AS DOOR2 SW
4	–	–

Connector No.	B142
Connector Name	REAR DOOR SWITCH RH
Connector Type	TH04FW-NH
Connector Color	WHITE

H.S.



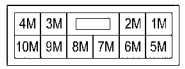
Terminal No.	Color of Wire	Signal Name
1	–	–
2	–	–
3	W	I RR DOOR SW
4	–	–

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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION CONNECTORS

Connector No.	E28
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS10FW-CS
Connector Color	WHITE

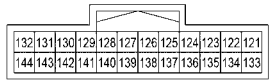
H.S.



Terminal No.	Color of Wire	Signal Name
1M	–	–
2M	–	–
3M	–	–
4M	–	–
5M	V	BATTERY
6M	Y	O LIGHT POSITION REAR LH
7M	–	–
8M	–	–
9M	–	–
10M	–	–

Connector No.	E29
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH24FB-NH
Connector Color	BLACK

H.S.



Terminal No.	Color of Wire	Signal Name
121	–	–
122	–	–
123	–	–
124	–	–
125	LG	BRAKE SW2
126	W	BRAKE SW1
127	–	–
128	–	–
129	–	–
130	–	–
131	–	–
132	Y	BUZZER (WITH I-KEY)
133	–	–
134	–	–
135	BR	DI FR LEFT E
136	GR	DI FR RIGHT E
137	–	–
138	–	–
139	G	STCUT RL
140	–	–
141	–	–
142	–	–
143	–	–
144	–	–

Connector No.	E38
Connector Name	STOP LAMP SWITCH
Connector Type	M04FW-LC
Connector Color	WHITE

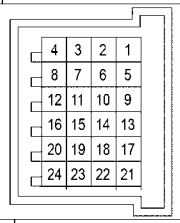
H.S.



Terminal No.	Color of Wire	Signal Name
1	V	BATTERY
2	LG	I BRAKE SW2
3	L	IGNITION
4	W	STOP LAMP SWITCH OUTPUT

Connector No.	E44
Connector Name	JOINT CONNECTOR-E01
Connector Type	NH24FG-J
Connector Color	GREEN

H.S.



Terminal No.	Color of Wire	Signal Name
1	V	SENSOR GROUND
2	LG	I BRAKE SW2
3	P	CAN-L
4	L	CAN-H
5	B	SENSOR GROUND
6	LG	I BRAKE SW2
7	P	CAN-L
8	L	CAN-H
9	W	SENSOR GROUND
10	Y	STOP LAMP SWITCH
11	P	CAN-L
12	L	CAN-H
13	–	–
14	R	STOP LAMP SWITCH
15	P	CAN-L
16	L	CAN-H
17	BR	EVAP CONTROL SYSTEM PRESSURE SENSOR
18	–	–
19	P	CAN-L
20	L	CAN-H
21	L	EVAP CONTROL SYSTEM PRESSURE SENSOR
22	–	–
23	–	–
24	–	–

Connector No.	E55
Connector Name	STARTER CUT RELAY
Connector Type	MS02FL-M2-LC
Connector Color	BLUE

H.S.



Terminal No.	Color of Wire	Signal Name
1	SB	BATTERY
2	G	RELAY CONTROL
3	L	BATTERY
5	GR	RELAY OUTPUT

Connector No.	E118
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	L02FB-MC
Connector Color	BLACK

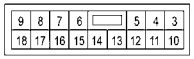
H.S.



Terminal No.	Color of Wire	Signal Name
1	R	FL BAT 2
2	W	FL BAT 1

Connector No.	E119
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	NS16FGY-CS
Connector Color	GRAY

H.S.



Terminal No.	Color of Wire	Signal Name
3	P	IGN NOT COLUMN LOCK
4	Y	LIGHT POSITION REAR LH
5	–	–
6	–	–
7	–	–
8	BR	ACTUATOR4 CABIN (3FB4)
9	L	LO HORN RLY
10	–	–
11	V	IGN AIRBAG
12	B	SIGNAL GROUND
13	–	–
14	–	–
15	–	–
16	G	LIGHT REVERSE LAMP
17	W	LIGHT POSITION REAR RH
18	–	–

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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION CONNECTORS

Connector No.	E120
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH24FGY-NH
Connector Color	GRAY

H.S.

30	29	28	27	26	25	24	23	22	21	20	19
42	41	40	39	38	37	36	35	34	33	32	31

Terminal No.	Color of Wire	Signal Name
19	LG	IGN ECM
20	–	–
21	–	–
22	P	CAN-L
23	–	–
24	L	CAN-H
25	–	–
26	–	–
27	SB	CABIN MOTOR 5
28	R	CABIN MOTOR 6
29	LG	CABIN MOTOR 7
30	Y	CABIN MOTOR 8
31	B	2ND SIGNAL GROUND
32	GR	LI PUSH SW
33	BR	AUTO STOP WIPER
34	–	–
35	–	–
36	–	–
37	–	–
38	–	–
39	L	HEV CAN-H
40	G	HEV CAN-L
41	W	CABIN MOTOR 3
42	R	CABIN MOTOR 4

Connector No.	E121
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	243405408R
Connector Color	RED

H.S.

45	44	43
48	47	46

Terminal No.	Color of Wire	Signal Name
43	–	–
44	R	BAT ABS VALVE
45	V	FR WIPER HI
46	W	FUEL PUMP
47	B	POWER GROUND
48	Y	FR WIPER LO

Connector No.	E122
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	YLA06FGY
Connector Color	GRAY

H.S.

83	82	81
86	85	84

Terminal No.	Color of Wire	Signal Name
81	V	FL ECM USM SUPPLY
82	–	–
83	G	STARTER
84	LG	BATT MOTOR FAN LO
85	–	–
86	GR	FL STARTER

Connector No.	E132
Connector Name	HPCM
Connector Type	RH40FBR-RZ8-L-RH
Connector Color	BROWN

H.S.

33	37	41	45	49	53	57	61	65	69	73	77
34	38	42	46	50	54	58	62	66	70	74	78
35	39	43	47	51	55	59	63	67	71	75	79
36	40	44	48	52	56	60	64	68	72	76	80

Terminal No.	Color of Wire	Signal Name
33	–	–
34	–	–
35	–	–
36	SB	P/N SIGNAL
37	–	–
38	–	–
39	–	–
40	–	–
41	–	–
42	–	–
43	–	–
44	–	–
45	–	–
46	–	–
47	–	–
48	–	–
49	–	–
50	B	HPCM GROUND
51	SHIELD	SHIELD
52	–	–
53	–	–
54	B	HPCM GROUND
55	–	–
56	–	–
57	B	HPCM GROUND
58	–	–
59	–	–
60	–	–
61	–	–
62	–	–
63	LG	12V BATTERY TEMPERATURE SENSOR
64	–	–
65	–	–
66	–	–
67	–	–
68	–	–
69	V	12V BATTERY CURRENT SENSOR
70	W	SENSOR GROUND
71	–	–
72	BR	SENSER POWER SUPPLY
73	–	–
74	–	–
75	–	–
76	–	–
77	L	POWER SUPPLY FOR HPCM
78	–	–
79	GR	SHIFT LOCK SOLENOID
80	–	–

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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION CONNECTORS

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1J	–	TO MAIN HARNESS
2J	Y	TO MAIN HARNESS
3J	–	TO MAIN HARNESS
4J	–	TO MAIN HARNESS
5J	–	TO MAIN HARNESS
6J	–	TO MAIN HARNESS
7J	–	TO MAIN HARNESS
8J	–	TO MAIN HARNESS
9J	BR	TO MAIN HARNESS
10J	–	TO MAIN HARNESS
11J	–	TO MAIN HARNESS
12J	–	TO MAIN HARNESS
13J	–	TO MAIN HARNESS
14J	–	TO MAIN HARNESS
15J	–	TO MAIN HARNESS
16J	–	TO MAIN HARNESS
17J	–	TO MAIN HARNESS
18J	–	TO MAIN HARNESS
19J	–	TO MAIN HARNESS
20J	–	TO MAIN HARNESS
21J	GR	TO MAIN HARNESS
22J	SHIELD	TO MAIN HARNESS
23J	LG	TO MAIN HARNESS
24J	V	TO MAIN HARNESS
25J	L	TO MAIN HARNESS
26J	BR	TO MAIN HARNESS
27J	G	TO MAIN HARNESS
28J	R	TO MAIN HARNESS
29J	L	TO MAIN HARNESS
30J	V	TO MAIN HARNESS
31J	–	TO MAIN HARNESS
32J	–	TO MAIN HARNESS
33J	R	TO MAIN HARNESS
34J	L	TO MAIN HARNESS
35J	BG	TO MAIN HARNESS
36J	LG	TO MAIN HARNESS
37J	GR	TO MAIN HARNESS
38J	BR	TO MAIN HARNESS
39J	–	TO MAIN HARNESS
40J	–	TO MAIN HARNESS
41J	G	TO MAIN HARNESS
42J	W	TO MAIN HARNESS
43J	L	TO MAIN HARNESS
44J	B	TO MAIN HARNESS
45J	SB	TO MAIN HARNESS
46J	BR	TO MAIN HARNESS
47J	W	TO MAIN HARNESS
48J	W	TO MAIN HARNESS
49J	L	TO MAIN HARNESS
50J	P	TO MAIN HARNESS
51J	W	TO MAIN HARNESS
52J	R	TO MAIN HARNESS
53J	SB	TO MAIN HARNESS
54J	LG	TO MAIN HARNESS
55J	W	TO MAIN HARNESS
56J	BG	TO MAIN HARNESS
57J	R	TO MAIN HARNESS
58J	V	TO MAIN HARNESS
59J	BR	TO MAIN HARNESS
60J	P	TO MAIN HARNESS
61J	L	TO MAIN HARNESS
62J	P	TO MAIN HARNESS
63J	L	TO MAIN HARNESS
64J	R	TO MAIN HARNESS
65J	L	TO MAIN HARNESS
66J	BG	TO MAIN HARNESS
67J	–	TO MAIN HARNESS
68J	–	TO MAIN HARNESS
69J	G	TO MAIN HARNESS
70J	L	TO MAIN HARNESS
71J	–	TO MAIN HARNESS
72J	–	TO MAIN HARNESS
73J	–	TO MAIN HARNESS
74J	–	TO MAIN HARNESS
75J	–	TO MAIN HARNESS
76J	–	TO MAIN HARNESS
77J	–	TO MAIN HARNESS
78J	–	TO MAIN HARNESS
79J	SHIELD	TO MAIN HARNESS
80J	B	TO MAIN HARNESS
81J	W	TO MAIN HARNESS
82J	–	TO MAIN HARNESS
83J	–	TO MAIN HARNESS
84J	–	TO MAIN HARNESS
85J	–	TO MAIN HARNESS
86J	–	TO MAIN HARNESS
87J	–	TO MAIN HARNESS
88J	–	TO MAIN HARNESS
89J	–	TO MAIN HARNESS
90J	–	TO MAIN HARNESS
91J	–	TO MAIN HARNESS
92J	LG	TO MAIN HARNESS
93J	L	TO MAIN HARNESS
94J	L	TO MAIN HARNESS
95J	BR	TO MAIN HARNESS
96J	–	TO MAIN HARNESS
97J	GR	TO MAIN HARNESS
98J	P	TO MAIN HARNESS
99J	W	TO MAIN HARNESS
100J	Y	TO MAIN HARNESS

Connector No.	F35
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	NS16FW-CS
Connector Color	WHITE

H.S.

71	70	69	68		67	66	65
80	79	78	77	76	75	74	73	72

Terminal No.	Color of Wire	Signal Name
65	–	–
66	W	ACTUATOR1 (3FB1)
67	V	LI ECM ACT5 DRIVER
68	–	–
69	–	–
70	R	IGN AT LPG
71	Y	IGN REVERSE SW AC VALVE
72	LG	ACTUATOR5 (3FBA)
73	G	ACTUATOR1 2 (3FB)
74	–	–
75	R	ACTUATOR3 (3FB3)
76	P	LI FUEL PUMP DRIVER
77	–	–
78	BR	ACTUATOR2 (3FB2)
79	G	LI LIGHT REVERSE SW
80	–	–

Connector No.	F42
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH24FB-NH
Connector Color	BLACK

H.S.

98	97	96	95	94	93	92	91	90	89	88	87
110	109	108	107	106	105	104	103	102	101	100	99

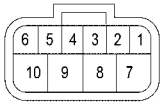
Terminal No.	Color of Wire	Signal Name
87	L	HEV CAN-H
88	G	HEV CAN-L
89	W	MOTOR CABIN 3
90	R	MOTOR CABIN 4
91	–	–
92	BG	LI NP SW
93	P	LI ECM DRIVER
94	–	–
95	–	–
96	–	–
97	–	–
98	–	–
99	BG	MOTOR CABIN 5
100	GR	MOTOR CABIN 6
101	LG	MOTOR CABIN 7
102	Y	MOTOR CABIN 8
103	W	HOOD SW2
104	–	–
105	–	–
106	BR	LO FAN RELAY2(PWM)
107	–	–
108	–	–
109	–	–
110	–	–

AAKIA4522GB

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION CONNECTORS

Connector No.	F78
Connector Name	TRANSMISSION RANGE SWITCH
Connector Type	YDX06FB-HS4
Connector Color	BLACK

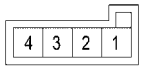
H.S.



Terminal No.	Color of Wire	Signal Name
1	–	–
2	Y	D RANGE SW
3	–	–
4	R	VIGN
5	V	P RANGE SW
6	SB	L RANGE SW
7	Y	IGN AT LPG
8	G	R RANGE SW
9	R	N RANGE SW
10	BG	LI NP SW

Connector No.	M14
Connector Name	JOINT CONNECTOR- M30
Connector Type	SAC04JW
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
1	Y	I IGN SW
2	Y	I START WO ESCL SW
3	Y	I START WO ESCL SW
4	Y	LI PUSH SW

Connector No.	M15
Connector Name	INSIDE KEY ANTENNA (INSTRUMENT CENTER)
Connector Type	RK02FGY
Connector Color	GRAY

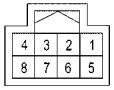
H.S.



Terminal No.	Color of Wire	Signal Name
1	GR	SES INT FRONT ANTENNA A
2	BG	SES INT FRONT ANTENNA B

Connector No.	M17
Connector Name	PUSH-BUTTON IGNITION SWITCH
Connector Type	THO8FW-NH
Connector Color	WHITE

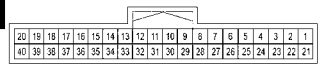
H.S.



Terminal No.	Color of Wire	Signal Name
1	–	–
2	–	–
3	–	–
4	B	GROUND
5	Y	I START WO ESCL SW
6	–	–
7	B	GROUND
8	W	O START SW BACKLIGHT LED

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FGY-NH
Connector Color	GRAY

H.S.



Terminal No.	Color of Wire	Signal Name
1	L	LIN 3 D
2	LA/G	DI FR LEFT D
3	LA/Y	DI FR RIGHT D
4	P	SPARE4 RL N
5	R	CAN-L
6	L	CAN-H
7	–	–
8	L	CAN-H
9	R	CAN-L
10	BG	DOORLOCK SW
11	Y	HAZARD SW D
12	W	PWR AUTOLIGHT SENSOR
13	–	–
14	–	–
15	–	–
16	–	–
17	L	PWR ATDVC
18	–	–
19	LG	AUTOLIGHT SENSOR
20	–	–
21	–	–
22	–	–
23	G	WL AUTHORIZATION RL
24	LA/R	DEFROSTER RL D
25	BR	BAT TEMP1 RL
26	–	–
27	Y	IGN1 RL
28	LA/W	IGN2 RL
29	–	–
30	V	GND AUTOLIGHT SENSOR
31	–	–
32	–	–
33	LG	CSW 5
34	Y	CSW 5
35	BG	SECURITY LED
36	G	CSW 3
37	GR	CSW 4
38	V	CSW 1
39	W	CSW 2
40	SB	DOORUNLOCK SW

AAKIA4523GB

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION CONNECTORS

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH
Connector Color	BLACK

H.S.

120	119	118	117	116	115	114	113	112	111	110	109	108	107	106	105	104	103	102	101
100	99	98	97	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81

Terminal No.	Color of Wire	Signal Name
81	–	–
82	W	SES FR HANDLE BUTTON SW
83	–	–
84	BR	CSW 2
85	SB	CSW 1
86	P	CSW 3
87	BG	CSW 4
88	W	START SW BACKLIGHT LED
89	Y	START W/O ESCL SW
90	–	–
91	–	–
92	BR	KEY CYLINDER LOCK SW
93	P	KEY CYLINDER UNLOCK SW
94	G	AT LOCKED IN PARK SW
95	V	SHORTING PIN
96	–	–
97	–	–
98	–	–
99	–	–
100	V	SES EXT DR ANTENNA A
101	–	–
102	–	–
103	–	–
104	R	DR KNOB SW
105	Y	SES DR HANDLE BUTTON SW
106	W	AUTO ACC2
107	–	–
108	–	–
109	–	–
110	BG	MR OUTPUT
111	–	–
112	–	–
113	–	–
114	Y	IMMOBILIZER KAZASHI B
115	W	IMMOBILIZER KAZASHI A
116	BG	SES INT FRONT ANTENNA B
117	GR	SES INT FRONT ANTENNA A

118	SB	SES EXT AS ANTENNA B
119	P	SES EXT AS ANTENNA A
120	BR	SES EXT DR ANTENNA B

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FBR-CS
Connector Color	BROWN

H.S.

167	166	165	164		163	162	161
176	175	174	173	172	171	170	169	168

Terminal No.	Color of Wire	Signal Name
161	W	PWR ECU
162	SB	PWM ROOMLAMP 1
163	L	AS LOCK OR UNLOCK D
164	–	–
165	V	DR OR FR LOCK D
166	–	–
167	LAV	PWR DOORLOCK1
168	BG	PWR FLASHERS
169	GR	PWR STOP LAMP
170	B	GND1
171	B	GND2
172	G	FR OR DR UNLOCK D
173	–	–
174	–	–
175	R	PWR DOORLOCK2
176	LG	PWR WIPER

AAKIA4524GB

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION CONNECTORS

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1J	–	TO ENGINE ROOM HARNESS
2J	R	TO ENGINE ROOM HARNESS
3J	–	TO ENGINE ROOM HARNESS
4J	–	TO ENGINE ROOM HARNESS
5J	–	TO ENGINE ROOM HARNESS
6J	–	TO ENGINE ROOM HARNESS
7J	–	TO ENGINE ROOM HARNESS
8J	–	TO ENGINE ROOM HARNESS
9J	W	TO ENGINE ROOM HARNESS
10J	–	TO ENGINE ROOM HARNESS
11J	–	TO ENGINE ROOM HARNESS
12J	–	TO ENGINE ROOM HARNESS
13J	–	TO ENGINE ROOM HARNESS
14J	–	TO ENGINE ROOM HARNESS
15J	–	TO ENGINE ROOM HARNESS
16J	–	TO ENGINE ROOM HARNESS
17J	–	TO ENGINE ROOM HARNESS
18J	–	TO ENGINE ROOM HARNESS
19J	–	TO ENGINE ROOM HARNESS
20J	–	TO ENGINE ROOM HARNESS
21J	LA/L	TO ENGINE ROOM HARNESS
22J	SHIELD	TO ENGINE ROOM HARNESS
23J	LG	TO ENGINE ROOM HARNESS
24J	V	TO ENGINE ROOM HARNESS
25J	L	TO ENGINE ROOM HARNESS
26J	BR	TO ENGINE ROOM HARNESS
27J	G	TO ENGINE ROOM HARNESS
28J	Y	TO ENGINE ROOM HARNESS
29J	L	TO ENGINE ROOM HARNESS
30J	V	TO ENGINE ROOM HARNESS
31J	–	TO ENGINE ROOM HARNESS
32J	–	TO ENGINE ROOM HARNESS
33J	R	TO ENGINE ROOM HARNESS
33J	Y	TO ENGINE ROOM HARNESS - (WITH DRIVER ASSISTNACE SYSTEM)
34J	L	TO ENGINE ROOM HARNESS
35J	BG	TO ENGINE ROOM HARNESS
36J	GR	TO ENGINE ROOM HARNESS
37J	Y	TO ENGINE ROOM HARNESS
38J	LA/BR	TO ENGINE ROOM HARNESS
39J	–	TO ENGINE ROOM HARNESS
40J	–	TO ENGINE ROOM HARNESS
41J	LA/R	TO ENGINE ROOM HARNESS
42J	W	TO ENGINE ROOM HARNESS
43J	L	TO ENGINE ROOM HARNESS
44J	B	TO ENGINE ROOM HARNESS
45J	SB	TO ENGINE ROOM HARNESS
46J	BR	TO ENGINE ROOM HARNESS
47J	W	TO ENGINE ROOM HARNESS
48J	R	TO ENGINE ROOM HARNESS
49J	SB	TO ENGINE ROOM HARNESS
50J	GR	TO ENGINE ROOM HARNESS
51J	W	TO ENGINE ROOM HARNESS
52J	R	TO ENGINE ROOM HARNESS
53J	BR	TO ENGINE ROOM HARNESS
54J	LG	TO ENGINE ROOM HARNESS
55J	LA/Y	TO ENGINE ROOM HARNESS
56J	LA/V	TO ENGINE ROOM HARNESS
57J	LA/R	TO ENGINE ROOM HARNESS
58J	W	TO ENGINE ROOM HARNESS
59J	BR	TO ENGINE ROOM HARNESS
60J	P	TO ENGINE ROOM HARNESS
61J	L	TO ENGINE ROOM HARNESS
62J	R	TO ENGINE ROOM HARNESS
63J	L	TO ENGINE ROOM HARNESS
64J	R	TO ENGINE ROOM HARNESS
65J	L	TO ENGINE ROOM HARNESS
66J	BG	TO ENGINE ROOM HARNESS
67J	–	TO ENGINE ROOM HARNESS
68J	–	TO ENGINE ROOM HARNESS
69J	G	TO ENGINE ROOM HARNESS
70J	L	TO ENGINE ROOM HARNESS
71J	–	TO ENGINE ROOM HARNESS
72J	–	TO ENGINE ROOM HARNESS
73J	–	TO ENGINE ROOM HARNESS
74J	–	TO ENGINE ROOM HARNESS
75J	–	TO ENGINE ROOM HARNESS
76J	–	TO ENGINE ROOM HARNESS
77J	–	TO ENGINE ROOM HARNESS
78J	–	TO ENGINE ROOM HARNESS
79J	SHIELD	TO ENGINE ROOM HARNESS
80J	B	TO ENGINE ROOM HARNESS
81J	W	TO ENGINE ROOM HARNESS
82J	–	TO ENGINE ROOM HARNESS
83J	–	TO ENGINE ROOM HARNESS
84J	–	TO ENGINE ROOM HARNESS
85J	–	TO ENGINE ROOM HARNESS
86J	–	TO ENGINE ROOM HARNESS
87J	–	TO ENGINE ROOM HARNESS
88J	–	TO ENGINE ROOM HARNESS
89J	–	TO ENGINE ROOM HARNESS
90J	–	TO ENGINE ROOM HARNESS
91J	–	TO ENGINE ROOM HARNESS
92J	Y	TO ENGINE ROOM HARNESS
93J	G	TO ENGINE ROOM HARNESS
94J	L	TO ENGINE ROOM HARNESS
95J	P	TO ENGINE ROOM HARNESS
96J	–	TO ENGINE ROOM HARNESS
97J	SB	TO ENGINE ROOM HARNESS
98J	P	TO ENGINE ROOM HARNESS
99J	LA/R	TO ENGINE ROOM HARNESS
100J	R	TO ENGINE ROOM HARNESS

AAKIA4525GB

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION CONNECTORS

Connector No.	M36
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1G	LA/R	TO BODY NO. 2 HARNESS
2G	W	TO BODY NO. 2 HARNESS
3G	Y	TO BODY NO. 2 HARNESS
4G	BG	TO BODY NO. 2 HARNESS
5G	G	TO BODY NO. 2 HARNESS
6G	SB	TO BODY NO. 2 HARNESS
7G	P	TO BODY NO. 2 HARNESS
8G	LA/Y	TO BODY NO. 2 HARNESS
9G	LA/W	TO BODY NO. 2 HARNESS
10G	R	TO BODY NO. 2 HARNESS
11G	G	TO BODY NO. 2 HARNESS
12G	L	TO BODY NO. 2 HARNESS
13G	BR	TO BODY NO. 2 HARNESS
14G	–	TO BODY NO. 2 HARNESS
15G	Y	TO BODY NO. 2 HARNESS
16G	–	TO BODY NO. 2 HARNESS
17G	–	TO BODY NO. 2 HARNESS
18G	R	TO BODY NO. 2 HARNESS
19G	LA/R	TO BODY NO. 2 HARNESS
20G	W	TO BODY NO. 2 HARNESS
21G	BR	TO BODY NO. 2 HARNESS
22G	P	TO BODY NO. 2 HARNESS
23G	L	TO BODY NO. 2 HARNESS
24G	W	TO BODY NO. 2 HARNESS
25G	L	TO BODY NO. 2 HARNESS

26G	–	TO BODY NO. 2 HARNESS
27G	–	TO BODY NO. 2 HARNESS
28G	–	TO BODY NO. 2 HARNESS
29G	–	TO BODY NO. 2 HARNESS
30G	–	TO BODY NO. 2 HARNESS
31G	–	TO BODY NO. 2 HARNESS
32G	–	TO BODY NO. 2 HARNESS
33G	–	TO BODY NO. 2 HARNESS
34G	V	TO BODY NO. 2 HARNESS
35G	BR	TO BODY NO. 2 HARNESS
36G	SHIELD	TO BODY NO. 2 HARNESS
37G	LG	TO BODY NO. 2 HARNESS
38G	V	TO BODY NO. 2 HARNESS
39G	SHIELD	TO BODY NO. 2 HARNESS
40G	G	TO BODY NO. 2 HARNESS
41G	R	TO BODY NO. 2 HARNESS
42G	–	TO BODY NO. 2 HARNESS
43G	–	TO BODY NO. 2 HARNESS
44G	BG	TO BODY NO. 2 HARNESS
45G	SHIELD	TO BODY NO. 2 HARNESS
46G	L	TO BODY NO. 2 HARNESS
47G	Y	TO BODY NO. 2 HARNESS
48G	SHIELD	TO BODY NO. 2 HARNESS
49G	W	TO BODY NO. 2 HARNESS
50G	R	TO BODY NO. 2 HARNESS
51G	–	TO BODY NO. 2 HARNESS
52G	–	TO BODY NO. 2 HARNESS
53G	–	TO BODY NO. 2 HARNESS
54G	–	TO BODY NO. 2 HARNESS
55G	–	TO BODY NO. 2 HARNESS
56G	–	TO BODY NO. 2 HARNESS
57G	–	TO BODY NO. 2 HARNESS
58G	–	TO BODY NO. 2 HARNESS
59G	–	TO BODY NO. 2 HARNESS
60G	GR	TO BODY NO. 2 HARNESS
61G	BR	TO BODY NO. 2 HARNESS
62G	–	TO BODY NO. 2 HARNESS
63G	–	TO BODY NO. 2 HARNESS
64G	–	TO BODY NO. 2 HARNESS
65G	–	TO BODY NO. 2 HARNESS
66G	–	TO BODY NO. 2 HARNESS
67G	–	TO BODY NO. 2 HARNESS
68G	–	TO BODY NO. 2 HARNESS
69G	–	TO BODY NO. 2 HARNESS
70G	–	TO BODY NO. 2 HARNESS
71G	–	TO BODY NO. 2 HARNESS
72G	–	TO BODY NO. 2 HARNESS
73G	–	TO BODY NO. 2 HARNESS
74G	–	TO BODY NO. 2 HARNESS
76G	–	TO BODY NO. 2 HARNESS
77G	–	TO BODY NO. 2 HARNESS
78G	LA/Y	TO BODY NO. 2 HARNESS
79G	LA/V	TO BODY NO. 2 HARNESS

80G	LA/B	TO BODY NO. 2 HARNESS
81G	LA/L	TO BODY NO. 2 HARNESS
82G	–	TO BODY NO. 2 HARNESS
83G	–	TO BODY NO. 2 HARNESS
84G	–	TO BODY NO. 2 HARNESS
85G	–	TO BODY NO. 2 HARNESS
86G	–	TO BODY NO. 2 HARNESS
87G	–	TO BODY NO. 2 HARNESS
88G	–	TO BODY NO. 2 HARNESS
89G	–	TO BODY NO. 2 HARNESS
90G	–	TO BODY NO. 2 HARNESS
91G	R	TO BODY NO. 2 HARNESS
92G	LA/L	TO BODY NO. 2 HARNESS
93G	W	TO BODY NO. 2 HARNESS
94G	LG	TO BODY NO. 2 HARNESS
95G	GR	TO BODY NO. 2 HARNESS
96G	SB	TO BODY NO. 2 HARNESS
97G	LA/BR	TO BODY NO. 2 HARNESS
98G	GR	TO BODY NO. 2 HARNESS
99G	Y	TO BODY NO. 2 HARNESS
100G	V	TO BODY NO. 2 HARNESS

Connector No.	M44
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FW-CS
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1P	R	IGNITION
2P	G	IGNITION
3P	Y	IGNITION RELAY-2 CONTROL
4P	LG	REAR WINDOW DEFOGGER RELAY OUTPUT
5P	GR	REAR WINDOW DEFOGGER RELAY OUTPUT
6P	LA/R	REAR WINDOW DEFOGGER RELAY CONTROL
7P	Y	IGNITION
8P	V	IGNITION
9P	L	BATTERY
10P	LG	IGNITION
11P	–	–
12P	–	–
13P	G	BATTERY
14P	–	–

15P	L	BATTERY
16P	LA/W	FRONT BLOWER MOTOR RELAY CONTROL

Connector No.	M68
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FBR-CS
Connector Color	BROWN

H.S.

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

Terminal No.	Color of Wire	Signal Name
1R	V	ILLUMINATION +
2R	G	IGNITION
3R	V	BATTERY
4R	–	–
5R	–	–
6R	LA/L	ACCESSORY
7R	LA/V	BATTERY
8R	–	–
9R	–	–
10R	GR	BATTERY
11R	–	–
12R	–	–
13R	–	–
14R	W	BATTERY
15R	W	BATTERY
16R	GR	ACCESSORY

AAKIA4526GB

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION CONNECTORS

Connector No.	M73
Connector Name	JOINT CONNECTOR-M23
Connector Type	SAC08JW
Connector Color	WHITE

H.S.

8 7 6 5 4 3 2 1

Terminal No.	Color of Wire	Signal Name
1	W	BATTERY
2	GR	BATTERY
3	W	BATTERY
4	W	BATTERY
5	W	BATTERY
6	W	BATTERY
7	W	BATTERY
8	W	BATTERY

Connector No.	M76
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	GND
2	–	–
3	–	–
4	–	–
5	–	–
6	–	–
7	BG	SECURITY
8	–	–
9	GR	ECO MODE SW
10	–	–
11	–	–
12	–	–
13	–	–
14	–	–
15	L	OUTSIDE TEMP SENSOR

16	–	–
17	BG	SATELLITE SW GND
18	SB	TRIP RESET SW
19	–	–
20	Y	OUTSIDE TEMP GND
21	L	GND (STRG SW GND)
22	Y	STRG SW A
23	GR	STRG SW B
24	BR	WASHER SW
25	V	BRAKE OIL SW
26	G	PKB SW
27	–	–
28	Y	DR BELT SW
29	R	SPORT MODE SW
30	LG	M RANGE
31	SB	NOT M RANGE
32	BG	AT SHIFT UP
33	BR	AT SHIFT DOWN
34	–	–
35	–	–
36	GR	ILL UP SW
37	V	ILL DOWN SW
38	G	8P/R OUTPUT
39	W	2P/R OUTPUT
40	–	–

Connector No.	M77
Connector Name	COMBINATION METER
Connector Type	TH12FW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
41	L	CAN-H
42	P	CAN-L
43	R	ILL CONT OUT
44	LA/B	FUEL SENSOR GND
45	G	BAT
46	V	IGN
47	SB	M-CAN H
48	LG	M-CAN L
49	–	–
50	–	–
51	LA/L	FUEL SENSOR

52	B	G1

Connector No.	M107
Connector Name	CVT SHIFT SELECTOR
Connector Type	TH16FW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	P	O/D OFF SW
2	B	GROUND
3	R	–
4	B	GROUND
5	G	ILL CONT OUT
6	B	GROUND
7	LG	M RANGE
8	BR	AT SHIFT DOWN
9	BG	AT SHIFT UP
10	B	GROUND
11	SB	NOT M RANGE
12	L	O PWR ATD/C
13	G	I AT LOCKED IN PARK SW
14	–	–
15	–	–
16	–	–

6	B	GROUND
7	B	GROUND
8	B	GROUND

Connector No.	M170
Connector Name	JOINT CONNECTOR-M29
Connector Type	SAC08JW
Connector Color	WHITE

H.S.

8 7 6 5 4 3 2 1

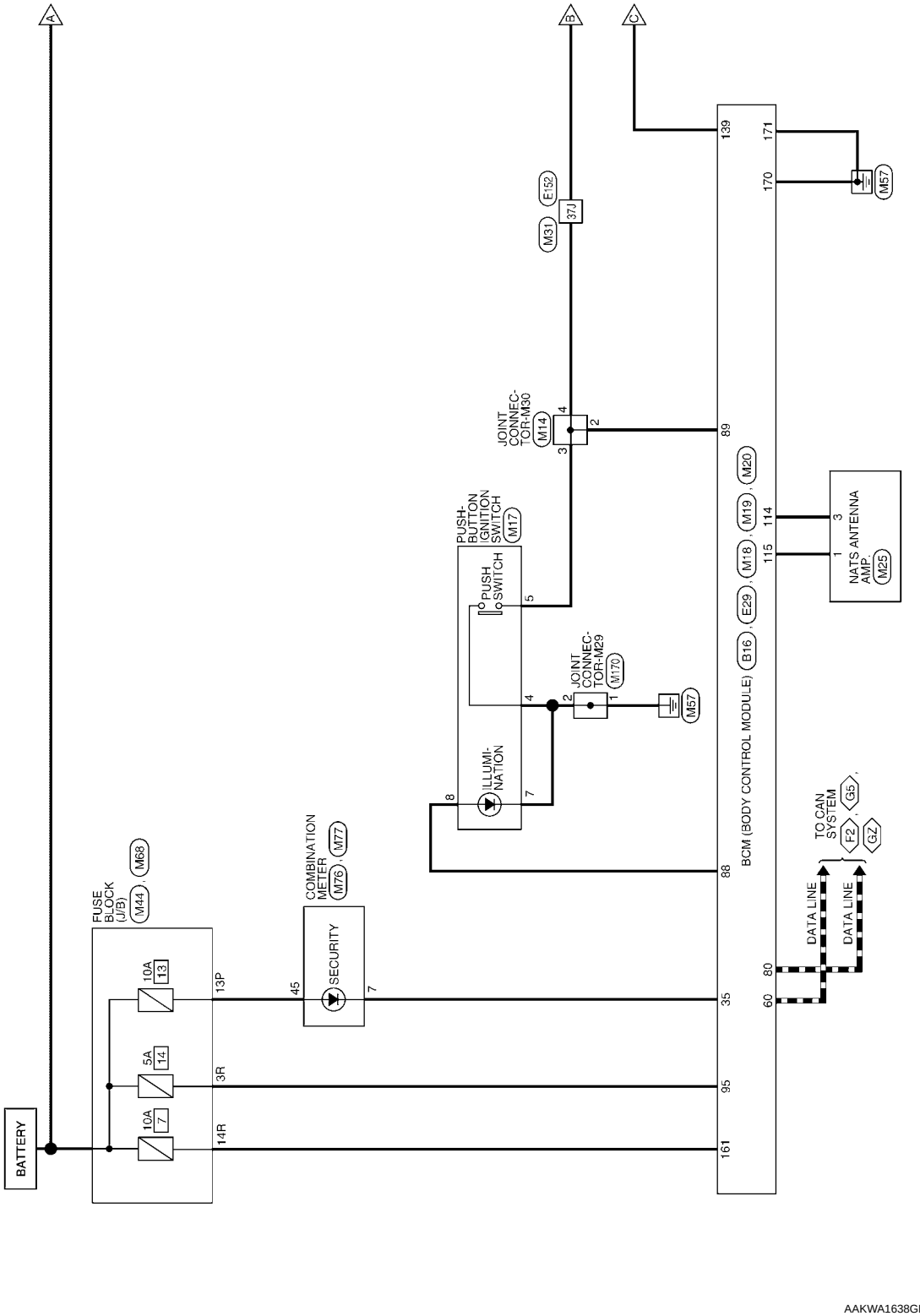
Terminal No.	Color of Wire	Signal Name
1	B	GROUND
2	B	GROUND
3	B	GROUND
4	B	GROUND
5	B	GROUND

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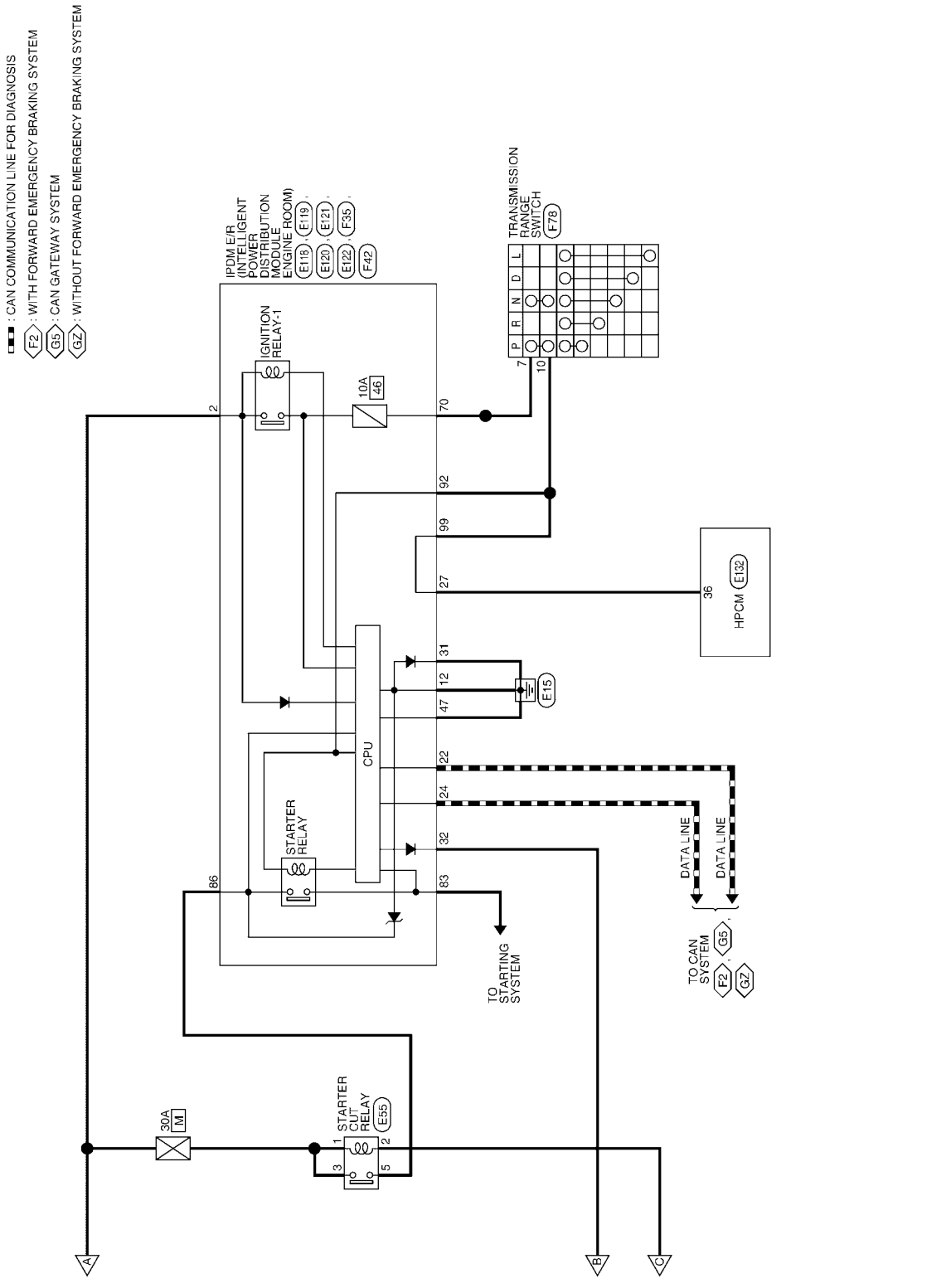
NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

Wiring Diagram

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AAKWA1638GB



AAKWA1639GB

NVIS CONNECTORS

Connector No.	B16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH
Connector Color	GREEN

H.S.

60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61

Terminal No.	Color of Wire	Signal Name
41	–	–
42	–	–
43	–	–
44	–	–
45	–	–
46	R	SES BACKDOOR BUTTON SW
47	–	–
48	–	–
49	G	NO TOUCH TGATE SENSOR
50	W	RR DOOR SW
51	LG	TGATE SW
52	R	RL DOOR SW
53	SB	AS DOOR2 SW
54	–	–
55	LA/G	RR AUTOSTOP SW
56	Y	TGATE OPENER SW
57	SB	DR DOOR2 SW
58	–	–
59	–	–
60	L	CAN-H
61	V	SES EXT REAR ANTENNA B
62	Y	SES INT MIDDLE ANTENNA B
63	L	SES INT MIDDLE ANTENNA A
64	LG	SES EXT REAR ANTENNA A
65	–	–
66	–	–
67	–	–
68	–	–
69	–	–
70	–	–
71	–	–
72	–	–
73	–	–
74	–	–
75	–	–
76	–	–
77	V	SHIFT LOCK RLY

78	–	–
79	LA/W	STOP LAMP3
80	P	CAN-L

Connector No.	E29
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH24FB-NH
Connector Color	BLACK

H.S.

132	131	130	129	128	127	126	125	124	123	122	121
144	143	142	141	140	139	138	137	136	135	134	133

Terminal No.	Color of Wire	Signal Name
121	–	–
122	–	–
123	–	–
124	–	–
125	LG	BRAKE SW2
126	W	BRAKE SW1
127	–	–
128	–	–
129	–	–
130	–	–
131	–	–
132	Y	BUZZER (WITH I-KEY)
133	–	–
134	–	–
135	BR	DI FR LEFT E
136	GR	DI FR RIGHT E
137	–	–
138	–	–
139	G	STCUT RL
140	–	–
141	–	–
142	–	–
143	–	–
144	–	–

Connector No.	E55
Connector Name	STARTER CUT RELAY
Connector Type	MS02FL-M2-LC
Connector Color	BLUE

H.S.

3
5
2	1

Terminal No.	Color of Wire	Signal Name
1	SB	BATTERY
2	G	RELAY CONTROL
3	L	BATTERY
5	GR	RELAY OUTPUT

Connector No.	E118
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	L02FB-MC
Connector Color	BLACK

H.S.

1
2

Terminal No.	Color of Wire	Signal Name
1	R	FL BAT 2
2	W	FL BAT 1

Connector No.	E119
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	NS16FGY-CS
Connector Color	GRAY

H.S.

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

Terminal No.	Color of Wire	Signal Name
3	P	IGN NOT COLUMN LOCK
4	Y	LIGHT POSITION REAR LH
5	–	–
6	–	–
7	–	–
8	BR	ACTUATOR4 CABIN (3FB4)
9	L	LO HORN RLY
10	–	–
11	V	IGN AIRBAG
12	B	SIGNAL GROUND
13	–	–
14	–	–
15	–	–
16	G	LIGHT REVERSE LAMP
17	W	LIGHT POSITION REAR RH
18	–	–

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NVIS CONNECTORS

Connector No.	E120
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH24FGY-NH
Connector Color	GRAY

H.S.

30	29	28	27	26	25	24	23	22	21	20	19
42	41	40	39	38	37	36	35	34	33	32	31

Terminal No.	Color of Wire	Signal Name
19	LG	IGN ECM
20	–	–
21	–	–
22	P	CAN-L
23	–	–
24	L	CAN-H
25	–	–
26	–	–
27	SB	CABIN MOTOR 5
28	R	CABIN MOTOR 6
29	LG	CABIN MOTOR 7
30	Y	CABIN MOTOR 8
31	B	2ND SIGNAL GROUND
32	GR	LI PUSH SW
33	BR	AUTO STOP WIPER
34	–	–
35	–	–
36	–	–
37	–	–
38	–	–
39	L	HEV CAN-H
40	G	HEV CAN-L
41	W	CABIN MOTOR 3
42	R	CABIN MOTOR 4

Connector No.	E121
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	24340540BR
Connector Color	RED

H.S.

45	44	43
48	47	46

Terminal No.	Color of Wire	Signal Name
43	–	–
44	R	BAT ABS VALVE
45	V	FR WIPER HI
46	W	FUEL PUMP
47	B	POWER GROUND
48	Y	FR WIPER LO

Connector No.	E122
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	YLA06FGY
Connector Color	GRAY

H.S.

83	82	81
86	85	84

Terminal No.	Color of Wire	Signal Name
81	V	FL ECM USM SUPPLY
82	–	–
83	G	STARTER
84	LG	BATT MOTOR FAN LO
85	–	–
86	GR	FL STARTER

Connector No.	E132
Connector Name	HPCM
Connector Type	RH40FBR-RZ8-L-RH
Connector Color	BROWN

H.S.

33	37	41	45	49	53	57	61	65	69	73	77
34	38	42	46	50	54	58	62	66	70	74	78
35	39	43	47	51	55	59	63	67	71	75	79
36	40	44	48	52	56	60	64	68	72	76	80

Terminal No.	Color of Wire	Signal Name
33	–	–
34	–	–
35	–	–
36	SB	P/N SIGNAL
37	–	–
38	–	–
39	–	–
40	–	–
41	–	–
42	–	–
43	–	–
44	–	–
45	–	–
46	–	–
47	–	–
48	–	–
49	–	–
50	B	HPCM GROUND
51	SHIELD	SHIELD
52	–	–
53	–	–
54	B	HPCM GROUND
55	–	–
56	–	–
57	B	HPCM GROUND
58	–	–
59	–	–
60	–	–
61	–	–
62	–	–
63	LG	12V BATTERY TEMPERATURE SENSOR
64	–	–
65	–	–
66	–	–
67	–	–
68	–	–
69	V	12V BATTERY CURRENT SENSOR
70	W	SENSOR GROUND
71	–	–
72	BR	SENSER POWER SUPPLY
73	–	–
74	–	–
75	–	–
76	–	–
77	L	POWER SUPPLY FOR HPCM
78	–	–
79	GR	SHIFT LOCK SOLENOID
80	–	–

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NVIS CONNECTORS

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1J	–	TO MAIN HARNESS
2J	Y	TO MAIN HARNESS
3J	–	TO MAIN HARNESS
4J	–	TO MAIN HARNESS
5J	–	TO MAIN HARNESS
6J	–	TO MAIN HARNESS
7J	–	TO MAIN HARNESS
8J	–	TO MAIN HARNESS
9J	BR	TO MAIN HARNESS
10J	–	TO MAIN HARNESS
11J	–	TO MAIN HARNESS
12J	–	TO MAIN HARNESS
13J	–	TO MAIN HARNESS
14J	–	TO MAIN HARNESS
15J	–	TO MAIN HARNESS
16J	–	TO MAIN HARNESS
17J	–	TO MAIN HARNESS
18J	–	TO MAIN HARNESS
19J	–	TO MAIN HARNESS
20J	–	TO MAIN HARNESS
21J	GR	TO MAIN HARNESS
22J	SHIELD	TO MAIN HARNESS
23J	LG	TO MAIN HARNESS
24J	V	TO MAIN HARNESS
25J	L	TO MAIN HARNESS
26J	BR	TO MAIN HARNESS
27J	G	TO MAIN HARNESS
28J	R	TO MAIN HARNESS
29J	L	TO MAIN HARNESS
30J	V	TO MAIN HARNESS
31J	–	TO MAIN HARNESS
32J	–	TO MAIN HARNESS
33J	R	TO MAIN HARNESS
34J	L	TO MAIN HARNESS
35J	BG	TO MAIN HARNESS
36J	LG	TO MAIN HARNESS
37J	GR	TO MAIN HARNESS
38J	BR	TO MAIN HARNESS
39J	–	TO MAIN HARNESS
40J	–	TO MAIN HARNESS
41J	G	TO MAIN HARNESS
42J	W	TO MAIN HARNESS
43J	L	TO MAIN HARNESS
44J	B	TO MAIN HARNESS
45J	SB	TO MAIN HARNESS
46J	BR	TO MAIN HARNESS
47J	W	TO MAIN HARNESS
48J	W	TO MAIN HARNESS
49J	L	TO MAIN HARNESS
50J	P	TO MAIN HARNESS
51J	W	TO MAIN HARNESS
52J	R	TO MAIN HARNESS
53J	SB	TO MAIN HARNESS
54J	LG	TO MAIN HARNESS
55J	W	TO MAIN HARNESS
56J	BG	TO MAIN HARNESS
57J	R	TO MAIN HARNESS
58J	V	TO MAIN HARNESS
59J	BR	TO MAIN HARNESS
60J	P	TO MAIN HARNESS
61J	L	TO MAIN HARNESS
62J	P	TO MAIN HARNESS
63J	L	TO MAIN HARNESS
64J	R	TO MAIN HARNESS
65J	L	TO MAIN HARNESS
66J	BG	TO MAIN HARNESS
67J	–	TO MAIN HARNESS
68J	–	TO MAIN HARNESS
69J	G	TO MAIN HARNESS
70J	L	TO MAIN HARNESS
71J	–	TO MAIN HARNESS
72J	–	TO MAIN HARNESS
73J	–	TO MAIN HARNESS
74J	–	TO MAIN HARNESS
75J	–	TO MAIN HARNESS
76J	–	TO MAIN HARNESS
77J	–	TO MAIN HARNESS
78J	–	TO MAIN HARNESS
79J	SHIELD	TO MAIN HARNESS
80J	B	TO MAIN HARNESS
81J	W	TO MAIN HARNESS
82J	–	TO MAIN HARNESS
83J	–	TO MAIN HARNESS
84J	–	TO MAIN HARNESS
85J	–	TO MAIN HARNESS
86J	–	TO MAIN HARNESS
87J	–	TO MAIN HARNESS
88J	–	TO MAIN HARNESS
89J	–	TO MAIN HARNESS
90J	–	TO MAIN HARNESS
91J	LG	TO MAIN HARNESS
92J	–	TO MAIN HARNESS
93J	L	TO MAIN HARNESS
94J	L	TO MAIN HARNESS
95J	BR	TO MAIN HARNESS
96J	–	TO MAIN HARNESS
97J	GR	TO MAIN HARNESS
98J	P	TO MAIN HARNESS
99J	W	TO MAIN HARNESS
100J	Y	TO MAIN HARNESS

Connector No.	F35
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	NS16FW-CS
Connector Color	WHITE

H.S.

71	70	69	68		67	66	65
80	79	78	77	76	75	74	73	72

Terminal No.	Color of Wire	Signal Name
65	–	–
66	W	ACTUATOR1 (3FB1)
67	V	LI ECM ACT5 DRIVER
68	–	–
69	–	–
70	R	IGN AT LPG
71	Y	IGN REVERSE SW AC VALVE
72	LG	ACTUATOR5 (3FBA)
73	G	ACTUATOR1 2 (3FB)
74	–	–
75	R	ACTUATOR3 (3FB3)
76	P	LI FUEL PUMP DRIVER
77	–	–
78	BR	ACTUATOR2 (3FB2)
79	G	LI LIGHT REVERSE SW
80	–	–

Connector No.	F42
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH24FB-NH
Connector Color	BLACK

H.S.

98	97	96	95	94	93	92	91	90	89	86	87
110	109	108	107	106	105	104	103	102	101	100	99

Terminal No.	Color of Wire	Signal Name
87	L	HEV CAN-H
88	G	HEV CAN-L
89	W	MOTOR CABIN 3
90	R	MOTOR CABIN 4
91	–	–
92	BG	LI NP SW
93	P	LI ECM DRIVER
94	–	–
95	–	–
96	–	–
97	–	–
98	–	–
99	BG	MOTOR CABIN 5
100	GR	MOTOR CABIN 6
101	LG	MOTOR CABIN 7
102	Y	MOTOR CABIN 8
103	W	HOOD SW2
104	–	–
105	–	–
106	BR	LO FAN RELAY2(PWM)
107	–	–
108	–	–
109	–	–
110	–	–

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NVIS CONNECTORS

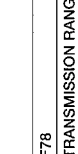
Connector No.	F78
Connector Name	TRANSMISSION RANGE SWITCH
Connector Type	YDX06FB-HS4
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	–	–
2	Y	D RANGE SW
3	–	–
4	R	VIGN
5	V	P RANGE SW
6	SB	L RANGE SW
7	Y	IGN AT LPG
8	G	R RANGE SW
9	R	N RANGE SW
10	BG	LI NP SW

Connector No.	M14
Connector Name	JOINT CONNECTOR- M30
Connector Type	SAC04JW
Connector Color	WHITE

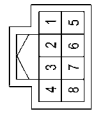
H.S.



Terminal No.	Color of Wire	Signal Name
1	Y	I IGN SW
2	Y	I START WO ESCL SW
3	Y	I START WO ESCL SW
4	Y	LI PUSH SW

Connector No.	M17
Connector Name	PUSH-BUTTON IGNITION SWITCH
Connector Type	TH08FW-NH
Connector Color	WHITE

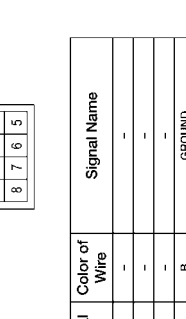
H.S.



Terminal No.	Color of Wire	Signal Name
1	–	–
2	–	–
3	–	–
4	B	GROUND
5	Y	I START WO ESCL SW
6	–	–
7	B	GROUND
8	W	O START SW BACKLIGHT LED

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FGY-NH
Connector Color	GRAY

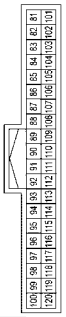
H.S.



Terminal No.	Color of Wire	Signal Name
1	L	LIN 3 D
2	LA/G	DI FR LEFT D
3	LA/Y	DI FR RIGHT D
4	P	SPARE4 RL N
5	R	CAN-L
6	L	CAN-H
7	–	–
8	L	CAN-H
9	R	CAN-L
10	BG	DOORLOCK SW
11	Y	HAZARD SW D
12	W	PWR AUTOLIGHT SENSOR
13	–	–
14	–	–
15	–	–
16	–	–
17	L	PWR ATDVC
18	–	–
19	LG	AUTOLIGHT SENSOR
20	–	–
21	–	–
22	–	–
23	G	WL AUTHORIZATION RL
24	LA/R	DEFROSTER RL D
25	BR	BAT TEMP1 RL
26	–	–
27	Y	IGN1 RL
28	LA/W	IGN2 RL
29	–	–
30	V	GND AUTOLIGHT SENSOR
31	–	–
32	–	–
33	LG	CSW 5
34	Y	CSW 5
35	BG	SECURITY LED
36	G	CSW 3
37	GR	CSW 4
38	V	CSW 1
39	W	CSW 2
40	SB	DOORUNLOCK SW

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH
Connector Color	BLACK

H.S.



Terminal No.	Color of Wire	Signal Name
81	–	–
82	W	SES FR HANDLE BUTTON SW
83	–	–
84	BR	CSW 2
85	SB	CSW 1
86	P	CSW 3
87	BG	CSW 4
88	W	START SW BACKLIGHT LED
89	Y	START WO ESCL SW
90	–	–
91	–	–
92	BR	KEY CYLINDER LOCK SW
93	P	KEY CYLINDER UNLOCK SW
94	G	AT LOCKED IN PARK SW
95	V	SHORTING PIN
96	–	–
97	–	–
98	–	–
99	–	–
100	V	SES EXT DR ANTENNA A
101	–	–
102	–	–
103	–	–
104	R	DR KNOB SW
105	Y	SES DR HANDLE BUTTON SW
106	W	AUTO ACC2
107	–	–
108	–	–
109	–	–
110	BG	MR OUTPUT
111	–	–
112	–	–
113	–	–
114	Y	IMMOBILIZER KAZASHI B
115	W	IMMOBILIZER KAZASHI A
116	BG	SES INT FRONT ANTENNA B
117	GR	SES INT FRONT ANTENNA A
118	SB	SES EXT AS ANTENNA B
119	P	SES EXT AS ANTENNA A
120	BR	SES EXT DR ANTENNA B

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NVIS CONNECTORS

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FBR-CS
Connector Color	BROWN

H.S.

167	166	165	164		163	162	161
176	175	174	173	172	171	170	169	168

Terminal No.	Color of Wire	Signal Name
161	W	PWR ECU
162	SB	PWM ROOMLAMP 1
163	L	AS LOCK OR UNLOCK D
164	–	–
165	V	DR OR FR LOCK D
166	–	–
167	LA/Y	PWR DOORLOCK1
168	BG	PWR FLASHERS
169	GR	PWR STOP LAMP
170	B	GND1
171	B	GND2
172	G	FR OR DR UNLOCK D
173	–	–
174	–	–
175	R	PWR DOORLOCK2
176	LG	PWR WIPER

Connector No.	M25
Connector Name	NATS ANTENNA AMP.
Connector Type	NH03FW
Connector Color	WHITE

H.S.

1
2
3

Terminal No.	Color of Wire	Signal Name
1	W	O IMMOBILIZER KAZASHI A
2	–	–
3	Y	O IMMOBILIZER KAZASHI B

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4
Connector Color	WHITE

H.S.

5J	4J	3J	2J	1J
10J	9J	8J	7J	6J

21J	20J	19J	18J	17J	16J	15J	14J	13J	12J	11J
33J	29J	28J	27J	26J	25J	24J	23J	22J		

41J	40J	39J	38J	37J	36J	35J	34J	33J	32J	31J
53J	49J	48J	47J	46J	45J	44J	43J	42J		

61J	60J	59J	58J	57J	56J	55J	54J	53J	52J	51J
73J	69J	68J	67J	66J	65J	64J	63J	62J		

81J	80J	79J	78J	77J	76J	75J	74J	73J	72J	71J
90J	89J	88J	87J	86J	85J	84J	83J	82J		

95J	94J	93J	92J	91J
100J	99J	98J	97J	96J

Terminal No.	Color of Wire	Signal Name
1J	–	TO ENGINE ROOM HARNESS
2J	R	TO ENGINE ROOM HARNESS
3J	–	TO ENGINE ROOM HARNESS
4J	–	TO ENGINE ROOM HARNESS
5J	–	TO ENGINE ROOM HARNESS
6J	–	TO ENGINE ROOM HARNESS
7J	–	TO ENGINE ROOM HARNESS
8J	–	TO ENGINE ROOM HARNESS
9J	W	TO ENGINE ROOM HARNESS
10J	–	TO ENGINE ROOM HARNESS
11J	–	TO ENGINE ROOM HARNESS
12J	–	TO ENGINE ROOM HARNESS
13J	–	TO ENGINE ROOM HARNESS
14J	–	TO ENGINE ROOM HARNESS
15J	–	TO ENGINE ROOM HARNESS
16J	–	TO ENGINE ROOM HARNESS
17J	–	TO ENGINE ROOM HARNESS
18J	–	TO ENGINE ROOM HARNESS
19J	–	TO ENGINE ROOM HARNESS
20J	–	TO ENGINE ROOM HARNESS
21J	LA/L	TO ENGINE ROOM HARNESS
22J	SHIELD	TO ENGINE ROOM HARNESS
23J	LG	TO ENGINE ROOM HARNESS
24J	V	TO ENGINE ROOM HARNESS
25J	L	TO ENGINE ROOM HARNESS
26J	BR	TO ENGINE ROOM HARNESS
27J	G	TO ENGINE ROOM HARNESS
28J	Y	TO ENGINE ROOM HARNESS
29J	L	TO ENGINE ROOM HARNESS
30J	V	TO ENGINE ROOM HARNESS
31J	–	TO ENGINE ROOM HARNESS
32J	–	TO ENGINE ROOM HARNESS
33J	R	TO ENGINE ROOM HARNESS
33J	Y	TO ENGINE ROOM HARNESS - (WITH DRIVER ASSISTNACE SYSTEM)
34J	L	TO ENGINE ROOM HARNESS
35J	BG	TO ENGINE ROOM HARNESS
36J	GR	TO ENGINE ROOM HARNESS
37J	Y	TO ENGINE ROOM HARNESS
38J	LA/BR	TO ENGINE ROOM HARNESS
38J	–	TO ENGINE ROOM HARNESS
40J	–	TO ENGINE ROOM HARNESS
41J	LA/R	TO ENGINE ROOM HARNESS
42J	W	TO ENGINE ROOM HARNESS
43J	L	TO ENGINE ROOM HARNESS
44J	B	TO ENGINE ROOM HARNESS
45J	SB	TO ENGINE ROOM HARNESS
46J	BR	TO ENGINE ROOM HARNESS
47J	W	TO ENGINE ROOM HARNESS
48J	R	TO ENGINE ROOM HARNESS
49J	SB	TO ENGINE ROOM HARNESS
50J	GR	TO ENGINE ROOM HARNESS
51J	W	TO ENGINE ROOM HARNESS
52J	R	TO ENGINE ROOM HARNESS
53J	BR	TO ENGINE ROOM HARNESS
54J	LG	TO ENGINE ROOM HARNESS
55J	LA/Y	TO ENGINE ROOM HARNESS
56J	LA/V	TO ENGINE ROOM HARNESS
57J	LA/R	TO ENGINE ROOM HARNESS
58J	W	TO ENGINE ROOM HARNESS
59J	BR	TO ENGINE ROOM HARNESS
60J	P	TO ENGINE ROOM HARNESS
61J	L	TO ENGINE ROOM HARNESS
62J	R	TO ENGINE ROOM HARNESS
63J	L	TO ENGINE ROOM HARNESS
64J	R	TO ENGINE ROOM HARNESS
65J	L	TO ENGINE ROOM HARNESS
66J	BG	TO ENGINE ROOM HARNESS
67J	–	TO ENGINE ROOM HARNESS
68J	–	TO ENGINE ROOM HARNESS
69J	G	TO ENGINE ROOM HARNESS
70J	L	TO ENGINE ROOM HARNESS
71J	–	TO ENGINE ROOM HARNESS
72J	–	TO ENGINE ROOM HARNESS
73J	–	TO ENGINE ROOM HARNESS
74J	–	TO ENGINE ROOM HARNESS
75J	–	TO ENGINE ROOM HARNESS
76J	–	TO ENGINE ROOM HARNESS
77J	–	TO ENGINE ROOM HARNESS
78J	–	TO ENGINE ROOM HARNESS
79J	SHIELD	TO ENGINE ROOM HARNESS
80J	B	TO ENGINE ROOM HARNESS
81J	W	TO ENGINE ROOM HARNESS
82J	–	TO ENGINE ROOM HARNESS
83J	–	TO ENGINE ROOM HARNESS
84J	–	TO ENGINE ROOM HARNESS
85J	–	TO ENGINE ROOM HARNESS
86J	–	TO ENGINE ROOM HARNESS
87J	–	TO ENGINE ROOM HARNESS
88J	–	TO ENGINE ROOM HARNESS
89J	–	TO ENGINE ROOM HARNESS
90J	–	TO ENGINE ROOM HARNESS
91J	–	TO ENGINE ROOM HARNESS
92J	Y	TO ENGINE ROOM HARNESS
93J	G	TO ENGINE ROOM HARNESS
94J	L	TO ENGINE ROOM HARNESS
95J	P	TO ENGINE ROOM HARNESS
96J	–	TO ENGINE ROOM HARNESS
97J	SB	TO ENGINE ROOM HARNESS
98J	P	TO ENGINE ROOM HARNESS
99J	LA/R	TO ENGINE ROOM HARNESS
100J	R	TO ENGINE ROOM HARNESS

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NVIS CONNECTORS

Connector No.	M44
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FW-CS
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1P	R	IGNITION
2P	G	IGNITION
3P	Y	IGNITION RELAY-2 CONTROL
4P	LG	REAR WINDOW DEFOGGER RELAY OUTPUT
5P	GR	REAR WINDOW DEFOGGER RELAY OUTPUT
6P	LA/R	REAR WINDOW DEFOGGER RELAY CONTROL
7P	Y	IGNITION
8P	V	IGNITION
9P	L	BATTERY
10P	LG	IGNITION
11P	–	–
12P	–	–
13P	G	BATTERY
14P	–	–
15P	L	BATTERY
16P	LA/W	FRONT BLOWER MOTOR RELAY CONTROL

Connector No.	M68
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FBR-CS
Connector Color	BROWN

H.S.

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

Terminal No.	Color of Wire	Signal Name
1R	V	ILLUMINATION +
2R	G	IGNITION
3R	V	BATTERY
4R	–	–
5R	–	–
6R	LA/L	ACCESSORY
7R	LA/V	BATTERY
8R	–	–
9R	–	–
10R	GR	BATTERY
11R	–	–
12R	–	–
13R	–	–
14R	W	BATTERY
15R	W	BATTERY
16R	GR	ACCESSORY

Connector No.	M76
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	GND
2	–	–
3	–	–
4	–	–
5	–	–
6	–	–
7	BG	SECURITY
8	–	–
9	GR	ECO MODE SW
10	–	–
11	–	–
12	–	–
13	–	–
14	–	–
15	L	OUTSIDE TEMP SENSOR
16	–	–
17	BG	SATELLITE SW GND
18	SB	TRIP RESET SW
19	–	–
20	Y	OUTSIDE TEMP GND
21	L	GND (STRG SW GND)
22	Y	STRG SW A
23	GR	STRG SW B
24	BR	WASHER SW
25	V	BRAKE OIL SW
26	G	PKB SW
27	–	–
28	Y	DR BELT SW
29	R	SPORT MODE SW
30	LG	M RANGE
31	SB	NOT M RANGE
32	BG	AT SHIFT UP
33	BR	AT SHIFT DOWN
34	–	–
35	–	–
36	GR	ILL UP SW
37	V	ILL DOWN SW
38	G	8P/R OUTPUT
39	W	2P/R OUTPUT
40	–	–

Connector No.	M77
Connector Name	COMBINATION METER
Connector Type	TH12FW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
41	L	CAN-H
42	P	CAN-L
43	R	ILL CONT OUT
44	LA/B	FUEL SENSOR GND
45	G	BAT
46	V	IGN
47	SB	M-CAN H
48	LG	M-CAN L
49	–	–
50	–	–
51	LA/L	FUEL SENSOR
52	B	G1

Connector No.	M170
Connector Name	JOINT CONNECTOR-M29
Connector Type	SAC08JW
Connector Color	WHITE

H.S.

8	7	6	5	4	3	2	1

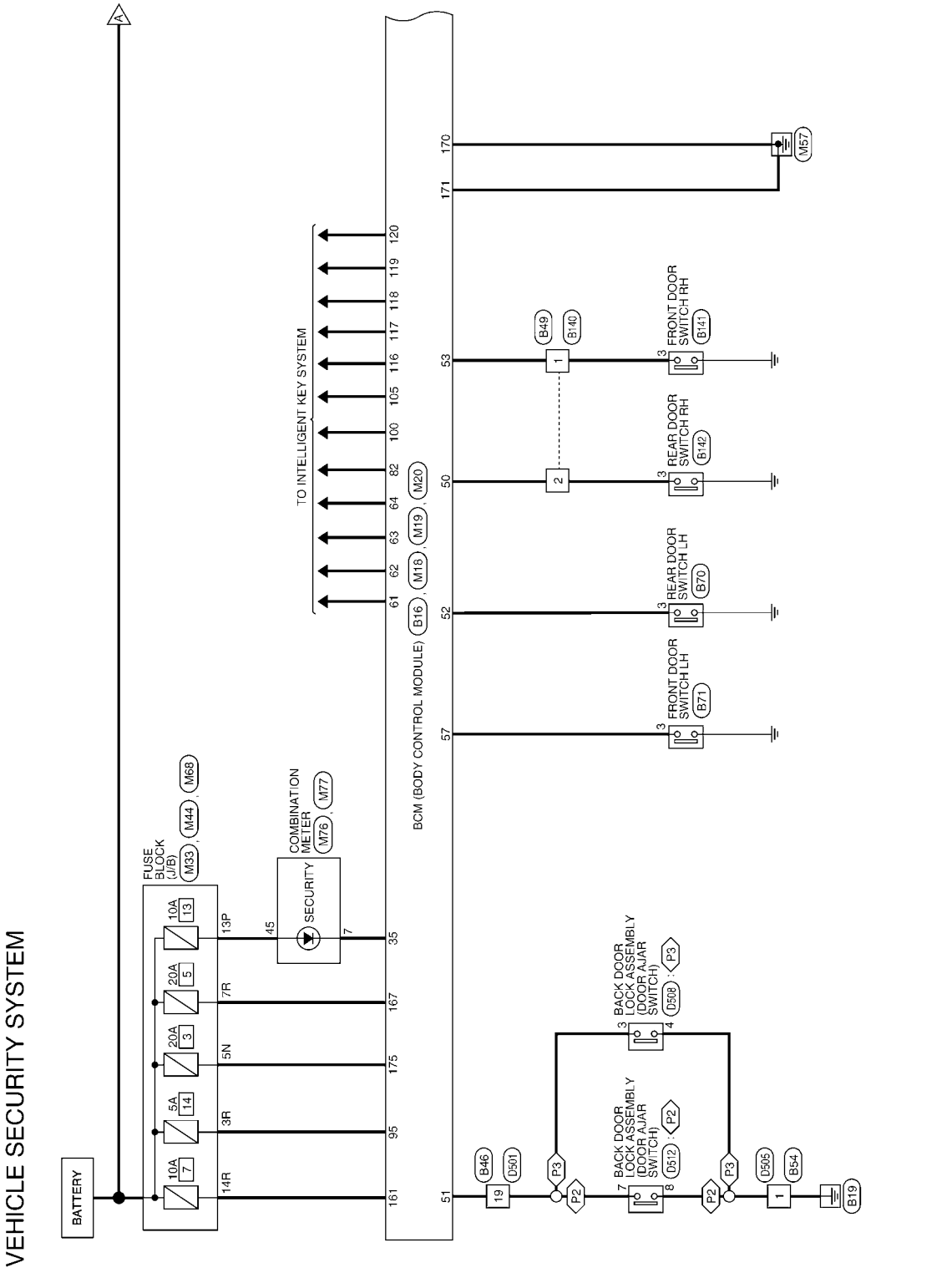
Terminal No.	Color of Wire	Signal Name
1	B	GROUND
2	B	GROUND
3	B	GROUND
4	B	GROUND
5	B	GROUND
6	B	GROUND
7	B	GROUND
8	B	GROUND

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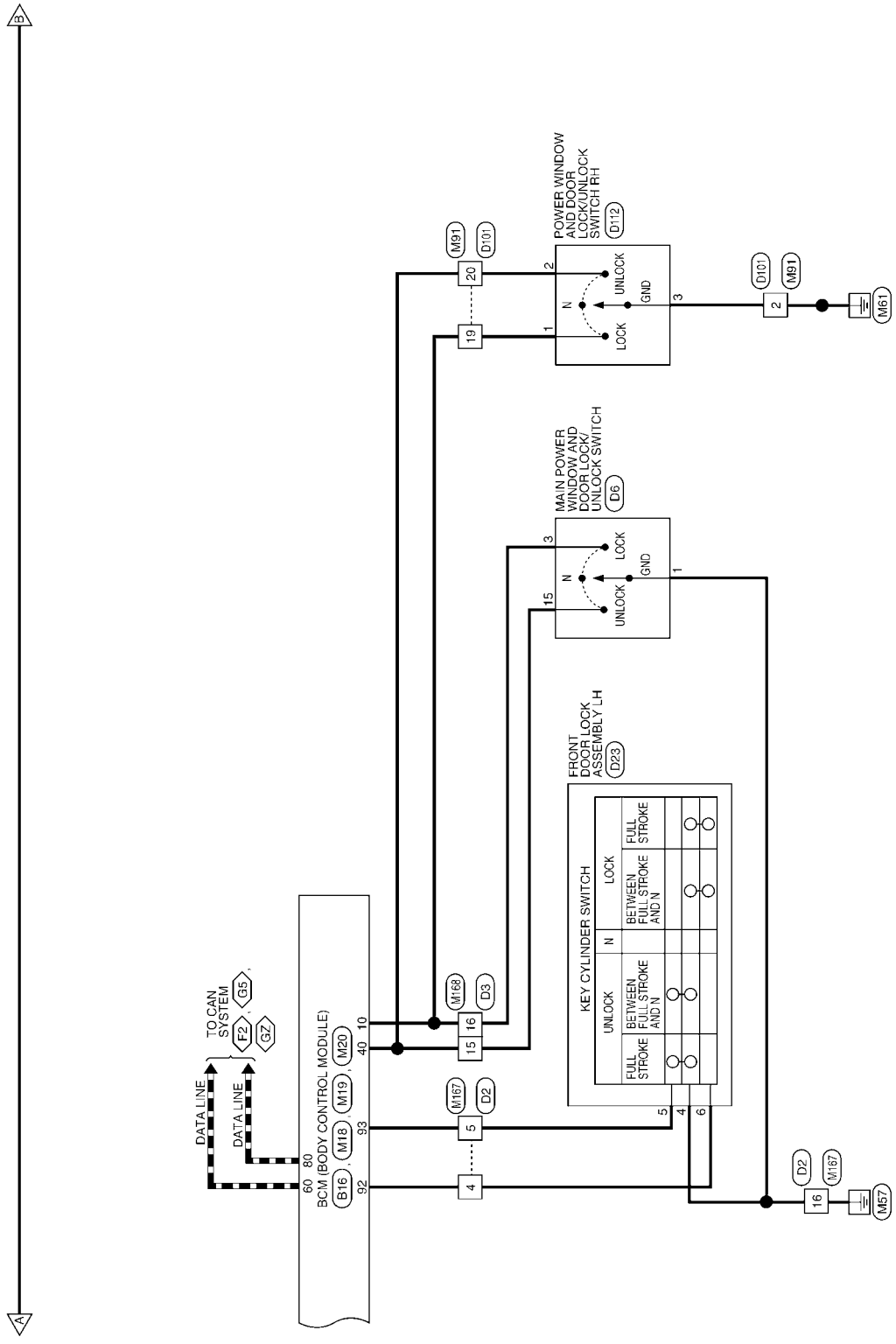
VEHICLE SECURITY SYSTEM

Wiring Diagram

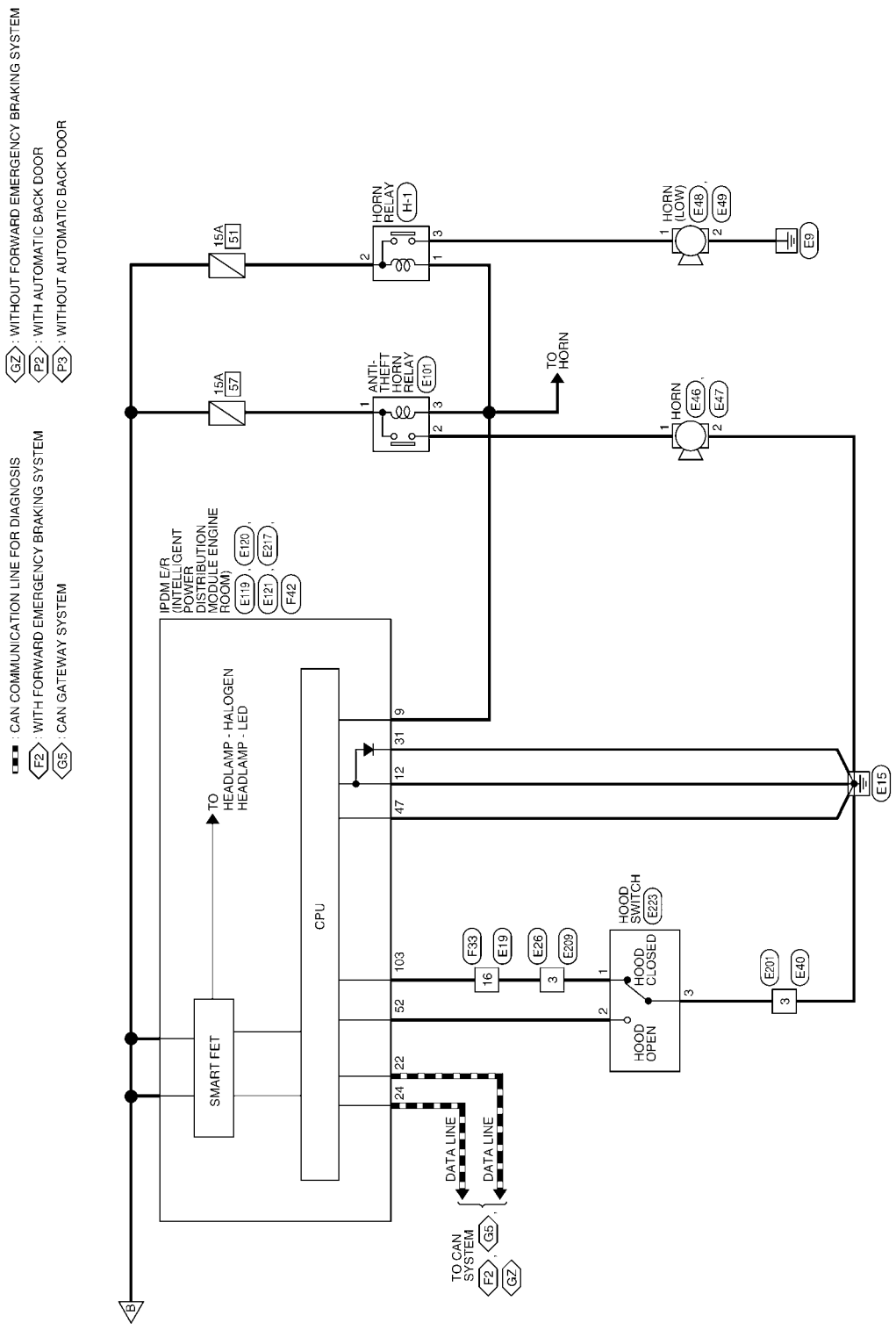
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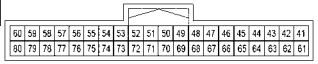
AAKWA1641GB


: CAN COMMUNICATION LINE FOR DIAGNOSIS
F2 : WITH FORWARD EMERGENCY BRAKING SYSTEM
G5 : CAN GATEWAY SYSTEM
GZ : WITHOUT FORWARD EMERGENCY BRAKING SYSTEM
P2 : WITH AUTOMATIC BACK DOOR
P3 : WITHOUT AUTOMATIC BACK DOOR
15A 51
15A 57
HORN RELAY H-1
ANTI-THEFT HORN RELAY E101
HORN (LOW) E48, E49
HORN E46, E47
E9
E15
TO HORN
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) E120, E119, E121, E217, F42
TO HEADLAMP - HALOGEN HEADLAMP - LED
CPU
SMART FET
HOOD SWITCH E223
HOOD CLOSED
HOOD OPEN
F33 E19 E26 E209
E201 E40
DATA LINE
DATA LINE
TO CAN SYSTEM G5, F2, GZ
B
AAKWA1642GB

VEHICLE SECURITY SYSTEM CONNECTORS

Connector No.	B16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH
Connector Color	GREEN

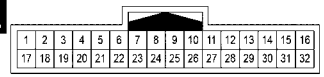
H.S.



Terminal No.	Color of Wire	Signal Name
41	–	–
42	–	–
43	–	–
44	–	–
45	–	–
46	R	SES BACKDOOR BUTTON SW
47	–	–
48	–	–
49	G	NO TOUCH TGATE SENSOR
50	W	RR DOOR SW
51	LG	TGATE SW
52	R	RL DOOR SW
53	SB	AS DOOR2 SW
54	–	–
55	LA/G	RR AUTOSTOP SW
56	Y	TGATE OPENER SW
57	SB	DR DOOR2 SW
58	–	–
59	–	–
60	L	CAN-H
61	V	SES EXT REAR ANTENNA B
62	Y	SES INT MIDDLE ANTENNA B
63	L	SES INT MIDDLE ANTENNA A
64	LG	SES EXT REAR ANTENNA A
65	–	–
66	–	–
67	–	–
68	–	–
69	–	–
70	–	–
71	–	–
72	–	–
73	–	–
74	–	–
75	–	–
76	–	–
77	V	SHIFT LOCK RLY
78	–	–
79	LA/W	STOP LAMP3
80	P	CAN-L

Connector No.	B46
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH
Connector Color	WHITE

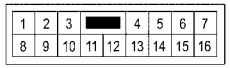
H.S.



Terminal No.	Color of Wire	Signal Name
1	–	TO BACK DOOR HARNESS
2	–	TO BACK DOOR HARNESS
3	–	TO BACK DOOR HARNESS
4	–	TO BACK DOOR HARNESS
5	R	TO BACK DOOR HARNESS
6	B	TO BACK DOOR HARNESS
7	W	TO BACK DOOR HARNESS
8	SHIELD	TO BACK DOOR HARNESS
9	–	TO BACK DOOR HARNESS
10	–	TO BACK DOOR HARNESS
11	–	TO BACK DOOR HARNESS
12	–	TO BACK DOOR HARNESS
13	W	TO BACK DOOR HARNESS
14	V	TO BACK DOOR HARNESS
15	BR	TO BACK DOOR HARNESS
16	SB	TO BACK DOOR HARNESS
17	LA/W	TO BACK DOOR HARNESS
18	LA/BR	TO BACK DOOR HARNESS
19	LG	TO BACK DOOR HARNESS
20	G	TO BACK DOOR HARNESS
21	G	TO BACK DOOR HARNESS
22	LA/R	TO BACK DOOR HARNESS
23	LA/R	TO BACK DOOR HARNESS
24	R	TO BACK DOOR HARNESS
25	–	TO BACK DOOR HARNESS
26	–	TO BACK DOOR HARNESS
27	–	TO BACK DOOR HARNESS
28	–	TO BACK DOOR HARNESS
29	Y	TO BACK DOOR HARNESS
30	G	TO BACK DOOR HARNESS
31	GR	TO BACK DOOR HARNESS
32	LG	TO BACK DOOR HARNESS

Connector No.	B49
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
1	SB	TO BODY NO. 2 HARNESS
2	W	TO BODY NO. 2 HARNESS
3	LA/W	TO BODY NO. 2 HARNESS
4	V	TO BODY NO. 2 HARNESS
5	SB	TO BODY NO. 2 HARNESS
6	LA/BR	TO BODY NO. 2 HARNESS
7	P	TO BODY NO. 2 HARNESS
8	LA/W	TO BODY NO. 2 HARNESS
9	LA/BR	TO BODY NO. 2 HARNESS
10	R	TO BODY NO. 2 HARNESS
11	LA/G	TO BODY NO. 2 HARNESS
12	LA/P	TO BODY NO. 2 HARNESS
13	–	TO BODY NO. 2 HARNESS
14	–	TO BODY NO. 2 HARNESS
15	G	TO BODY NO. 2 HARNESS
16	V	TO BODY NO. 2 HARNESS

Connector No.	B54
Connector Name	WIRE TO WIRE
Connector Type	M02MW-LC
Connector Color	WHITE

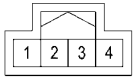
H.S.



Terminal No.	Color of Wire	Signal Name
1	B	TO BACK DOOR HARNESS
2	–	TO BACK DOOR HARNESS

Connector No.	B70
Connector Name	REAR DOOR SWITCH LH
Connector Type	TH04FW-NH
Connector Color	WHITE

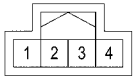
H.S.



Terminal No.	Color of Wire	Signal Name
1	–	–
2	–	–
3	R	I RL DOOR SW
4	–	–

Connector No.	B71
Connector Name	FRONT DOOR SWITCH LH
Connector Type	TH04FW-NH
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
1	–	–
2	–	–
3	SB	I DR DOOR2 SW
4	–	–

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VEHICLE SECURITY SYSTEM CONNECTORS

Connector No.	B140
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	GR	TO BODY HARNESS
2	W	TO BODY HARNESS
3	LA/Y	TO BODY HARNESS
4	V	TO BODY HARNESS
5	SB	TO BODY HARNESS
6	LA/BR	TO BODY HARNESS
7	LA/V	TO BODY HARNESS
8	L	TO BODY HARNESS
9	Y	TO BODY HARNESS
10	R	TO BODY HARNESS
11	V	TO BODY HARNESS
12	LG	TO BODY HARNESS
13	L	TO BODY HARNESS
14	Y	TO BODY HARNESS
15	LA/GR	TO BODY HARNESS
16	LA/LG	TO BODY HARNESS

Connector No.	B141
Connector Name	FRONT DOOR SWITCH RH
Connector Type	TH04FW-NH
Connector Color	WHITE

H.S.

1	2	3	4

Terminal No.	Color of Wire	Signal Name
1	–	–
2	–	–
3	GR	I AS DOOR2 SW
4	–	–

Connector No.	B142
Connector Name	REAR DOOR SWITCH RH
Connector Type	TH04FW-NH
Connector Color	WHITE

H.S.

1	2	3	4

Terminal No.	Color of Wire	Signal Name
1	–	–
2	–	–
3	W	I RR DOOR SW
4	–	–

Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	V	TO MAIN HARNESS
2	R	TO MAIN HARNESS
3	G	TO MAIN HARNESS
4	BR	TO MAIN HARNESS
5	P	TO MAIN HARNESS
6	LA/L	TO MAIN HARNESS
7	LA/BR	TO MAIN HARNESS
8	SB	TO MAIN HARNESS
9	GR	TO MAIN HARNESS
10	L	TO MAIN HARNESS
11	P	TO MAIN HARNESS
12	LG	TO MAIN HARNESS
13	Y	TO MAIN HARNESS
14	V	TO MAIN HARNESS
15	R	TO MAIN HARNESS
16	B	TO MAIN HARNESS

Connector No.	D3
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	Y	TO MAIN HARNESS
2	GR	TO MAIN HARNESS
3	LA/SB	TO MAIN HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
3	W	TO MAIN HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
4	LA/BG	TO MAIN HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
4	V	TO MAIN HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
5	LA/Y	TO MAIN HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
5	SB	TO MAIN HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
6	LA/V	TO MAIN HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
6	LG	TO MAIN HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
7	W	TO MAIN HARNESS
8	V	TO MAIN HARNESS
9	SB	TO MAIN HARNESS
10	LG	TO MAIN HARNESS
11	GR	TO MAIN HARNESS
12	G	TO MAIN HARNESS
13	Y	TO MAIN HARNESS
14	B	TO MAIN HARNESS
15	BG	TO MAIN HARNESS
16	L	TO MAIN HARNESS
17	LA/W	TO MAIN HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
17	LA/SB	TO MAIN HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
18	LA/W	TO MAIN HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
18	LA/Y	TO MAIN HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
19	LA/BR	TO MAIN HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
19	LA/LG	TO MAIN HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
20	LA/GR	TO MAIN HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
20	LA/V	TO MAIN HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
21	BR	TO MAIN HARNESS
22	W	TO MAIN HARNESS
23	LA/R	TO MAIN HARNESS
24	GR	TO MAIN HARNESS
25	R	TO MAIN HARNESS
26	LA/G	TO MAIN HARNESS
27	LA/LG	TO MAIN HARNESS
28	LA/L	TO MAIN HARNESS
29	LA/Y	TO MAIN HARNESS
30	LA/V	TO MAIN HARNESS
31	LA/BR	TO MAIN HARNESS
32	P	TO MAIN HARNESS

Connector No.	D6
Connector Name	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
Connector Type	NS16FW-CS
Connector Color	WHITE

H.S.

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

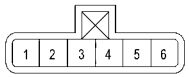
Terminal No.	Color of Wire	Signal Name
1	B	GND
2	GR	MOTOR DN AS UNLOCK SW
3	L	LOCK SW
4	R	ENCODER SIG-2
5	W	ENCODER SIG-1
6	P	MOTOR DN RR
7	LG	MOTOR UP RR
8	Y	MOTOR DN RL
9	V	MOTOR UP RL
10	SB	IGN
11	–	–
12	Y	ENCODER GND
13	–	–
14	G	ENCODER +
15	BG	UNLOCK SW
16	L	MOTOR UP AS

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VEHICLE SECURITY SYSTEM CONNECTORS

Connector No.	D23
Connector Name	FRONT DOOR LOCK ASSEMBLY LH
Connector Type	E06FGY-RS
Connector Color	GRAY

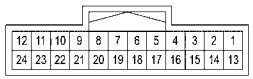
H.S.



Terminal No.	Color of Wire	Signal Name
1	V	O DR OR FR LOCK D
2	G	O FR OR DR UNLOCK D
3	R	I DR KNOB SW
4	B	GROUND
5	P	I KEY CYLINDER UNLOCK SW
6	BR	I KEY CYLINDER LOCK SW

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Type	TH24FW-NH
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
1	B	TO MAIN HARNESS
2	B	TO MAIN HARNESS
3	B	TO MAIN HARNESS
4	P	TO MAIN HARNESS
5	R	TO MAIN HARNESS
6	SB	TO MAIN HARNESS
7	L	TO MAIN HARNESS
8	V	TO MAIN HARNESS
9	Y	TO MAIN HARNESS
10	B	TO MAIN HARNESS
11	G	TO MAIN HARNESS
12	LA/V	TO MAIN HARNESS
13	LA/Y	TO MAIN HARNESS
14	LA/R	TO MAIN HARNESS
15	LA/V	TO MAIN HARNESS
16	LA/L	TO MAIN HARNESS
17	LA/BG	TO MAIN HARNESS
18	GR	TO MAIN HARNESS
19	LG	TO MAIN HARNESS
20	BR	TO MAIN HARNESS
21	LA/G	TO MAIN HARNESS
22	LA/SB	TO MAIN HARNESS
23	LA/BG	TO MAIN HARNESS
24	LA/Y	TO MAIN HARNESS

Connector No.	D112
Connector Name	POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH
Connector Type	NS12FW-CS
Connector Color	WHITE

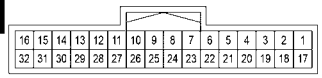
H.S.



Terminal No.	Color of Wire	Signal Name
1	LG	LOCK SW
2	BR	UNLOCK SW
3	B	GROUND
4	–	–
5	–	–
6	LA/L	ASST DN
7	LA/R	ASST UP
8	GR	IGNITION
9	–	–
10	–	–
11	Y	MAIN DN
12	BR	MAIN UP

Connector No.	D501
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
1	–	TO BODY HARNESS
2	–	TO BODY HARNESS
3	–	TO BODY HARNESS
4	–	TO BODY HARNESS
5	R	TO BODY HARNESS
6	B	TO BODY HARNESS
7	W	TO BODY HARNESS
8	V	TO BODY HARNESS
9	–	TO BODY HARNESS
10	–	TO BODY HARNESS
11	–	TO BODY HARNESS
12	–	TO BODY HARNESS
13	G	TO BODY HARNESS
14	LA/GR	TO BODY HARNESS
15	LA/W	TO BODY HARNESS
16	LA/LG	TO BODY HARNESS
17	Y	TO BODY HARNESS
18	LA/R	TO BODY HARNESS
19	W	TO BODY HARNESS
20	–	TO BODY HARNESS
21	G	TO BODY HARNESS
22	LA/Y	TO BODY HARNESS
23	P	TO BODY HARNESS
24	BR	TO BODY HARNESS
25	–	TO BODY HARNESS
26	–	TO BODY HARNESS
27	–	TO BODY HARNESS
28	–	TO BODY HARNESS
29	V	TO BODY HARNESS
30	G	TO BODY HARNESS
31	BG	TO BODY HARNESS
32	LG	TO BODY HARNESS

Connector No.	D505
Connector Name	WIRE TO WIRE
Connector Type	M02FW-LC
Connector Color	WHITE

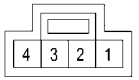
H.S.



Terminal No.	Color of Wire	Signal Name
1	B	TO BODY HARNESS
2	–	TO BODY HARNESS

Connector No.	D508
Connector Name	BACK DOOR LOCK ASSEMBLY (WITHOUT AUTOMATIC BACK DOOR SYSTEM)
Connector Type	NS04FW-CS
Connector Color	WHITE

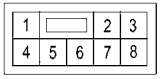
H.S.



Terminal No.	Color of Wire	Signal Name
1	LA/V	O TGATE OPENER
2	GR	GROUND
3	W	I TGATE SW
4	GR	GROUND

Connector No.	D512
Connector Name	BACK DOOR LOCK ASSEMBLY (WITH AUTOMATIC BACK DOOR SYSTEM)
Connector Type	NS08FW-CS
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
1	LA/L	LATCH MTR OPEN
2	LA/G	LATCH MTR CLOSE
3	–	–
4	LA/GR	OPEN SW
5	LA/W	CLOSE SW
6	LA/LG	HALF LATCH SW
7	W	I TGATE SW
8	B	GROUND

AAKIA4536GB

VEHICLE SECURITY SYSTEM CONNECTORS

Connector No.	E19
Connector Name	WIRE TO WIRE
Connector Type	NS16MBR-CS
Connector Color	BROWN

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	TO ENGINE CONTROL HARNESS
2	BG	TO ENGINE CONTROL HARNESS
3	B	TO ENGINE CONTROL HARNESS
4	B	TO ENGINE CONTROL HARNESS
5	B	TO ENGINE CONTROL HARNESS
6	B	TO ENGINE CONTROL HARNESS
7	B	TO ENGINE CONTROL HARNESS
8	W	TO ENGINE CONTROL HARNESS
9	BR	TO ENGINE CONTROL HARNESS
10	BR	TO ENGINE CONTROL HARNESS
11	L	TO ENGINE CONTROL HARNESS
12	BR	TO ENGINE CONTROL HARNESS
13	R	TO ENGINE CONTROL HARNESS
14	G	TO ENGINE CONTROL HARNESS
15	W	TO ENGINE CONTROL HARNESS
16	W	TO ENGINE CONTROL HARNESS

Connector No.	E26
Connector Name	WIRE TO WIRE
Connector Type	TH12MW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	V	TO FRONT END MODULE HARNESS
2	L	TO FRONT END MODULE HARNESS
3	W	TO FRONT END MODULE HARNESS
4	BR	TO FRONT END MODULE HARNESS

5	L	TO FRONT END MODULE HARNESS
6	GR	TO FRONT END MODULE HARNESS
7	SHIELD	TO FRONT END MODULE HARNESS
8	LG	TO FRONT END MODULE HARNESS
9	–	TO FRONT END MODULE HARNESS
10	–	TO FRONT END MODULE HARNESS
11	B	TO FRONT END MODULE HARNESS
12	GR	TO FRONT END MODULE HARNESS

Connector No.	E40
Connector Name	WIRE TO WIRE
Connector Type	M04MW-LC
Connector Color	WHITE

H.S.

1	2
3	4

Terminal No.	Color of Wire	Signal Name
1	–	TO FRONT END MODULE HARNESS
2	GR	TO FRONT END MODULE HARNESS
3	B	TO FRONT END MODULE HARNESS
4	–	TO FRONT END MODULE HARNESS

Connector No.	E46
Connector Name	HORN
Connector Type	P01FB-A
Connector Color	BLACK

H.S.

2

Terminal No.	Color of Wire	Signal Name
2	B	GROUND

Connector No.	E47
Connector Name	HORN
Connector Type	P01FB-A
Connector Color	BLACK

H.S.

1

Terminal No.	Color of Wire	Signal Name
1	R	ANTI-THEFT HORN RELAY OUTPUT

Connector No.	E48
Connector Name	HORN (LOW)
Connector Type	P01FB-A
Connector Color	BLACK

H.S.

2

Terminal No.	Color of Wire	Signal Name
2	B	GROUND

Connector No.	E49
Connector Name	HORN (LOW)
Connector Type	P01FB-A
Connector Color	BLACK

H.S.

1

Terminal No.	Color of Wire	Signal Name
1	R	HORN RELAY OUTPUT

Connector No.	E101
Connector Name	ANTI-THEFT HORN RELAY
Connector Type	M03FW-R-LC
Connector Color	WHITE

H.S.

1
2	3

Terminal No.	Color of Wire	Signal Name
1	L	BATTERY
2	R	RELAY OUTPUT
3	GR	RELAY CONTROL

Connector No.	E119
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	NS16FGY-CS
Connector Color	GRAY

H.S.

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

Terminal No.	Color of Wire	Signal Name
3	P	IGN NOT COLUMN LOCK
4	Y	LIGHT POSITION REAR LH
5	–	–
6	–	–
7	–	–
8	BR	ACTUATOR4 CABIN (0FB4)
9	L	LO HORN RLY
10	–	–
11	V	IGN AIRBAG
12	B	SIGNAL GROUND
13	–	–
14	–	–
15	–	–
16	G	LIGHT REVERSE LAMP
17	W	LIGHT POSITION REAR RH
18	–	–

AAKIA4537GB

VEHICLE SECURITY SYSTEM CONNECTORS

Connector No.	E120
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH24FGY-NH
Connector Color	GRAY

H.S.

30	29	28	27	26	25	24	23	22	21	20	19
42	41	40	39	38	37	36	35	34	33	32	31

Terminal No.	Color of Wire	Signal Name
19	LG	IGN ECM
20	–	–
21	–	–
22	P	CAN-L
23	–	–
24	L	CAN-H
25	–	–
26	–	–
27	SB	CABIN MOTOR 5
28	R	CABIN MOTOR 6
29	LG	CABIN MOTOR 7
30	Y	CABIN MOTOR 8
31	B	2ND SIGNAL GROUND
32	GR	LI PUSH SW
33	BR	AUTO STOP WIPER
34	–	–
35	–	–
36	–	–
37	–	–
38	–	–
39	L	HEV CAN-H
40	G	HEV CAN-L
41	W	CABIN MOTOR 3
42	R	CABIN MOTOR 4

Connector No.	E121
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	24340-5408R
Connector Color	RED

H.S.

45	44	43
48	47	46

Terminal No.	Color of Wire	Signal Name
43	–	–
44	R	BAT ABS VALVE
45	V	FR WIPER HI
46	W	FUEL PUMP
47	B	POWER GROUND
48	Y	FR WIPER LO

Connector No.	E201
Connector Name	WIRE TO WIRE
Connector Type	M04FW-LC
Connector Color	WHITE

H.S.

2	1
4	3

Terminal No.	Color of Wire	Signal Name
1	–	TO FRONT END MODULE HARNESS
2	B	TO FRONT END MODULE HARNESS
3	B	TO FRONT END MODULE HARNESS
4	–	TO FRONT END MODULE HARNESS

Connector No.	E209
Connector Name	WIRE TO WIRE
Connector Type	TH12FW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	V	TO ENGINE ROOM HARNESS
2	L	TO ENGINE ROOM HARNESS
3	W	TO ENGINE ROOM HARNESS
4	BG	TO ENGINE ROOM HARNESS
5	L	TO ENGINE ROOM HARNESS
6	GR	TO ENGINE ROOM HARNESS
7	SHIELD	TO ENGINE ROOM HARNESS
8	LG	TO ENGINE ROOM HARNESS
9	–	TO ENGINE ROOM HARNESS
10	–	TO ENGINE ROOM HARNESS
11	B	TO ENGINE ROOM HARNESS
12	GR	TO ENGINE ROOM HARNESS

Connector No.	E217
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	NS08FBR-CS
Connector Color	BROWN

H.S.

51		50	49
56	55	54	53	52

Terminal No.	Color of Wire	Signal Name
49	R	LIGHT DTRL LH
50	L	LIGHT LBEAM LH
51	V	LIGHT FR FOG LAMPS LH
52	R	LI HOOD SW
53	GR	LI LED DETECTION 2
54	LG	LIGHT HBEAM RH
55	–	–
56	BG	LIGHT PARKING FR LH

Connector No.	E223
Connector Name	HOOD SWITCH
Connector Type	RK03MBR
Connector Color	BROWN

H.S.

1	2	3

Terminal No.	Color of Wire	Signal Name
1	W	HOOD SW2
2	R	LI HOOD SW
3	B	GROUND

Connector No.	F33
Connector Name	WIRE TO WIRE
Connector Type	NS16FBR-CS
Connector Color	BROWN

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	R	TO ENGINE ROOM HARNESS
2	BG	TO ENGINE ROOM HARNESS
3	B	TO ENGINE ROOM HARNESS
4	B	TO ENGINE ROOM HARNESS
5	B	TO ENGINE ROOM HARNESS
6	GR	TO ENGINE ROOM HARNESS
7	B	TO ENGINE ROOM HARNESS
8	W	TO ENGINE ROOM HARNESS
9	BR	TO ENGINE ROOM HARNESS
10	BR	TO ENGINE ROOM HARNESS
11	L	TO ENGINE ROOM HARNESS
12	Y	TO ENGINE ROOM HARNESS
13	R	TO ENGINE ROOM HARNESS
14	G	TO ENGINE ROOM HARNESS
15	W	TO ENGINE ROOM HARNESS
16	W	TO ENGINE ROOM HARNESS

AAKIA4538GB

VEHICLE SECURITY SYSTEM CONNECTORS

Connector No.	F42
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH24FB-NH
Connector Color	BLACK

H.S.

86	97	96	95	94	93	92	91	90	89	88	87
110	109	108	107	106	105	104	103	102	101	100	99

Terminal No.	Color of Wire	Signal Name
87	L	HEV CAN-H
88	G	HEV CAN-L
89	W	MOTOR CABIN 3
90	R	MOTOR CABIN 4
91	–	–
92	BG	LI NP SW
93	P	LI ECM DRIVER
94	–	–
95	–	–
96	–	–
97	–	–
98	–	–
99	BG	MOTOR CABIN 5
100	GR	MOTOR CABIN 6
101	LG	MOTOR CABIN 7
102	Y	MOTOR CABIN 8
103	W	HOOD SW2
104	–	–
105	–	–
106	BR	LO FAN RELAY2(PWM)
107	–	–
108	–	–
109	–	–
110	–	–

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FGY-NH
Connector Color	GRAY

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	L	LIN 3 D
2	LA/G	DI FR LEFT D
3	LA/Y	DI FR RIGHT D
4	P	SPARE4 RL N
5	R	CAN-L
6	L	CAN-H
7	–	–
8	L	CAN-H
9	R	CAN-L
10	BG	DOORLOCK SW
11	Y	HAZARD SW D
12	W	PWR AUTOLIGHT SENSOR
13	–	–
14	–	–
15	–	–
16	–	–
17	L	PWR ATDVC
18	–	–
19	LG	AUTOLIGHT SENSOR
20	–	–
21	–	–
22	–	–
23	G	WL AUTHORIZATION RL
24	LA/R	DEFROSTER RL D
25	BR	BAT TEMP1 RL
26	–	–
27	Y	IGN1 RL
28	LA/W	IGN2 RL
29	–	–
30	V	GND AUTOLIGHT SENSOR
31	–	–
32	–	–
33	LG	CSW 5
34	Y	CSW 5
35	BG	SECURITY LED
36	G	CSW 3
37	GR	CSW 4

38	V	CSW 1
39	W	CSW 2
40	SB	DOORUNLOCK SW

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH
Connector Color	BLACK

H.S.

100	99	98	97	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81
120	119	118	117	116	115	114	113	112	111	110	109	108	107	106	105	104	103	102	101

Terminal No.	Color of Wire	Signal Name
81	–	–
82	W	SES FR HANDLE BUTTON SW
83	–	–
84	BR	CSW 2
85	SB	CSW 1
86	P	CSW 3
87	BG	CSW 4
88	W	START SW BACKLIGHT LED
89	Y	START WO ESCL SW
90	–	–
91	–	–
92	BR	KEY CYLINDER LOCK SW
93	P	KEY CYLINDER UNLOCK SW
94	G	AT LOCKED IN PARK SW
95	V	SHORTING PIN
96	–	–
97	–	–
98	–	–
99	–	–
100	V	SES EXT DR ANTENNA A
101	–	–
102	–	–
103	–	–
104	R	DR KNOB SW
105	Y	SES DR HANDLE BUTTON SW
106	W	AUTO ACC2
107	–	–
108	–	–
109	–	–
110	BG	MR OUTPUT
111	–	–
112	–	–
113	–	–

114	Y	IMMOBILIZER KAZASHI B
115	W	IMMOBILIZER KAZASHI A
116	BG	SES INT FRONT ANTENNA B
117	GR	SES INT FRONT ANTENNA A
118	SB	SES EXT AS ANTENNA B
119	P	SES EXT AS ANTENNA A
120	BR	SES EXT DR ANTENNA B

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FBR-CS
Connector Color	BROWN

H.S.

167	166	165	164		163	162	161
176	175	174	173	172	171	170	169	168

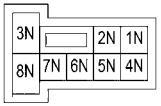
Terminal No.	Color of Wire	Signal Name
161	W	PWR ECU
162	SB	PWM ROOMLAMP 1
163	L	AS LOCK OR UNLOCK D
164	–	–
165	V	DR OR FR LOCK D
166	–	–
167	LA/V	PWR DOORLOCK1
168	BG	PWR FLASHERS
169	GR	PWR STOP LAMP
170	B	GND1
171	B	GND2
172	G	FR OR DR UNLOCK D
173	–	–
174	–	–
175	R	PWR DOORLOCK2
176	LG	PWR WIPER

AAKIA4539GB

VEHICLE SECURITY SYSTEM CONNECTORS

Connector No.	M33
Connector Name	FUSE BLOCK (J/B)
Connector Type	CS06FW-M2
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
1N	L	ACCESSORY RELAY 1 OUTPUT
2N	LG	BATTERY
3N	Y	FRONT BLOWER MOTOR RELAY OUTPUT
4N	LG	BATTERY
5N	R	BATTERY
6N	BG	BATTERY
7N	BR	ACCESSORY RELAY-1 CONTROL
8N	SB	FRONT BLOWER MOTOR RELAY OUTPUT

Connector No.	M44
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FW-CS
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1P	R	IGNITION
2P	G	IGNITION
3P	Y	IGNITION RELAY-2 CONTROL
4P	LG	REAR WINDOW DEFOGGER RELAY OUTPUT
5P	GR	REAR WINDOW DEFOGGER RELAY OUTPUT
6P	LA/R	REAR WINDOW DEFOGGER RELAY CONTROL
7P	Y	IGNITION
8P	V	IGNITION
9P	L	BATTERY
10P	LG	IGNITION
11P	–	–
12P	–	–
13P	G	BATTERY
14P	–	–
15P	L	BATTERY
16P	LA/W	FRONT BLOWER MOTOR RELAY CONTROL

Connector No.	M68
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FBR-CS
Connector Color	BROWN

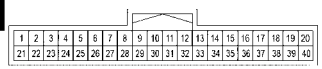
H.S.

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

Terminal No.	Color of Wire	Signal Name
1R	V	ILLUMINATION +
2R	G	IGNITION
3R	V	BATTERY
4R	–	–
5R	–	–
6R	LA/L	ACCESSORY
7R	LA/V	BATTERY
8R	–	–
9R	–	–
10R	GR	BATTERY
11R	–	–
12R	–	–
13R	–	–
14R	W	BATTERY
15R	W	BATTERY
16R	GR	ACCESSORY

Connector No.	M76
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH
Connector Color	WHITE

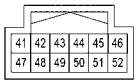
H.S.



Terminal No.	Color of Wire	Signal Name
1	B	GND
2	–	–
3	–	–
4	–	–
5	–	–
6	–	–
7	BG	SECURITY
8	–	–
9	GR	ECO MODE SW
10	–	–
11	–	–
12	–	–
13	–	–
14	–	–
15	L	OUTSIDE TEMP SENSOR
16	–	–
17	BG	SATELLITE SW GND
18	SB	TRIP RESET SW
19	–	–
20	Y	OUTSIDE TEMP GND
21	L	GND (STRG SW GND)
22	Y	STRG SW A
23	GR	STRG SW B
24	BR	WASHER SW
25	V	BRAKE OIL SW
26	G	PKB SW
27	–	–
28	Y	DR BELT SW
29	R	SPORT MODE SW
30	LG	M RANGE
31	SB	NOT M RANGE
32	BG	AT SHIFT UP
33	BR	AT SHIFT DOWN
34	–	–
35	–	–
36	GR	ILL UP SW
37	V	ILL DOWN SW
38	G	8P/R OUTPUT
39	W	2P/R OUTPUT
40	–	–

Connector No.	M77
Connector Name	COMBINATION METER
Connector Type	TH12FW-NH
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
41	L	CAN-H
42	P	CAN-L
43	R	ILL CONT OUT
44	LA/B	FUEL SENSOR GND
45	G	BAT
46	V	IGN
47	SB	M-CAN H
48	LG	M-CAN L
49	–	–
50	–	–
51	LA/L	FUEL SENSOR
52	B	G1

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VEHICLE SECURITY SYSTEM CONNECTORS

Connector No.	M91
Connector Name	WIRE TO WIRE
Connector Type	TH24MW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	TO FRONT DOOR RH HARNESS
2	GR	TO FRONT DOOR RH HARNESS
3	GR	TO FRONT DOOR RH HARNESS
4	W	TO FRONT DOOR RH HARNESS
5	P	TO FRONT DOOR RH HARNESS
6	SB	TO FRONT DOOR RH HARNESS
7	B	TO FRONT DOOR RH HARNESS
8	L	TO FRONT DOOR RH HARNESS
9	Y	TO FRONT DOOR RH HARNESS
10	SHIELD	TO FRONT DOOR RH HARNESS
11	G	TO FRONT DOOR RH HARNESS
12	V	TO FRONT DOOR RH HARNESS
13	Y	TO FRONT DOOR RH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
13	LA/SB	TO FRONT DOOR RH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
14	R	TO FRONT DOOR RH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
14	LA/GR	TO FRONT DOOR RH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
15	V	TO FRONT DOOR RH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
15	LA/V	TO FRONT DOOR RH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
16	LA/L	TO FRONT DOOR RH HARNESS
17	LA/BG	TO FRONT DOOR RH HARNESS
18	GR	TO FRONT DOOR RH HARNESS
19	LG	TO FRONT DOOR RH HARNESS
20	BR	TO FRONT DOOR RH HARNESS
21	LA/Y	TO FRONT DOOR RH HARNESS
22	SB	TO FRONT DOOR RH HARNESS
23	BG	TO FRONT DOOR RH HARNESS
24	Y	TO FRONT DOOR RH HARNESS

Connector No.	M167
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	V	TO FRONT DOOR LH HARNESS
2	R	TO FRONT DOOR LH HARNESS
3	G	TO FRONT DOOR LH HARNESS
4	BR	TO FRONT DOOR LH HARNESS
5	P	TO FRONT DOOR LH HARNESS
6	Y	TO FRONT DOOR LH HARNESS - (WITHOUT BOSE AUDIO SYSTEM)
6	LA/L	TO FRONT DOOR LH HARNESS - (WITH BOSE AUDIO SYSTEM)
7	R	TO FRONT DOOR LH HARNESS - (WITHOUT BOSE AUDIO SYSTEM)
7	LA/BR	TO FRONT DOOR LH HARNESS - (WITH BOSE AUDIO SYSTEM)
8	L	TO FRONT DOOR LH HARNESS
9	LA/BR	TO FRONT DOOR LH HARNESS
10	LA/GR	TO FRONT DOOR LH HARNESS
11	Y	TO FRONT DOOR LH HARNESS
12	BG	TO FRONT DOOR LH HARNESS
13	LA/G	TO FRONT DOOR LH HARNESS
14	LA/R	TO FRONT DOOR LH HARNESS
15	P	TO FRONT DOOR LH HARNESS
16	B	TO FRONT DOOR LH HARNESS

Connector No.	M168
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	Y	TO FRONT DOOR LH HARNESS
2	GR	TO FRONT DOOR LH HARNESS
3	SB	TO FRONT DOOR LH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
3	Y	TO FRONT DOOR LH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
4	BG	TO FRONT DOOR LH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
4	V	TO FRONT DOOR LH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
5	Y	TO FRONT DOOR LH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
5	BR	TO FRONT DOOR LH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
6	V	TO FRONT DOOR LH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
6	LG	TO FRONT DOOR LH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
7	Y	TO FRONT DOOR LH HARNESS
8	V	TO FRONT DOOR LH HARNESS
9	BR	TO FRONT DOOR LH HARNESS
10	LG	TO FRONT DOOR LH HARNESS
11	L	TO FRONT DOOR LH HARNESS
12	Y	TO FRONT DOOR LH HARNESS
13	G	TO FRONT DOOR LH HARNESS
14	SHIELD	TO FRONT DOOR LH HARNESS
15	SB	TO FRONT DOOR LH HARNESS
16	BG	TO FRONT DOOR LH HARNESS
17	GR	TO FRONT DOOR LH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
17	SB	TO FRONT DOOR LH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
18	W	TO FRONT DOOR LH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
18	LA/SB	TO FRONT DOOR LH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
19	BR	TO FRONT DOOR LH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
19	LA/GR	TO FRONT DOOR LH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
20	GR	TO FRONT DOOR LH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
20	LA/V	TO FRONT DOOR LH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
21	BR	TO FRONT DOOR LH HARNESS
22	W	TO FRONT DOOR LH HARNESS
23	R	TO FRONT DOOR LH HARNESS - (WITH AUTOMATIC DRIVE POSITIONER)
23	LA/R	TO FRONT DOOR LH HARNESS - (WITHOUT AUTOMATIC DRIVE POSITIONER)
24	GR	TO FRONT DOOR LH HARNESS
25	R	TO FRONT DOOR LH HARNESS LED INDICATOR L
26	LA/G	TO FRONT DOOR LH HARNESS
27	LG	TO FRONT DOOR LH HARNESS
28	L	TO FRONT DOOR LH HARNESS
29	Y	TO FRONT DOOR LH HARNESS
30	V	TO FRONT DOOR LH HARNESS
31	G	TO FRONT DOOR LH HARNESS
32	P	TO FRONT DOOR LH HARNESS

AAKIA4541GB

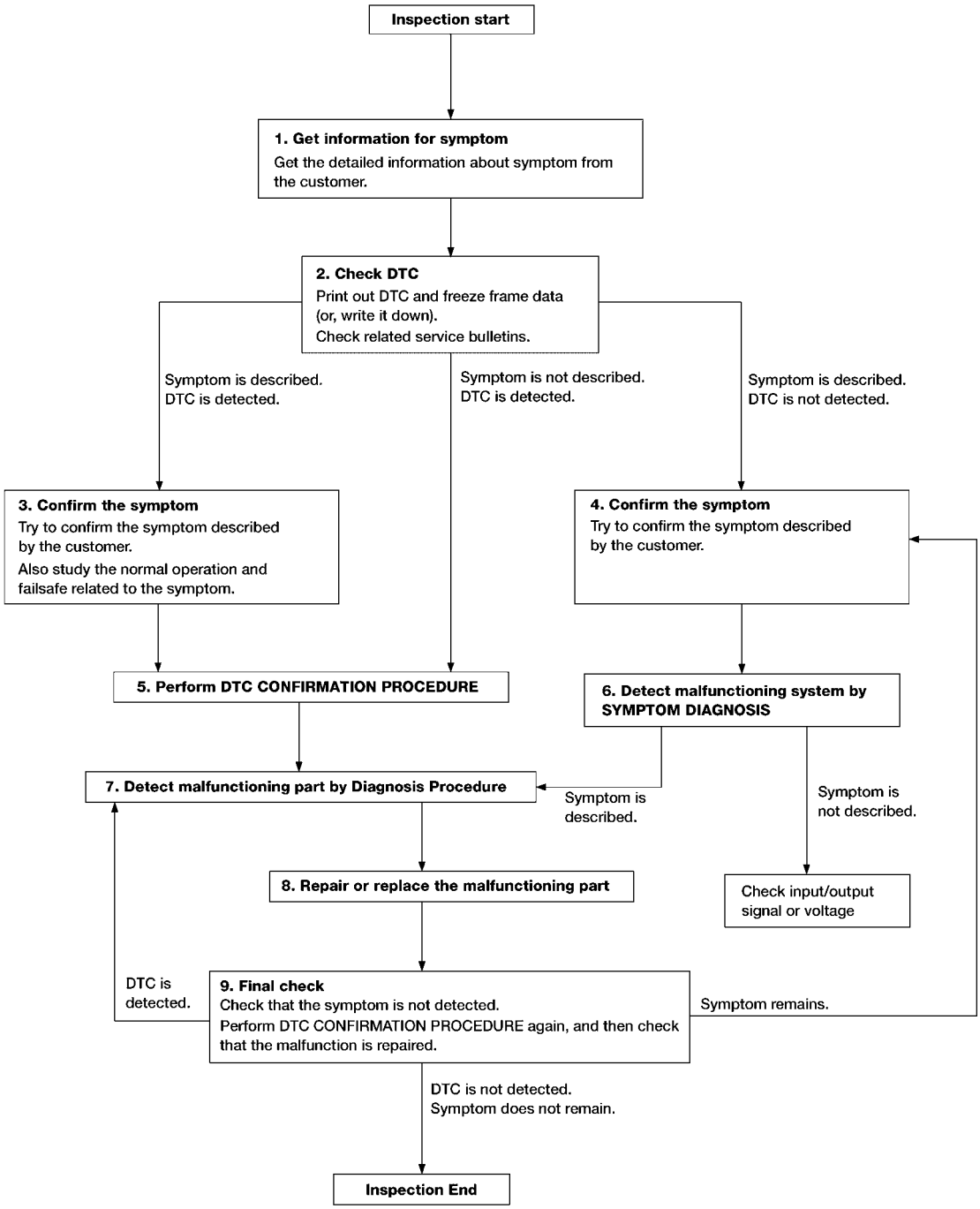
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000014625308

OVERALL SEQUENCE



ALAIA0158GB

DETAILED FLOW

1.GET INFORMATION FOR SYMPTOM

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

>> GO TO 2.

2.CHECK DTC

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

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

3. Check related service bulletins for information.

Are any symptoms described and any DTC detected?

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

3.CONFIRM THE SYMPTOM

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

>> GO TO 5.

4.CONFIRM THE SYMPTOM

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

>> GO TO 6.

5.PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC CONFIRMATION PROCEDURE for the detected DTC, and then check that DTC is detected again. At this time, always connect CONSULT to the vehicle, and check self diagnostic results in real time.

NOTE:

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

Is DTC detected?

YES >> GO TO 7.
NO >> Check according to GI-54, "Intermittent Incident".

6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM DIAGNOSIS

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

Is the symptom described?

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

7.DETECT MALFUNCTIONING PART BY DIAGNOSIS PROCEDURE

Inspect according to Diagnosis Procedure of the system.

Is malfunctioning part detected?

YES >> GO TO 8.
NO >> Check according to GI-54, "Intermittent Incident".

8. REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 9.

9. FINAL CHECK

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

Is DTC detected and does symptom remain?

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

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ECM

ECM : Description

INFOID:0000000014625309

Performing the following procedure can automatically activate recommunication of ECM and BCM, but only when the ECM is replaced with a new one*.
*: New one means an ECM that has never been energized on-board.
(In this step, initialization procedure by CONSULT is not necessary)
NOTE:
- **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:0000000014625310

1.PERFORM ECM RECOMMUNICATING FUNCTION

1. Install ECM.
2. Contact backside of registered Intelligent Key* to push-button ignition switch, then turn ignition switch to 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 to OFF.
5. Check that the engine starts.

>> GO TO 2.

2.PERFORM ADDITIONAL SERVICE WHEN REPLACING ECM

Perform EC-152, "Work Procedure".

>> Inspection End.

BCM

BCM : Description

INFOID:0000000014625311

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

AFTER REPLACEMENT
CAUTION:
When replacing BCM, always perform “WRITE CONFIGURATION” with CONSULT. Or not doing so, BCM control function does not operate normally.
- **Complete the procedure of “WRITE CONFIGURATION” in order.**
- **Configuration is different for each vehicle model. Confirm configuration of each vehicle model.**
- **If you set incorrect “WRITE CONFIGURATION”, incidents might occur.**

NOTE:
When replacing BCM, perform the system initialization (NATS). Refer to the CONSULT Immobilizer mode and follow the on-screen instructions.

BCM : Work Procedure

INFOID:0000000014625312

1.SAVING VEHICLE SPECIFICATION

Ⓔ CONSULT Configuration
Perform “READ CONFIGURATION” to save or print current vehicle specification. Refer to SEC-63, "BCM : Description".

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

>> GO TO 2.

2.REPLACE BCM

Replace BCM. Refer to BCS-73, "Removal and Installation".

>> GO TO 3.

3.WRITING VEHICLE SPECIFICATION

CONSULT Configuration
Perform “WRITE CONFIGURATION - Config file” or “WRITE CONFIGURATION - Manual selection” to write vehicle specification. Refer to SEC-63, "BCM : Work Procedure".

>> GO TO 4.

4.INITIALIZE BCM (NATS)

Perform BCM initialization. (NATS) Refer to the CONSULT Immobilizer mode and follow the on-screen instructions.

>> Inspection End.

DTC/CIRCUIT DIAGNOSIS

P161D IMMOBILIZER

DTC Description

INFOID:0000000015246289

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition	
P161D	IMMOBILIZER (Immobilizer)	Diagnosis condition	Ignition switch ON
		Signal (terminal)	—
		Threshold	When BCM detects an immobilizer malfunction and engine start is prohibited.
		Diagnosis delay time	1 second or less

POSSIBLE CAUSE

BCM

FAIL-SAFE

Inhibit setting the vehicle to READY

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “EV/HEV”.

Is the DTC detected?

YES >> Refer to SEC-65, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015246290

1. CHECK DTC OF “BCM”

CONSULT

Select “Self Diagnostic Result” mode of “BCM”.

Is the DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to BCS-48, "DTC Index".
NO >> GO TO 2.

2. REPLACE BCM

Replace BCM. Refer to BCS-73, "Removal and Installation".

>> Inspection End.

P161E IMMOBILIZER

DTC Description

INFOID:0000000015246291

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition	
P161E	IMMOBILIZER (Immobilizer)	Diagnosis condition	Ignition switch ON
		Signal (terminal)	—
		Threshold	When CONSULT is not used during HPCM replacement.
		Diagnosis delay time	1 second or less

POSSIBLE CAUSE

- BCM
- HPCM

FAIL-SAFE

Inhibit setting the vehicle to READY

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “EV/HEV”.

Is the DTC detected?

YES >> Refer to SEC-66, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015246292

1.HPCM REGISTRATION

Using CONSULT, register HPCM.

Is the DTC detected?

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

2.REPLACE BCM

Replace BCM. Refer to BCS-73, "Removal and Installation".

Is the DTC detected?

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

3.REPLACE HPCM

Replace HPCM. Refer to HBC-335, "Removal and Installation".

>> Inspection End.

P161F IMMOBILIZER

DTC Description

INFOID:0000000015246293

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition	
P161F	IMMOBILIZER (Immobilizer)	Diagnosis condition	Ignition switch ON
		Signal (terminal)	—
		Threshold	When BCM detects an immobilizer malfunction and engine start is prohibited.
		Diagnosis delay time	1 second or less

POSSIBLE CAUSE

HPCM

FAIL-SAFE

Inhibit setting the vehicle to READY

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “EV/HEV”.

Is the DTC detected?

YES >> Refer to SEC-67, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015246294

1.REPLACE HPCM

Replace HPCM. Refer to HBC-335, "Removal and Installation".

>> Inspection End.

B2192 ID DISCORD, BCM-ECM

DTC Description

INFOID:0000000015246295

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition	
B2192-00	ID DISCORD BCM-ECM* (Identification discord body control module - engine control module)	Diagnosis condition	Ignition switch ON
		Signal (terminal)	The ID verification between BCM and HPCM
		Threshold	The ID verification results are improper
		Diagnosis delay time	1 second or less

*: “ECM” is indicated on CONSULT display, however this means HPCM on this models.

POSSIBLE CAUSE

- BCM
- HPCM

FAIL-SAFE

Inhibit setting the vehicle to READY

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “BCM”.

Is the DTC detected?

YES >> Refer to SEC-68, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015246296

1.PERFORM INITIALIZATION

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

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

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

2.CHECK SELF DIAGNOSTIC RESULT

CONSULT
1. Select “Self Diagnostic Result” mode of “BCM”.
2. Erase DTC.
3. Perform DTC CONFIRMATION PROCEDURE for DTC B2192-00. Refer to SEC-68, "DTC Description".

Is the DTC detected?

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

3.REPLACE BCM

Replace BCM. Refer to BCS-73, "Removal and Installation".

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

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

4.REPLACE HPCM

Replace HPCM. Refer to HBC-335, "Removal and Installation".

>> Inspection End.

B2193 CHAIN OF BCM-ECM

DTC Description

INFOID:0000000015246297

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition	
B2193-00	CHAIN OF BCM-ECM* (Chain of body control module - engine control module)	Diagnosis condition	Ignition switch ON
		Signal (terminal)	Between BCM and HPCM communication
		Threshold	Inactive communication
		Diagnosis delay time	1 second or less

*: “ECM” is indicated on CONSULT display, however this means HPCM on this models.

POSSIBLE CAUSE

- Harness or connectors
  (The CAN communication line is open or shorted.)
- BCM
- HPCM

FAIL-SAFE

Inhibit setting the vehicle to READY

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC B2193-00 is displayed with DTC U1000-00 or U1010-00, first perform the trouble diagnosis for DTC U1000-00 or U1010-00.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000-00: Refer to DLK-117, "DTC Description". U1010-00: Refer to DLK-118, "DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “BCM”.

Is the DTC detected?

YES >> Refer to SEC-70, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015246298

1.CHECK DTC PRIORITY

If DTC B2193-00 is displayed with DTC U1000-00 or U1010-00, first perform the trouble diagnosis for DTC U1000-00 or U1010-00.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000-00: Refer to DLK-117, "DTC Description". U1010-00: Refer to DLK-118, "DTC Description".
NO >> GO TO 2.

2.REPLACE BCM

Replace BCM. Refer to BCS-73, "Removal and Installation".

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

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

3.REPLACE HPCM

Replace HPCM. Refer to HBC-335, "Removal and Installation".

>> Inspection End.

B2195 ANTI-SCANNING

DTC Description

INFOID:0000000015246299

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition	
B2195-00	ANTI-SCANNING (Anti-scanning)	Diagnosis condition	Ignition switch ON
		Signal (terminal)	ID verification between BCM and HPCM
		Threshold	Out of the specified specification is detected.
		Diagnosis delay time	1 second or less

POSSIBLE CAUSE

ID verification request out of the specified specification

FAIL-SAFE

Inhibit setting the vehicle to READY

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “BCM”.

Is the DTC detected?

YES >> Refer to SEC-72, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015246300

1.CHECK SELF DIAGNOSTIC RESULT 1

CONSULT
1. Select “Self Diagnostic Result” mode of “BCM”.
2. Erase DTC.
3. Perform DTC CONFIRMATION PROCEDURE for DTC B2195-00. Refer to SEC-72, "DTC Description".

Is the 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

CONSULT
1. Obtain the customers approval to remove unspecified accessory part related to engine start, and then remove it.
2. Select “Self Diagnostic Result” mode of “BCM”.
3. Erase DTC.
4. Perform DTC CONFIRMATION PROCEDURE for DTC B2195-00. Refer to SEC-72, "DTC Description".

Is the DTC detected?

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

4.REPLACE BCM

Replace BCM. Refer to BCS-73, "Removal and Installation".

>> Inspection End.

B2198 NATS ANTENNA AMP.

DTC Description

INFOID:0000000015246301

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition	
B2198-00	NATS ANTENNA AMP (Nissan Anti-Theft System antenna amplifier)	Diagnosis condition	BCM enters in the low power consumption mode (BCM sleep condition)
		Signal (terminal)	NATS antenna amp. signal
		Threshold	Inactive communication between NATS antenna amp. and BCM
		Diagnosis delay time	1 second or less

POSSIBLE CAUSE

- Harness or connectors
  (NATS antenna amp. circuit is open or shorted.)
- NATS antenna amp.
- BCM

FAIL-SAFE

Inhibit setting the vehicle to READY

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

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. Select “Self Diagnostic Result” mode of “BCM”.

Is the DTC detected?

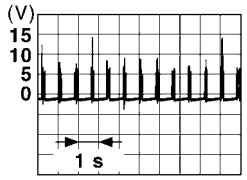
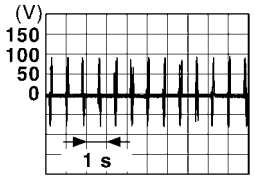
YES >> Refer to SEC-74, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015246302

1.CHECK NATS ANTENNA AMP. COMMUNICATION SIGNAL

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

(+) NATS antenna amp. Connector	(+) NATS antenna amp. Terminal	(–)	Condition		Voltage
M25	1	Ground	Intelligent Key battery is removed and brake pedal is depressed	When a registered Intelligent Key backside is contacted to push-button ignition switch	0V
				Other than above	 JMMIA1651GB
	3			When a registered Intelligent Key backside is contacted to push-button ignition switch	0V
				Other than above	 JMMIA1650GB

Is the inspection result normal?

YES >> Replace NATS antenna amp. Refer to SEC-109, "Removal and Installation".
NO >> GO TO 2.

2. CHECK NATS ANTENNA AMP. COMMUNICATION SIGNAL CIRCUIT

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

NATS antenna amp. Connector	NATS antenna amp. Terminal	BCM Connector	BCM Terminal	Continuity
M25	1	M19	115	Yes
	3		114	

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

NATS antenna amp. Connector	NATS antenna amp. Terminal	Ground	Continuity
M25	1		No
	3		

Is the inspection result normal?

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

3. REPLACE BCM

Replace BCM. Refer to BCS-73, "Removal and Installation".

>> Inspection End.

B2556 PUSH-BUTTON IGNITION SWITCH

DTC Description

INFOID:0000000015246303

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition	
B2556-00	PUSH-BTN IGN SW (Push-button ignition switch)	Diagnosis condition	—
		Signal (terminal)	Push switch signal
		Threshold	0 - 1.5 V
		Diagnosis delay time	100 second or more

POSSIBLE CAUSE

- Harness or connectors
  (Push-button ignition switch circuit is shorted.)
- Push-button ignition switch
- BCM

FAIL-SAFE

—

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

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. Select “Self Diagnostic Result” mode of “BCM”.

Is the DTC detected?

YES >> Refer to SEC-76, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015246304

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 (Approx.)
Push-button ignition switch			
Connector	Terminal		
M17	5	Ground	Battery voltage

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	
M17	5	M19	89	Yes

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

Push-button ignition switch		Ground	Continuity
Connector	Terminal		
M17	5		No

Is the inspection result normal?

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

3.REPLACE BCM

Replace BCM. Refer to BCS-73, "Removal and Installation".

>> 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		
M17	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-77, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Replace push-button ignition switch. Refer to PCS-102, "Removal and Installation".

6.CHECK INTERMITTENT INCIDENT

Refer to GI-54, "Intermittent Incident".

>> Inspection End.

Component Inspection

INFOID:0000000015246305

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				
5	4	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 PCS-102, "Removal and Installation".

B2557 VEHICLE SPEED

DTC Description

INFOID:0000000015246306

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition	
B2557-00	VEHICLE SPEED (Vehicle speed)	Diagnosis condition	When vehicle running
		Signal (terminal)	CAN communication signal
		Threshold	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.
		Diagnosis delay time	10 second or more

POSSIBLE CAUSE

- Harness or connectors
  (The CAN communication line is open or shorted.)
- Combination meter
- ABS actuator and electric unit (control unit)

FAIL-SAFE

Inhibit steering lock

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC B2557-00 is displayed with DTC U1000-00 or U1010-00, first perform the trouble diagnosis for DTC U1000-00 or U1010-00.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000-00: Refer to DLK-117, "DTC Description" U1010-00: Refer to DLK-118, "DTC Description".
NO >> GO TO 2

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
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. Select “Self Diagnostic Result” mode of “BCM”.

Is the DTC detected?

YES >> Refer to SEC-78, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015246307

1.CHECK DTC PRIORITY

If DTC B2557-00 is displayed with DTC U1000-00 or U1010-00, first perform the trouble diagnosis for DTC U1000-00 or U1010-00.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000-00: Refer to DLK-117, "DTC Description" U1010-00: Refer to DLK-118, "DTC Description".
NO >> GO TO 2

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

CONSULT
Select “Self Diagnostic Result” mode of “ABS”.

Is the DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to BRC-61, "DTC Index".
NO >> GO TO 3.

3.CHECK DTC OF “COMBINATION METER”

CONSULT
Select “Self Diagnostic Result” mode of “METER/M&A”.

Is the DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to MWI-32, "DTC Index".
NO >> GO TO 4.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-54, "Intermittent Incident".

>> Inspection End.

B2602 SHIFT POSITION

DTC Description

INFOID:0000000015246308

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition	
B2602-00	SHIFT POSITION (Shift position)	Diagnosis condition	When vehicle running
		Signal (terminal)	• CAN communication signal • P position signal
		Threshold	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
		Diagnosis delay time	10 second or more

POSSIBLE CAUSE

- Harness or connectors
  (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
- ABS actuator and electric unit (control unit)

FAIL-SAFE

Inhibit steering lock

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC B2602-00 is displayed with DTC U1000-00 or U1010-00, first perform the trouble diagnosis for DTC U1000-00 or U1010-00.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000-00: Refer to DLK-117, "DTC Description" U1010-00: Refer to DLK-118, "DTC Description".
NO >> GO TO 2

2.PERFORM DTC CONFIRMATION PROCEDURE

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

Is the DTC detected?

YES >> Refer to SEC-80, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015246309

1.CHECK DTC PRIORITY

If DTC B2602-00 is displayed with DTC U1000-00 or U1010-00, first perform the trouble diagnosis for DTC U1000-00 or U1010-00.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000-00: Refer to DLK-117, "DTC Description" U1010-00: Refer to DLK-118, "DTC Description".
NO >> GO TO 2

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

CONSULT
Select “Self Diagnostic Result” mode of “ABS”.

Is the DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to BRC-61, "DTC Index".
NO >> GO TO 3.

3. CHECK DTC OF COMBINATION METER

CONSULT
Select “Self Diagnostic Result” mode of “METER/M&A”.

Is the DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to MWI-32, "DTC Index".
NO >> GO TO 4.

4. 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.

(+)		(–)	Condition		Voltage (Approx.)
CVT shift selector (park position switch)					
Connector	Terminal				
M107	12	Ground	Power position	ACC or ON	Battery voltage

Is the inspection result normal?

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

5. CHECK CVT SHIFT SELECTOR POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. 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	
M107	12	M18	17	Yes

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

CVT shift selector (park position switch)		Ground	Continuity
Connector	Terminal		
M107	12		No

Is the inspection result normal?

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

6. REPLACE BCM

Replace BCM. Refer to BCS-73, "Removal and Installation".

>> Inspection End.

7. CHECK CVT SHIFT SELECTOR CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector.

3. 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	
M107	13	M19	94	Yes

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

CVT shift selector (park position switch)		Ground	Continuity
Connector	Terminal		
M107	13		No

Is the inspection result normal?

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

8.CHECK CVT SHIFT SELECTOR

Refer to SEC-82, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 9.
NO >> Replace CVT shift selector. Refer to TM-206, "Removal and Installation".

9.CHECK INTERMITTENT INCIDENT

Refer to GI-54, "Intermittent Incident".

>> Inspection End.

Component Inspection

INFOID:0000000015246310

1.CHECK CVT SHIFT SELECTOR

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

CVT shift selector		Condition		Continuity
Terminal				
12	13	Selector lever: P position	Selector button: Released	No
			Selector button: Pressed	Yes
		Selector lever: Except P position		

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace CVT shift selector. Refer to TM-206, "Removal and Installation".

B2604 SHIFT POSITION

DTC Description

INFOID:0000000015246311

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition	
B2604-00	PNP/CLUTCH SW (Park neutral position/ clutch switch)	Diagnosis condition	Ignition switch ON
		Signal (terminal)	• CAN communication signal • P/N position signal
		Threshold	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
		Diagnosis delay time	5 second or more

POSSIBLE CAUSE

- Harness or connectors
  (CAN communication line is open or shorted.)
- Harness or connectors
  (Transmission range switch circuit is open or shorted.)
- Transmission range switch
- TCM

FAIL-SAFE

—

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC B2604-00 is displayed with DTC U1000-00 or U1010-00, first perform the trouble diagnosis for DTC U1000-00 or U1010-00.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000-00: Refer to DLK-117, "DTC Description" U1010-00: Refer to DLK-118, "DTC Description".
NO >> GO TO 2

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
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. Select “Self Diagnostic Result” mode of “BCM”.

Is the DTC detected?

YES >> Refer to SEC-83, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015246312

1.CHECK DTC PRIORITY

If DTC B2604-00 is displayed with DTC U1000-00 or U1010-00, first perform the trouble diagnosis for DTC U1000-00 or U1010-00.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000-00: Refer to DLK-117, "DTC Description" U1010-00: Refer to DLK-118, "DTC Description".
NO >> GO TO 2.

2.CHECK DTC OF TCM

CONSULT
Select “Self Diagnostic Result” mode of “TCM”.

Is the DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to TM-70, "DTC Index".
NO >> GO TO 3.

3.CHECK FUSE

1. Turn ignition switch OFF.
2. Check that the following fuse is not blown.

Signal name	Fuse No.
Ignition power supply	46 (10A)

Is the fuse blown (open)?

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

4.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 (Approx.)
Transmission range switch			
Connector	Terminal		
F78	7	Ground	Battery voltage

Is the inspection result normal?

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

5.CHECK IPDM E/R INPUT SIGNAL

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

(+)		(–)	Condition		Voltage (Approx.)
IPDM E/R					
Connector	Terminal				
F42	92	Ground	Selector lever	P or N position	Battery voltage
				Other than above	0 - 1 V

Is the inspection result normal?

YES >> GO TO 8.
NO >> GO TO 6.

6.CHECK TRANSMISSIONRANGE SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect transmission range switch connector and 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	
F78	10	F42	92	Yes

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

Transmission range switch		Ground	Continuity
Connector	Terminal		
F78	10		No

Is the inspection result normal?

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

7. CHECK TRANSMISSION RANGE SWITCH

Refer to SEC-85, "Component Inspection".

Is the inspection the result normal?

YES >> Inspection End.
NO >> Replace transmission range switch. Refer to TM-215, "Removal and Installation".

8. REPLACE IPDM E/R

Refer to PCS-46, "Removal and Installation".

>> Inspection End.

Component Inspection

INFOID:0000000015246313

1. CHECK TRANSMISSION RANGE SWITCH

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

Transmission range switch		Condition		Continuity
Terminal				
7	10	Select lever	P or N position	Yes
			Other than above	No

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace transmission assembly. Refer to TM-215, "Removal and Installation".

B2608 STARTER RELAY

DTC Description

INFOID:0000000015246314

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition	
B2608-00	STARTER RELAY (Starter relay)	Diagnosis condition	Ignition switch ON
		Signal (terminal)	CAN communication signal
		Threshold	BCM outputs starter relay OFF signal but BCM receives starter relay ON signal from IPDM E/R (CAN).
		Diagnosis delay time	1 second or more

POSSIBLE CAUSE

- IPDM E/R
- BCM

FAIL-SAFE

—

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

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. Select “Self Diagnostic Result” mode of “BCM”.

Is the DTC detected?

YES >> Refer to SEC-86, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015246315

1.CHECK DTC OF IPDM E/R

CONSULT

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

Is the DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to PCS-28, "DTC Index".
NO >> GO TO 2.

2.CHECK INTERMITTENT INCIDENT

Refer to GI-54, "Intermittent Incident".

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace BCM. Refer to BCS-73, "Removal and Installation".

B260F ENGINE STATUS

DTC Description

INFOID:0000000015246316

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition	
B260F-00	ENG STATE SIG LOST (Engine state signal lost)	Diagnosis condition	Ignition switch ON
		Signal (terminal)	—
		Threshold	BCM has not yet received the engine status signal from HPCM.
		Diagnosis delay time	2 second or more

POSSIBLE CAUSE

- Harness or connectors
  (CAN communication line is open or shorted.)
- HPCM

FAIL-SAFE

—

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC B260F-00 is displayed with DTC U1000-00 or U1010-00, first perform the trouble diagnosis for DTC U1000-00 or U1010-00.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000-00: Refer to DLK-117, "DTC Description" U1010-00: Refer to DLK-118, "DTC Description".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT
1. Turn ignition switch ON and wait 2 seconds or more.
2. Select “Self Diagnostic Result” mode of “BCM”.

Is the DTC detected?

YES >> Refer to SEC-87, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015246317

1.CHECK DTC PRIORITY

If DTC B260F-00 is displayed with DTC U1000-00 or U1010-00, first perform the trouble diagnosis for DTC U1000-00 or U1010-00.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000-00: Refer to DLK-117, "DTC Description", U1010-00: Refer to DLK-118, "DTC Description".
NO >> GO TO 2.

2.INSPECTION START

CONSULT
1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “BCM”.
3. Touch “ERASE”.
4. Perform DTC CONFIRMATION PROCEDURE for DTC B260F-00. Refer to SEC-87, "DTC Description".

Is the DTC detected?

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

3.REPLACE HPCM

Replace HPCM. Refer to HBC-335, "Removal and Installation".

>> Inspection End.

B261E VEHICLE TYPE

DTC Description

INFOID:0000000015246318

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition	
B261E	VEHICLE TYPE (Vehicle type)	Diagnosis condition	Ignition switch ON
		Signal (terminal)	CAN communication signal
		Threshold	Difference of BCM configuration
		Diagnosis delay time	2 second or more

POSSIBLE CAUSE

BCM

FAIL-SAFE

- Inhibit setting the vehicle to READY

DTC CONFIRMATION PROCEDURE

1.CHECK DTC PRIORITY

If DTC B261E is displayed with DTC U1000 or U1010, first perform the trouble diagnosis for DTC U1000 or U1010.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000: Refer to DLK-117, "DTC Description". U1010: Refer to DLK-118, "DTC Description".

NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Turn ignition switch ON.
2. Check DTC in “Self Diagnostic Result” mode of “BCM”.

Is DTC detected?

YES >> Refer to SEC-89, "Diagnosis Procedure".

NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".

NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015246319

1.CHECK DTC PRIORITY

If DTC B261E is displayed with DTC U1000 or U1010, first perform the trouble diagnosis for DTC U1000 or U1010.

Is applicable DTC detected?

YES >> Perform diagnosis of applicable. U1000: Refer to DLK-117, "DTC Description". U1010: Refer to DLK-118, "DTC Description".

NO >> GO TO 2.

2.INSPECTION START

CONSULT

1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “BCM”.
3. Touch “ERASE”.
4. Perform DTC CONFIRMATION PROCEDURE for DTC B261E. Refer to SEC-89, "DTC Description".

Is the DTC B261E detected again?

YES >> GO TO 3.

NO >> Inspection End.

3.REPLACE BCM

Replace BCM. Refer to GI-54, "Intermittent Incident".

>> Inspection End.

B26FC KEY REGISTRATION

DTC Description

INFOID:0000000015246320

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition	
B26FC-00	KEY REGISTRATION (Key registration)	Diagnosis condition	—
		Signal (terminal)	—
		Threshold	Intelligent Key that does not match the vehicle is registered.
		Diagnosis delay time	1 second or less

POSSIBLE CAUSE

- Improper registration operation
- Intelligent Key
- BCM

FAIL-SAFE

—

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Perform initialization of BCM and registration of all Intelligent Keys using CONSULT.
2. Select “Self Diagnostic Result” mode of “BCM”.

Is the DTC detected?

YES >> Refer to SEC-91, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015246321

1.REPLACE INTELLIGENT KEY

CONSULT

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

Is the DTC detected?

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

2.REPLACE BCM

Replace BCM. Refer to PCS-101, "Removal and Installation".

>> Inspection End.

B27D1 START CUT RELAY OFF

DTC Description

INFOID:0000000015246322

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition	
B27D1–00	START CUT RELAY OFF (Starter cut relay OFF)	Diagnosis condition	Ignition switch ON
		Signal (terminal)	Starter cut relay signal
		Threshold	When the starter relay/starter cut relay status signal transmitted from IPDM E/R via CAN communication is (OFF/OFF) after even though BCM is operating the starter cut relay ON output
		Diagnosis delay time	1 second or more

POSSIBLE CAUSE

- Starter cut relay
- Harness or connectors
  (Starter cut relay circuit is shorted)
- IPDM E/R

FAIL-SAFE

—

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Press push-button ignition switch under the following conditions and wait 1 second or more.
- Selector lever: In the P position.
- Brake pedal: Depressed.
2. Select “Self Diagnostic Result” mode of “BCM”.

Is the DTC detected?

YES >> Refer to SEC-92, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015246323

1.CHECK STARTER CUT RELAY INPUT SIGNAL

Check voltage between BCM harness connector and ground.

(+)		(-)	Condition	Voltage (Approx.)
BCM				
Connector	Terminal			
E29	139	Ground	At engine cranking	0 - 0.1 V
			Other than above	Battery voltage

Is the inspection result normal?

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

2.CHECK STARTER CUT RELAY INPUT SIGNAL CIRCUIT

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

BCM		Starter cut relay		Continuity
Connector	Terminal	Connector	Terminal	
E29	139	E55	2	Yes

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
E29	139		No

Is the inspection result normal?

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

3.CHECK FUSIBLE LINK

Check that the following fusible link is not blown

Signal name	Fusible link No.
Battery power supply	M (30A)

Is the fusible link blown (open)?

YES >> Replace the blown fusible link after repairing the affected circuit if a fusible link is blown.
NO >> GO TO 6.

4.CHECK STARTER CUT RELAY OUTPUT SIGNAL

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

(+)		(-)	Condition	Voltage (Approx.)
IPDM E/R				
Connector	Terminal			
E122	86	Ground	Other than engine cranking	0 - 1 V
			Engine cranking	Battery voltage

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-46, "Removal and Installation".
NO >> GO TO 5.

5.CHECK STARTER CUT RELAY OUTPUT SIGNAL CIRCUIT

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

IPDM E/R		Starter cut relay		Continuity
Connector	Terminal	Connector	Terminal	
E122	86	E55	5	Yes

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E122	86		No

Is the inspection result normal?

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

6.CHECK STARTER CUT RELAY

Check starter cut relay. Refer to SEC-94, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 7.
NO >> Replace starter cut relay.

7.REPLACE BCM

Replace BCM. Refer to PCS-101, "Removal and Installation".

Is the inspection result normal?

YES >> Inspection End.
NO >> GO TO 8.

8.CHECK INTERMITTENT INCIDENT

Check intermittent incident. Refer to GI-54, "Intermittent Incident".

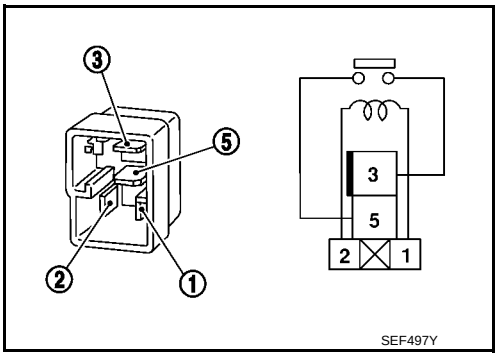
>> Inspection End.

Component Inspection

INFOID:0000000015246324

1.CHECK STARTER CUT RELAY

1. Disconnect starter cut relay.
2. Check continuity between starter cut relay terminals.



Starter cut 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 cut relay.

B27D2 START CUT RELAY ON

DTC Description

INFOID:0000000015246325

DTC DETECTION LOGIC

DTC No.	CONSULT screen items (Trouble diagnosis content)	DTC detecting condition	
B27D2–00	START CUT RELAY ON (Starter cut relay ON)	Diagnosis condition	Ignition switch ON
		Signal (terminal)	Starter cut relay signal
		Threshold	When BCM starter cut relay is in OFF status, and when the starter relay/starter cut relay status signal is (ON/ON)
		Diagnosis delay time	1 second or more

POSSIBLE CAUSE

- Harness or connectors
  (Starter cut relay circuit is shorted)
- Starter cut relay
- BCM
- IPDM E/R

FAIL-SAFE

—

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

CONSULT

1. Press push-button ignition switch under the following conditions and wait 1 second or more.
- Selector lever: In the P position.
- Brake pedal: Depressed.
2. Select “Self Diagnostic Result” mode of “BCM”.

Is the DTC detected?

YES >> Refer to SEC-95, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-54, "Intermittent Incident".
NO-2 >> Confirmation after repair: Inspection End.

Diagnosis Procedure

INFOID:0000000015246326

1.CHECK STARTER CUT RELAY INPUT SIGNAL

1. Check voltage between BCM harness connector and ground.

(+)		(-)	Condition	Voltage (Approx.)
BCM				
Connector	Terminal			
E29	139	Ground	At engine cranking	0 - 0.1 V
			Other than above	Battery voltage

Is the inspection result normal?

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

2.CHECK STARTER CUT RELAY INPUT SIGNAL CIRCUIT

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

BCM		Starter cut relay		Continuity
Connector	Terminal	Connector	Terminal	
E29	139	E55	2	Yes

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
E29	139		No

Is the inspection result normal?

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

3.CHECK FUSIBLE LINK

Check that the following fusible link is not blown

Signal name	Fusible link
Battery power supply	M (30A)

Is the fusible link blown (open)?

YES >> Replace the blown fusible link after repairing the affected circuit if a fusible link is blown.
NO >> GO TO 6.

4.CHECK STARTER CUT RELAY OUTPUT SIGNAL

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

(+)		(-)	Condition	Voltage (Approx.)
IPDM E/R				
Connector	Terminal			
E122	86	Ground	Other than engine cranking	0 - 1 V
			Engine cranking	Battery voltage

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-46, "Removal and Installation".
NO >> GO TO 5.

5.CHECK STARTER CUT RELAY OUTPUT SIGNAL CIRCUIT

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

IPDM E/R		Starter cut relay		Continuity
Connector	Terminal	Connector	Terminal	
E122	86	E55	5	Yes

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E122	86		No

Is the inspection result normal?

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

6.CHECK STARTER CUT RELAY

Check starter cut relay. Refer to SEC-97, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 7.
NO >> Replace starter cut relay.

7. REPLACE BCM

Replace BCM. PCS-101, "Removal and Installation".

Is the inspection result normal?

YES >> Inspection End.
NO >> GO TO 8.

8. CHECK INTERMITTENT INCIDENT

Refer to GI-54, "Intermittent Incident".

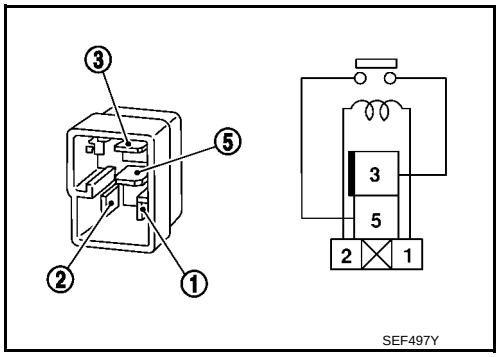
>> Inspection End.

Component Inspection

INFOID:0000000015246327

1. CHECK STARTER CUT RELAY

1. Disconnect starter cut relay.
2. Check continuity between starter relay terminals.



Starter cut 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 cut relay.

HEADLAMP FUNCTION

Component Function Check

INFOID:0000000014625367

1.CHECK FUNCTION

CONSULT
1. Select “THEFT ALM” of “BCM”..
2. Select “HEAD LAMP(HI)” in “Active Test” mode.
3. Check headlamps operation:

Test item		Description	
HEAD LAMP (HI)	ON	Headlamps (Hi)	Light
	OFF		Does not light

Is the inspection result normal?

YES >> Inspection End.
NO >> Refer to SEC-98, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000014625368

1.CHECK HEADLAMP FUNCTION

Refer to SEC-98, "Component Function Check".

Is the inspection result normal?

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

2.CHECK INTERMITTENT INCIDENT

Refer to GI-54, "Intermittent Incident".

>> Inspection End.

HORN FUNCTION

Component Function Check

INFOID:0000000014625369

1.CHECK FUNCTION 1

CONSULT
1. Select “THEFT ALM” of “BCM”.
2. Select “VEHICLE SECURITY HORN” in “Active Test” mode.
3. Check the horn operation:

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

Is the operation normal?

YES >> Inspection End.
NO >> Go to SEC-49, "Wiring Diagram".

Component Inspection

INFOID:0000000014625370

1.CHECK ANTI-THEFT HORN RELAY

1. Turn ignition switch OFF.
2. Disconnect anti-theft horn relay.
3. Check voltage between anti-theft horn relay connector and ground under the following conditions:

(+) Anti-theft horn relay Terminal	(–)	Condition	Voltage (V) (Approx.)
3	Ground	12 V direct current supply between terminals 1 and 3	12
		No current supply	0

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace anti-theft horn relay.

SECURITY INDICATOR LAMP

Component Function Check

INFOID:0000000014625371

1.CHECK FUNCTION

CONSULT
1. Select “IMMU” of “BCM”.
2. Select “THEFT IND” in “Active Test” mode.
3. Check security indicator lamp operation:

Test item		Description	
THEFT IND	ON	Security indicator lamp	Illuminates
	OFF		Does not illuminate

Is the inspection result normal?

YES >> Inspection End.
NO >> Go to SEC-100, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000014625372

Regarding Wiring Diagram information, refer to SEC-49, "Wiring Diagram".

1.CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT

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

(+)		(–)	Voltage (V) (Approx.)
Combination meter			
Connector	Terminal		
M77	45	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 2.
NO-1 >> Check 10 A fuse [No. 13, located in the fuse block (J/B)].
NO-2 >> Check harness for open or short between combination meter and fuse.

2.CHECK SECURITY INDICATOR LAMP SIGNAL

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

(+)		(–)	Voltage (V) (Approx.)
BCM			
Connector	Terminal		
M18	35	Ground	Battery voltage

Is the inspection result normal?

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

3.REPLACE BCM

1. Replace BCM. Refer to BCS-73, "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 SECURITY INDICATOR LAMP CIRCUIT

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

Combination meter		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M76	7	M18	35	Yes

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

Combination meter		Ground	Continuity
Connector	Terminal		
M76	7		No

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-81, "Removal and Installation".
NO >> Repair or replace harness.

SYMPTOM DIAGNOSIS

INTELLIGENT KEY SYSTEM SYMPTOMS

Diagnosis Procedure

INFOID:0000000015258233

NOTE:
Perform the self-diagnosis with CONSULT before the symptom diagnosis. Perform the trouble diagnosis if any DTC is detected.

SYMPTOM TABLE 1 (BOTH INTELLIGENT KEYS HAVE THE SAME SYMPTOMS)

No.	Door lock operation (remote keyless entry)	Door lock operation (request switch) or back door open operation (opener switch of back door panel)	Engine started with push-button ignition switch operation (registered Intelligent Key is within the detection area of inside key antenna)	Engine started with push-button ignition switch operation (registered Intelligent Key placed next to push-button ignition switch)	Symptom
1	OK	OK	No start	No start	SEC-103
2	OK	NG	OK	OK	SEC-103
3	OK	NG	No crank, No start	OK	SEC-104
4	NG	NG	No crank, No start	OK	SEC-106
5	NG	NG	No start	No start	SEC-106
6	OK	OK	No crank, No start	OK	SEC-104
7	NG	OK	OK	OK	SEC-106
8	NG	NG	OK	OK	SEC-106
9	Poor range	OK	OK	OK	SEC-107

SYMPTOM TABLE 2 (ONE INTELLIGENT KEY HAS THE SYMPTOM, OTHER KEYS OPERATE NORMALLY)

No.	Door lock operation (remote keyless entry)	Door lock operation (request switch) or back door open operation (opener switch of back door panel)	Engine started with push-button ignition switch operation (Intelligent Key is within the detection area of inside key antenna)	Engine started with push-button ignition switch operation (registered Intelligent Key placed next to push-button ignition switch)	Symptom
1	NG	OK	OK	OK	SEC-104
2	NG	NG	No crank, No start	OK	SEC-106
3	NG	NG	No crank, No start	No crank, No start	SEC-107
4	OK	OK	No crank, No start	No crank, No start	SEC-106
5	OK	NG	No crank, No start	OK	SEC-107
6	Poor range	OK	OK	OK	SEC-107

ENGINE CAN NOT START

Description

INFOID:0000000015258234

Engine does not start when push-button ignition switch is pressed.

SYMPTOM TABLE (BOTH INTELLIGENT KEYS HAVE THE SAME SYMPTOMS)

Door lock operation (remote keyless entry)	Door lock operation (request switch) or back door open operation (opener switch of back door panel)	Engine started with push-button ignition switch operation (registered Intelligent Key is within the detection area of inside key antenna)	Engine started with push-button ignition switch operation (registered Intelligent Key placed next to push-button ignition switch)
OK	OK	No start	No start

CONDITIONS OF VEHICLE (OPERATING CONDITIONS)

“ENGINE START BY I-KEY” setting in “Work support” mode of “INTELLIGENT KEY” of “BCM” is ON.

DIAGNOSIS PROCEDURE

Refer to SEC-103, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000015258235

1.CHECK INTELLIGENT KEY SYSTEM SYMPTOM TABLE

Check Intelligent Key system symptom table.
Refer to SEC-102, "Diagnosis Procedure".

>> GO TO 2.

2.PERFORM SELF-DIAGNOSIS RESULT

Select “Self Diagnostic Result” mode of all systems, and check if DTC is detected.

>> Follow troubleshooting for each DTC.

ENGINE DOES NOT START WHEN INTELLIGENT KEY IS INSIDE OF VEHICLE

Description

INFOID:0000000015258236

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

NOTE:

- Before starting diagnosis check that vehicle condition is as shown in “Conditions of vehicle”, 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.

SYMPTOM TABLE (BOTH INTELLIGENT KEYS HAVE THE SAME SYMPTOMS)

Door lock operation (remote keyless entry)	Door lock operation (request switch) or back door open operation (opener switch of back door panel)	Engine started with push-button ignition switch operation (registered Intelligent Key is within the detection area of inside key antenna)	Engine started with push-button ignition switch operation (registered Intelligent Key placed next to push-button ignition switch)
OK	OK	No crank, No start	OK

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 Intelligent Keys with a registered Intelligent Key ID are in the vehicle.

DIAGNOSIS PROCEDURE

Refer to SEC-104, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000015258237

1.CHECK INTELLIGENT KEY SYSTEM SYMPTOM TABLE

Check Intelligent Key system symptom table.
Refer to SEC-102, "Diagnosis Procedure".

>> GO TO 2.

2.PERFORM SELF-DIAGNOSIS RESULT

Select “Self Diagnostic Result” mode of “BCM”, and check if DTC is detected.

Is DTC detected?

YES >> Perform the trouble diagnosis for the detected DTC.
NO >> GO TO 3.

3.CHECK “ENGINE START BY I-KEY” SETTING IN “WORK SUPPORT”

1. Select “INTELLIGENT KEY” of “BCM” using CONSULT.
2. Select “ENGINE START BY I-KEY” of “Work support” mode.
3. Check “ENGINE START BY I-KEY” in “Work support”.

Is the inspection result normal?

YES >> GO TO 4.
NO >> Set “On” in “ENGINE START BY I-KEY”.

4.CHECK INSIDE KEY ANTENNA

Use SIGNAL TECH II to check each inside key antenna. For the inspection method and how to use SIGNAL TECH II, refer to “NISSAN/INFINITI SIGNAL TECH II USER GUIDE”.

Is the inspection result normal?

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

5. REPLACE BCM

1. Replace BCM. Refer to BCS-73, "Removal and Installation".
2. Check operation after replacement.

Is the inspection result normal?

YES >> Inspection End.
NO >> Check intermittent incident. Refer to GI-54, "Intermittent Incident".

ENGINE DOES NOT START WHEN INTELLIGENT KEY IS INSIDE OF VEHICLE (ONE KEY)

Description

INFOID:0000000015258238

Engine does not start when push-button ignition switch is pressed. (One Intelligent Key has the symptom, other keys operate normally.)

SYMPTOM TABLE (ONE INTELLIGENT KEY HAS THE SYMPTOM, OTHER KEYS OPERATE NORMALLY)

Door lock operation (remote keyless entry)	Door lock operation (request switch) or back door open operation (opener switch of back door panel)	Engine started with push-button ignition switch operation (Intelligent Key is within the detection area of inside key antenna)	Engine started with push-button ignition switch operation (registered Intelligent Key placed next to push-button ignition switch)
OK	OK	No crank, No start	No crank, No start

DIAGNOSIS PROCEDURE

Refer to SEC-106, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000015258239

1.CHECK INTELLIGENT KEY SYSTEM SYMPTOM TABLE

Check Intelligent Key system symptom table.
Refer to SEC-102, "Diagnosis Procedure".

>> GO TO 2.

2.REGISTER INTELLIGENT KEY

1. Register the Intelligent Key.
2. Check operation after replacement.

Is the inspection result normal?

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

3.REPLACE INTELLIGENT KEY

1. Replace the Intelligent Key and perform registration again.
2. Check operation after replacement.

Is the inspection result normal?

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

4.REPLACE BCM

1. Replace BCM. Refer to BCS-73, "Removal and Installation".
2. Check operation after replacement.

Is the inspection result normal?

YES >> Inspection End.
NO >> Check intermittent incident. Refer to GI-54, "Intermittent Incident".

DOOR DOES NOT LOCK/UNLOCK AND ENGINE DOES NOT START (REQ SW/PUSH SW) (ONE KEY)

Description

INFOID:0000000015258240

Door does not lock/unlock with door request switch, and engine does not start when push-button ignition switch is pressed while carrying Intelligent Key. (One Intelligent Key has the symptom, other keys operate normally.)

SYMPTOM TABLE (ONE INTELLIGENT KEY HAS THE SYMPTOM, OTHER KEYS OPERATE NORMALLY)

Door lock operation (remote keyless entry)	Door lock operation (request switch) or back door open operation (opener switch of back door panel)	Engine started with push-button ignition switch operation (Intelligent Key is within the detection area of inside key antenna)	Engine started with push-button ignition switch operation (registered Intelligent Key placed next to push-button ignition switch)
OK	NG	No crank, No start	OK

DIAGNOSIS PROCEDURE

Refer to SEC-107, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000015258241

1.CHECK INTELLIGENT KEY SYSTEM SYMPTOM TABLE

Check Intelligent Key system symptom table.
Refer to SEC-102, "Diagnosis Procedure".

>> GO TO 2.

2.CHECK INTELLIGENT KEY LOW BATTERY WARNING

Check that the Intelligent Key low battery warning operates.

Is the Intelligent Key low battery warning operated?

YES >> Replace Intelligent Key battery. Refer to DLK-339, "Removal and Installation".
NO >> GO TO 3.

3.CHECK INTELLIGENT KEY BATTERY

Check the Intelligent Key battery.

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace Intelligent Key battery. Refer to DLK-339, "Removal and Installation".

4.REGISTER INTELLIGENT KEY

1. Register the Intelligent Key.
2. Check operation after replacement.

Is the inspection result normal?

YES >> Inspection End.
NO >> GO TO 5.

5.REPLACE INTELLIGENT KEY

1. Replace the Intelligent Key and perform registration again.
2. Check operation after replacement.

Is the inspection result normal?

YES >> Inspection End.
NO >> GO TO 6.

6.REPLACE BCM

1. Replace BCM. Refer to BCS-73, "Removal and Installation".
2. Check operation after replacement.

Is the inspection result normal?

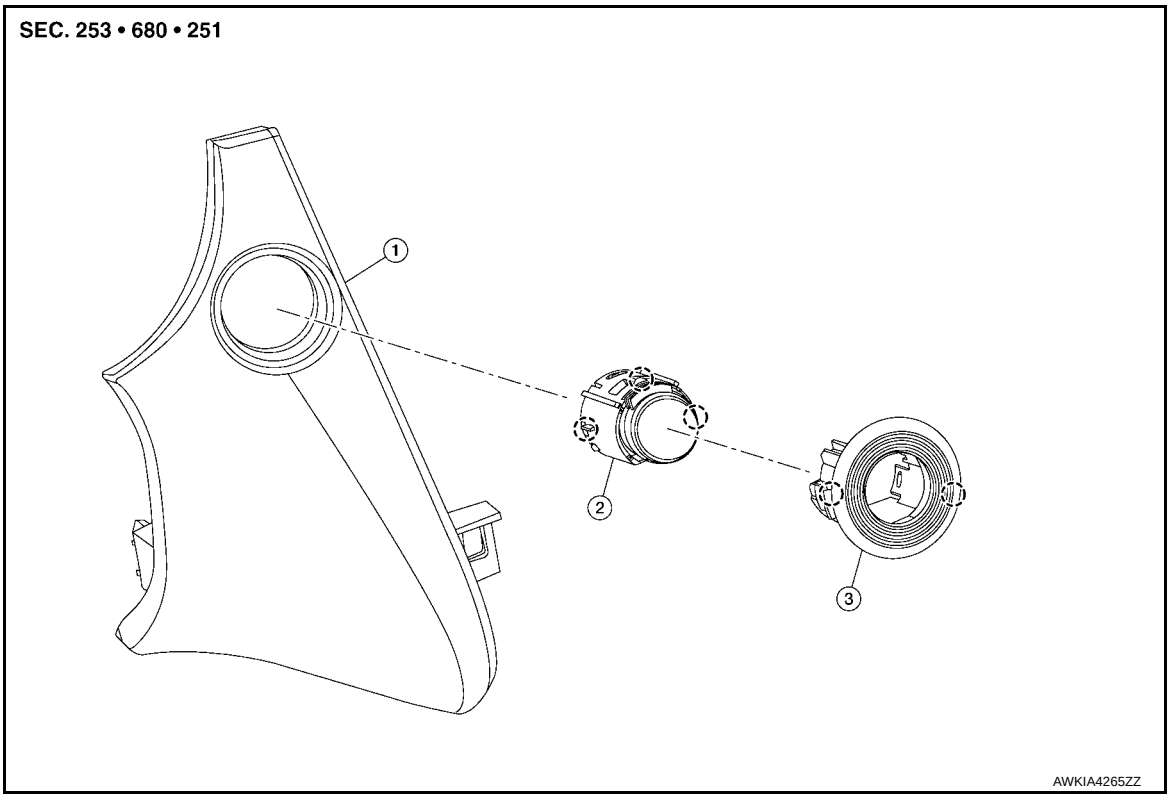
YES >> Inspection End.
NO >> Check intermittent incident. Refer to GI-54, "Intermittent Incident".

REMOVAL AND INSTALLATION

NATS ANTENNA AMP.

Exploded View

INFOID:0000000014625387



1. Instrument finisher B
2. Push button ignition switch
3. NATS antenna amp.

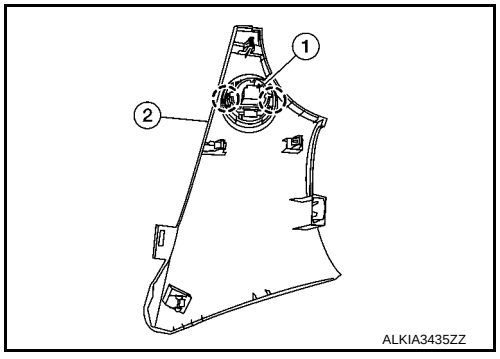
Pawl

Removal and Installation

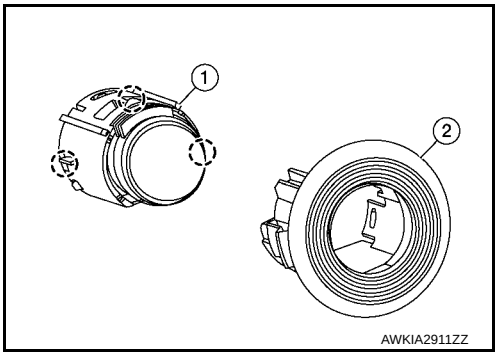
INFOID:0000000014625388

REMOVAL

1. Remove the instrument finisher B. Refer to IP-16, "INSTRUMENT FINISHER B : Removal and Installation".
2. Release pawls using suitable tool and remove NATS antenna amp. (1) from instrument finisher B (2).
   : Pawl



3. Release pawls using suitable tool and remove NATS antenna amp. (2) from push button ignition switch (1).
   ◌: Pawl



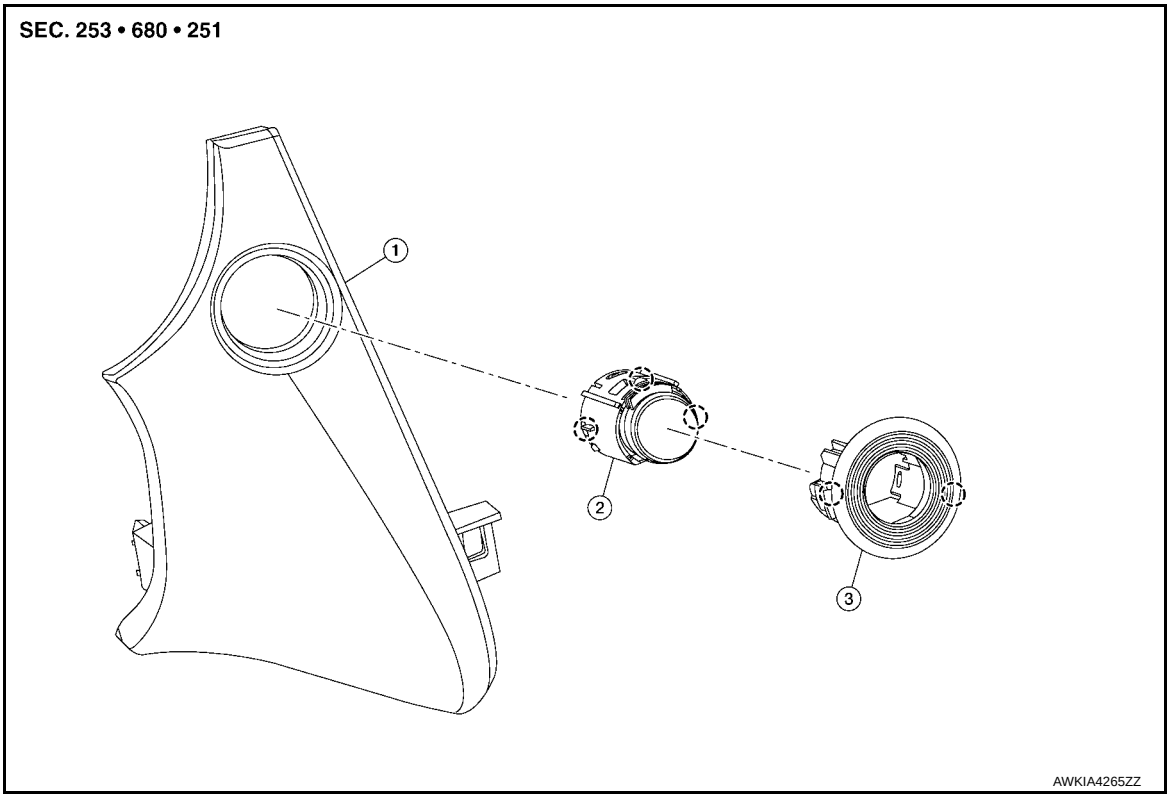
INSTALLATION

Installation is in the reverse order of removal.

PUSH-BUTTON IGNITION SWITCH

Exploded View

INFOID:0000000014625389



1. Instrument finisher B
2. Push button ignition switch
3. NATS antenna amp.

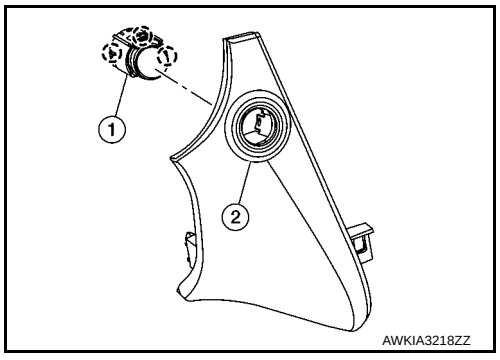
Pawl

Removal and Installation

INFOID:0000000014625390

REMOVAL

1. Remove the instrument finisher B. Refer to IP-16, "INSTRUMENT FINISHER B : Removal and Installation".
2. Release pawls using suitable tool and remove push button ignition switch (1) from NATS antenna amp. (2).
   : Pawl



INSTALLATION

Installation is in the reverse order of removal.