SECTION SEC
SECURITY CONTROL SYSTEM

CONTENTS

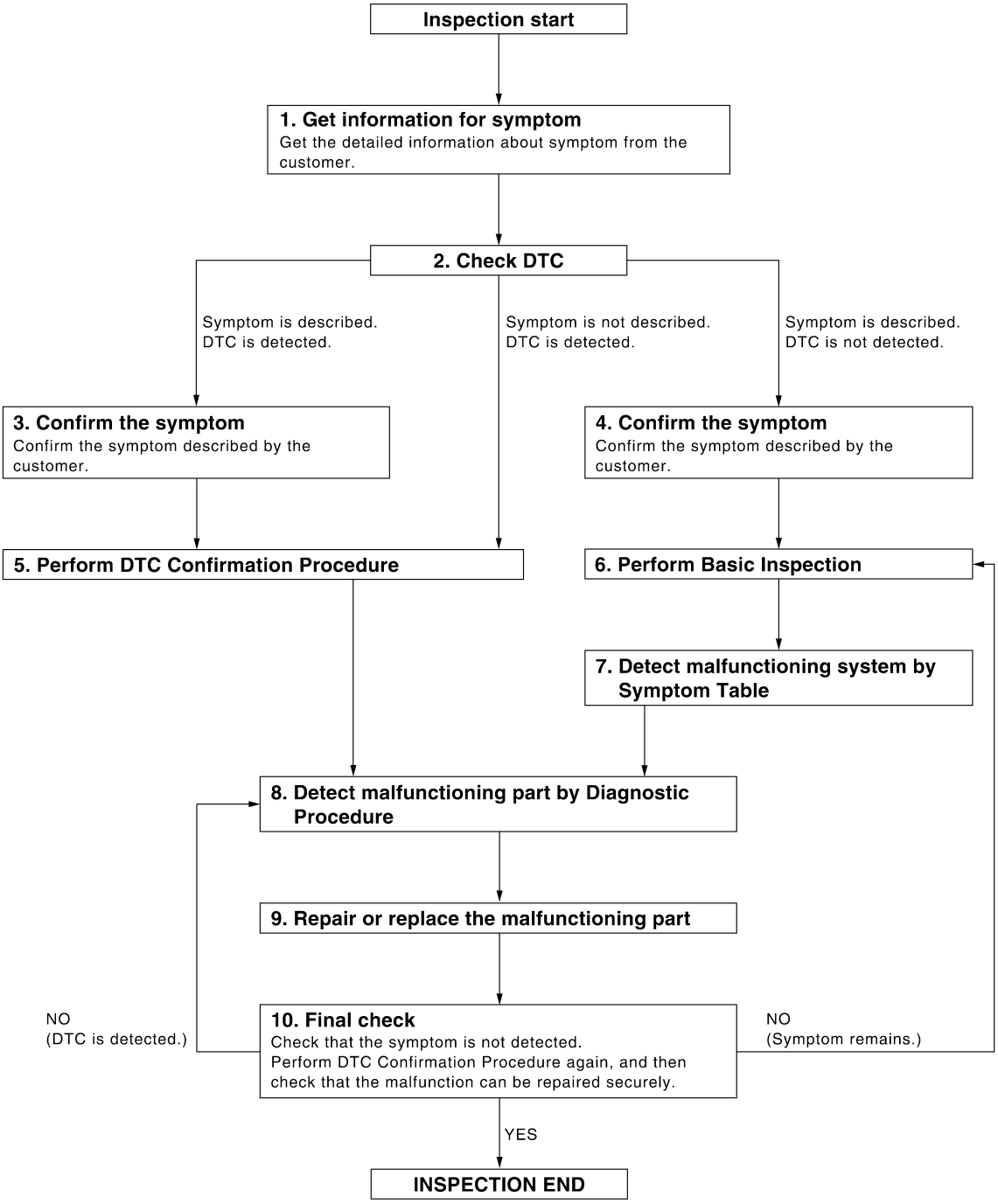
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000010051895

OVERALL SEQUENCE



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DETAILED FLOW

1.GET INFORMATION FOR SYMPTOM

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

>> GO TO 2.

2.CHECK DTC WITH BCM AND IPDM E/R

1. Check “Self Diagnostic Result” with CONSULT.
2. Perform the following procedure if DTC is displayed.

- Record DTC and freeze frame data (Print them out with 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.

Is any symptom described and any DTC detected?

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

3.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.
Connect CONSULT to the vehicle in “Data Monitor” mode and check real time diagnosis results.
Verify relationship between the symptom and the condition when the symptom is detected.

>> GO TO 5.

4.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.
Connect CONSULT to the vehicle in “Data Monitor ” mode and check real time diagnosis results.
Verify relationship 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 displayed DTC, and then check that DTC is detected again.
At this time, always keep CONSULT connected to the vehicle, and check diagnostic results in real time.
If two or more DTCs are detected, refer to SEC-115, "DTC Inspection Priority Chart" and determine trouble diagnosis order.

NOTE:

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

Is DTC detected?

YES >> GO TO 8.
NO >> Refer to GI-41, "Intermittent Incident".

6.PERFORM BASIC INSPECTION

Perform SEC-7, "Pre-Inspection for Multi-System Diagnostic".

Inspection End>>GO TO 7.

7.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

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

- Intelligent Key system/engine start function: SEC-158, "Symptom Table".
- Vehicle security system: SEC-159, "Symptom Table".

- Nissan vehicle immobilizer system-NATS: SEC-160, "Symptom Table".

>> GO TO 8.

8.DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

NOTE:

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

Is malfunctioning part detected?

YES >> GO TO 9.
NO >> Check voltage of related BCM terminals using CONSULT.

9.REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 10.

10.FINAL CHECK

When DTC was detected in step 2, perform DTC Confirmation Procedure or Component Function Check again, and then check that the malfunction has been fully repaired.

When symptom was described from the customer, refer to confirmed symptom in step 3 or 4, and check that the symptom is not detected.

Is the inspection result normal?

NO (DTC is detected)>> GO TO 8.
NO (Symptom remains)>>GO TO 6.
YES >> Inspection End.

PRE-INSPECTION FOR DIAGNOSTIC

Pre-Inspection for Multi-System Diagnostic

INFOID:0000000010051896

The engine start function, door lock function, power distribution system and NATS-IVIS/NVIS are closely related to each other. Narrow down the system in question by performing this inspection to identify which system is malfunctioning. For example, the vehicle security system can operate only when the door lock and power distribution system are operating normally.

1.CHECK DOOR LOCK OPERATION

Check the door lock for normal operation with the Intelligent Key and door request switch.
Successful door lock operation with the Intelligent Key and request switch indicates that the remote keyless entry receiver and inside key antenna required for engine start are functioning normally.

Can the door be locked with the Intelligent Key and door request switch?

YES >> GO TO 2.
NO >> Refer to DLK-183, "Symptom Table".

2.CHECK ENGINE STARTING

Check that the engine starts when the Intelligent Key is inserted into the key slot.

Does the engine start?

YES >> GO TO 3.
NO >> Refer to SEC-158, "Symptom Table".

3.CHECK POWER SUPPLY INDICATOR SWITCHING

Press push-button ignition switch and check that the position indicator switches from LOCK, through ACC to ON.

Is each position indicator illuminating?

YES >> GO TO 4.
NO >> Refer to PCS-65, "Component Function Check".

4.CHECK VEHICLE SECURITY SYSTEM

Check the vehicle security system for normal operation. Refer to SEC-7, "Vehicle Security Operation Check".

Are the inspection results normal?

YES >> Inspection End.
NO >> Repair vehicle security system as necessary.

Vehicle Security Operation Check

INFOID:0000000010051897

1.INSPECTION START

Turn ignition switch “OFF” and remove Intelligent Key from key slot.
NOTE:
Before starting operation check, open front windows.

>> GO TO 2

2.CHECK SECURITY INDICATOR LAMP

1. Lock doors using Intelligent Key or mechanical key.
2. Check that security indicator lamp illuminates for 30 seconds.

Does security indicator lamp illuminate?

YES >> GO TO 3
NO >> Perform diagnosis and repair. Refer to SEC-92, "Component Function Check".

3.CHECK ALARM FUNCTION

1. After 30 seconds, security indicator lamp will start to blink.
2. Open any door before unlocking with Intelligent Key or mechanical key, or open trunk lid without Intelligent Key or mechanical key.

Does alarm function properly?

YES >> GO TO 4
NO >> Check the following.
- The vehicle security system does not phase in alarm mode. Refer to SEC-159, "Symptom Table".
- Alarm (horn, headlamp and hazard lamp) do not operate. Refer to SEC-159, "Symptom Table".

4. CHECK ALARM CANCEL OPERATION

Unlock any door or open trunk lid using Intelligent Key or mechanical key.

Does alarm (horn, headlamp and hazard lamp) stop?

YES >> Inspection End.
NO >> Check door lock function. Refer to SEC-19, "System Description".

INSPECTION AND ADJUSTMENT
ECM RE-COMMUNICATING FUNCTION

ECM RE-COMMUNICATING FUNCTION : Description

INFOID:0000000010051898

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

ECM RE-COMMUNICATING FUNCTION : Special Repair Requirement

INFOID:0000000010051899

1.PERFORM ECM RE-COMMUNICATING FUNCTION

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

Can engine be started?

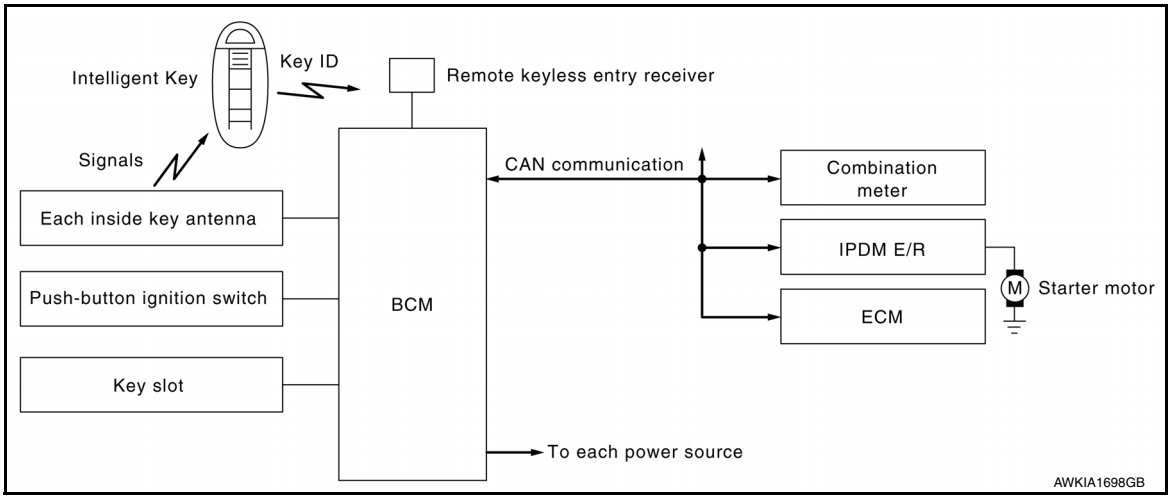
YES >> Procedure is completed.
NO >> Initialize control unit. Refer to CONSULT Immobilizer mode and follow the on-screen instructions.

SYSTEM DESCRIPTION

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

System Diagram

INFOID:0000000010051900



System Description

INFOID:0000000010051901

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM function	Actuator
Push-button ignition switch	Push switch	Engine start function	• Starter relay (IPDM E/R) • Starter control relay (IPDM E/R) • Starter motor • KEY warning lamp
CVT shift selector	P range		
TCM	N, P range		
Stop lamp switch	Brake ON/OFF		
Each inside key antenna	Request signal		
Remote keyless entry receiver	Key ID		
Each door switch	Door open/close		
ECM	Engine status signal		

SYSTEM DESCRIPTION

- The engine start function of Intelligent Key system is a system that makes it possible to start and stop the engine without removing the key. It verifies the electronic ID using two-way communications when pressing the push-button ignition switch while carrying the Intelligent Key, which operates based on the results of electronic ID verification for Intelligent Key using two-way communications between the Intelligent Key and the vehicle.
  NOTE:
  The driver should carry the Intelligent Key at all times.
- Intelligent Key has 2 IDs [for Intelligent Key and for NVIS (NATS)]. It can perform the door lock/unlock operation and the push-button ignition switch operation when the registered Intelligent Key is carried.
- When the Intelligent Key battery is discharged, it can be used as emergency back-up by inserting the Intelligent Key to the key slot. At that time, perform the NVIS (NATS) ID verification. If it is used when the Intelligent Key is carried, perform the Intelligent Key ID verification.
- When the push-button ignition switch is pressed the ID will be verified. If the ID is successfully verified, starting the engine will be possible.
- If the door lock/unlock operation is performed when the Intelligent Key battery is discharged, all doors lock/unlock can be performed by operating the driver door key cylinder using the mechanical key set in the Intelligent Key.
- Intelligent Key system can register up to 4 keys (Including the standard Intelligent Key) on request from the owner.
  NOTE:

- Refer to DLK-24, "INTELLIGENT KEY : System Description" for any functions other than engine start function of Intelligent Key system.

PRECAUTIONS FOR INTELLIGENT KEY SYSTEM

- **In the Intelligent Key system of model A35, the transponder [the chip for NVIS (NATS) ID verification] is integrated into the Intelligent Key. (For the conventional models, it is integrated into the mechanical key.) Therefore, the mechanical key cannot perform the ID verification, and thus it cannot start the engine. Instead, the NVIS (NATS) ID verification can be performed by inserting the Intelligent Key into the key slot, and then it can start the engine.**

OPERATION WHEN INTELLIGENT KEY IS CARRIED

1. When the push-button ignition switch is pressed and brake pedal is depressed, the BCM signals the inside key antenna and transmits the request signal to the Intelligent Key.
2. The Intelligent Key sends the request signal and transmits the Intelligent Key ID signal to the BCM via the remote keyless entry receiver.
3. The 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 confirms that the shift position is P or N.
7. BCM transmits the starter request signal via CAN communication to IPDM E/R and turns the starter relay in IPDM E/R ON if BCM judges that the engine start condition is satisfied.
8. IPDM E/R turns the starter control relay ON when receiving the starter request signal.
9. Battery power is supplied through the starter relay and the starter control relay to operate the starter motor and to start the cranking.
   CAUTION:
   If a malfunction is detected in the Intelligent Key system, the “KEY” warning lamp in the combination meter illuminates. At that time, the engine cannot be started.
10. When BCM received feedback signal from ECM acknowledging the engine has been initiated, the BCM transmits a stop signal to IPDM E/R and stops the cranking by turning OFF the starter motor relay. (If the engine initiating has failed, the cranking will stop automatically within 5 seconds.)
    CAUTION:
    When the Intelligent Key is carried outside of the vehicle (inside key antenna detection area) with the power supply in ACC or ON position, even if the engine start condition* is satisfied, the engine cannot be started.

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

OPERATION RANGE

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

OPERATION WHEN KEY SLOT IS USED

When the Intelligent Key battery is discharged, it performs the NVIS (NATS) ID verification between the integrated transponder and BCM by inserting the Intelligent Key into the key slot, and then the engine can be started.
For details relating to starting the engine using key slot, refer to SEC-10, "System Description".

BATTERY SAVER SYSTEM

When all the following conditions are met for 60 minutes, the battery saver system will cut off the power supply to prevent battery discharge.

- The ignition switch is in the ACC position
- All doors are closed
- CVT selector lever is in the P position
- No Intelligent Key failures (Intelligent Key warning indicator is not ON)

Reset Condition of Battery Saver System

In order to prevent the battery from discharging, the battery saver system will cut off the power supply when all doors are closed, the selector lever is in P position and the ignition switch is left in ACC position for 1 hour. If any of the following conditions are met, the battery saver system is released:

- Opening any door
- Operating with request switch on door lock

• Operating with Intelligent Key on door lock
Press push-button ignition switch and ignition switch will change to ACC position from OFF position.

PUSH-BUTTON IGNITION SWITCH OPERATION PROCEDURE

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 or when it is inserted to the key slot, it is equivalent to the operations below.
• When starting the engine, the BCM monitors under the engine start conditions.
- Brake pedal operating condition
- CVT selector lever position
- Vehicle speed
- Engine status
• Unless each start condition is fulfilled, the engine will not respond regardless of how many times the engine switch is pressed. At that time, illumination repeats the position in the order of LOCK→ACC→ON→OFF.

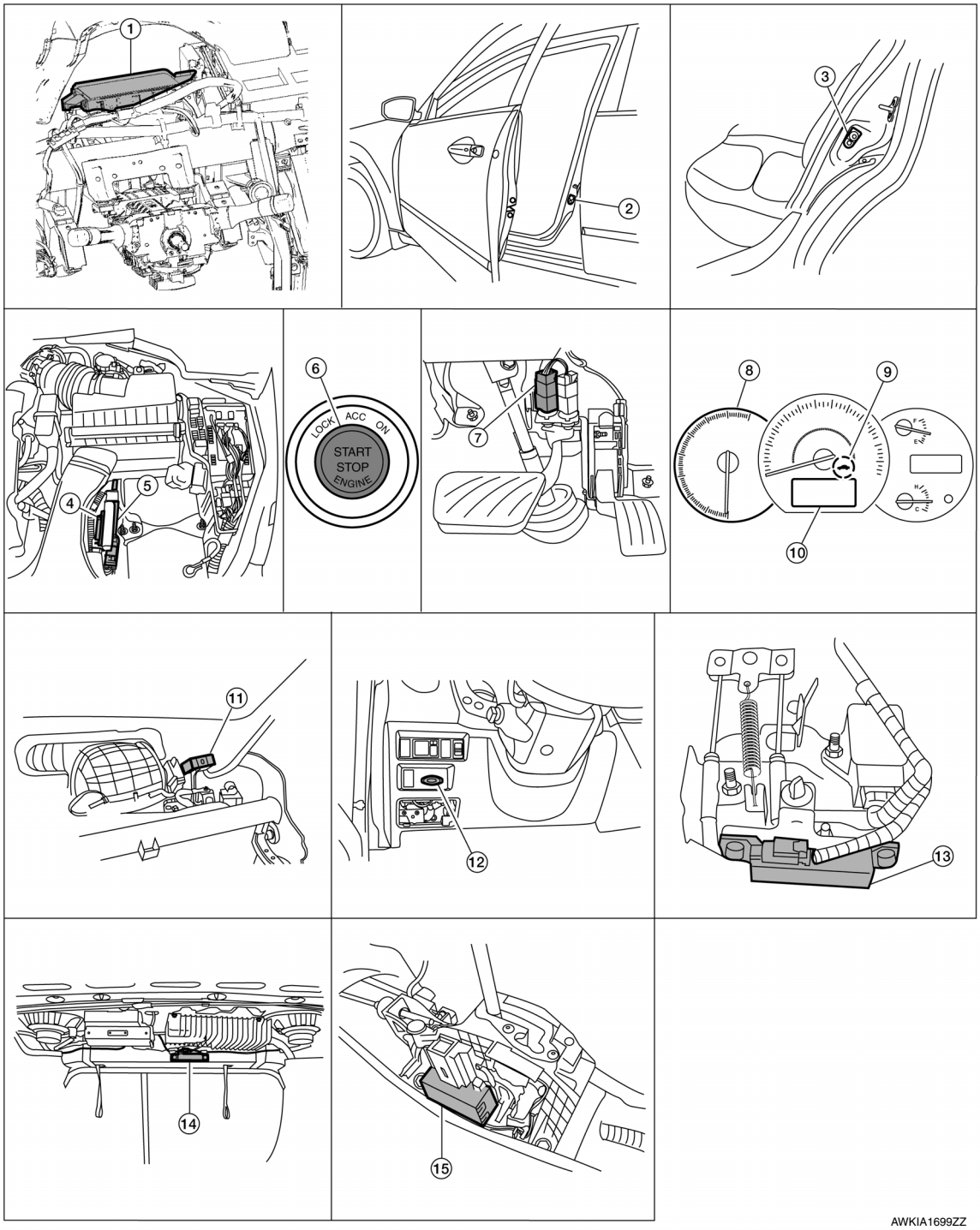
Power supply position	Engine start/stop condition		Push-button ignition switch operation frequency
	Brake pedal	CVT selector lever position	
LOCK → ACC	Not depressed	Any position	1
LOCK → ACC → ON	Not depressed	Any position	2
LOCK → ACC → ON → OFF	Not depressed	Any position	3
LOCK → START ACC → START ON → START (Engine start)	Depressed	P or N position (*1)	1 [If the switch is pressed once, the engine starts from any power supply position (LOCK, ACC, and ON)]
Engine is running → OFF (Engine stop)	—	Any position Vehicle speed < 4 km/h (2 MPH)	1
Engine is running → ACC (Engine stop)	—	Any position other than P (*2)	1
Engine stall return operation while driving	—	P position	1

*1: When the CVT selector lever position is N position, the engine start condition is different according to the vehicle speed.
• At vehicle speed of 4 km/h (2 MPH) or less, the engine can start only when the brake pedal is depressed.
• At vehicle speed of 4 km/h (2 MPH) or more, the engine can start even if the brake pedal is not depressed. (It is the same as “Engine stall return operation while driving”.)

*2: When the CVT selector lever position is in any position other than P position and when the vehicle speed is 5 km/h (3 MPH) or more, the engine stop condition is different.
• Press and hold the push-button ignition switch for 2 seconds or more. (When the push-button ignition switch is pressed for too short a time, the operation may be invalid, so properly press and hold to prevent an incorrect operation.)
• Press the push-button ignition switch 3 times or more within 1.5 seconds. (Emergency stop operation)

Component Parts Location

INFOID:0000000010051902



1. BCM M16, M17, M18, M19, M21 (view with instrument panel removed)
2. Front door switch LH B8 RH B108
3. Rear door switch LH B18 RH B116
4. TCM F15
5. ECM E10
6. Push button ignition switch M38
7. Stop lamp switch E38 (view with lower driver instrument panel removed)
8. Combination meter M24
9. Security indicator lamp

10. Information display
11. Remote keyless entry receiver M27 (view with instrument panel removed)
12. Key slot M40
13. Front console antenna M41 (view with center console removed)
14. Rear parcel shelf antenna B29
15. CVT shift selector M78

Component Description

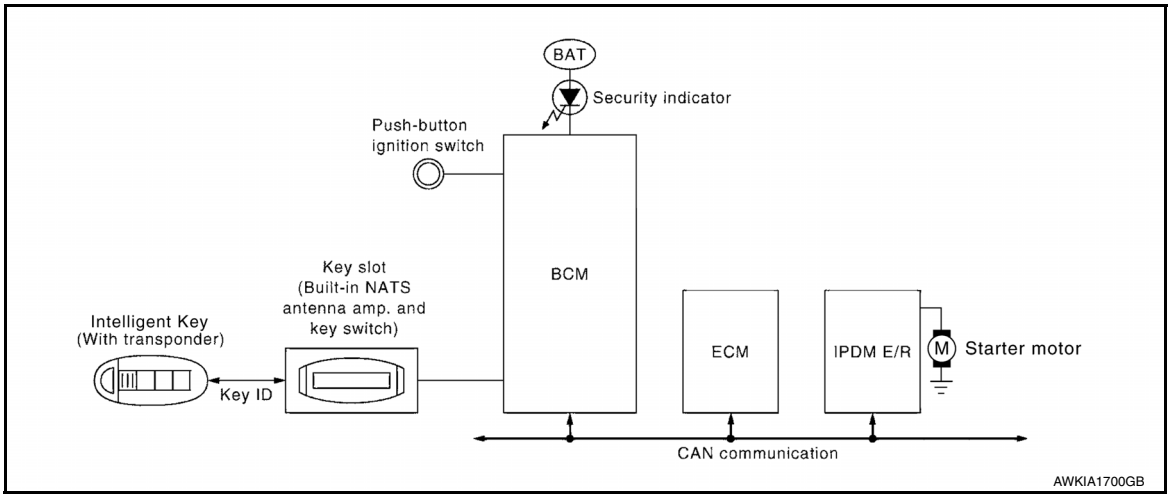
INFOID:0000000010051903

Component	Reference
BCM	SEC-31
Push-button ignition switch	SEC-46
Door switch	DLK-67
CVT shift selector	SEC-50
Inside key antenna	DLK-60
Remote keyless entry receiver	DLK-110
Stop lamp switch	SEC-43
Starter relay	SEC-63
Starter control relay	SEC-49
Security indicator	SEC-92
Key warning lamp	SEC-91

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS)

System Diagram

INFOID:0000000010051904



System Description

INFOID:0000000010051905

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM function	Actuator
Push-button ignition switch	Push switch	NVIS (NATS)	• Starter relay (IPDM E/R) • Starter control relay (IPDM E/R) • Starter motor • KEY warning lamp • Security indicator lamp
CVT shift selector	P range		
TCM	N, P range		
Stop lamp switch	Brake ON/OFF		
Key slot	Key ID		
Each door switch	Door open/close		
ECM	Engine status signal		

SYSTEM DESCRIPTION

- The NVIS (NATS) is an anti-theft system. By registering an Intelligent Key ID into the vehicle, it prevents the engine being started by an unregistered Intelligent Key. It has a higher protection against auto thefts than duplicate mechanical keys.
- It performs the ID verification when starting the engine in the same way as the Intelligent Key system. But, it performs the NVIS (NATS) ID verification when inserting the Intelligent Key and performs the Intelligent Key ID verification when carrying the Intelligent Key.
- The Intelligent Key system of A35 is not the same as the conventional models. The mechanical key integrated in the Intelligent Key cannot start the engine. When the Intelligent Key battery is discharged, the NVIS (NATS) ID verification memorized to the transponder integrated with Intelligent Key is performed by inserting the Intelligent Key into the key slot. If the verification results are OK, the engine start operation can be performed by the push-button ignition switch operation.
- Locate the security indicator and apply the anti-theft system equipment sticker, forewarning that the NVIS (NATS) is onboard with the model.
- The security indicator always blinks when the Intelligent Key is removed from the key slot and when the power supply position is in LOCK position.
- Intelligent Key can be registered up to 4 keys (Including the standard ignition key) on request from the owner.
- The specified registration is required when replacing ECM, BCM or Intelligent Key. For registration procedure for NVIS (NATS) and registration procedure for Intelligent Key when installing the BCM, refer to CONSULT Immobilizer mode and follow the on-screen instructions.
- Possible symptom of NVIS (NATS) malfunction is “Engine cannot start”. In A35, the engine can be started with the Intelligent Key system and NVIS (NATS). Identify the possible causes according to “Work Flow”. Refer to SEC-4, "Work Flow".

- If ECM other than Genuine NISSAN is installed, the engine cannot be started. For ECM replacement procedure, refer to SEC-9, "ECM RE-COMMUNICATING FUNCTION : Special Repair Requirement".

PRECAUTIONS FOR KEY REGISTRATION

- The key registration is a procedure that erases the current NVIS (NATS) ID once, and then re-registers a new ID operation. Therefore, the registered Intelligent Key is necessary for this procedure. Before starting the registration operation collect all registered Intelligent Keys from the customer
- When registering the Intelligent Key, perform only one procedure to register simultaneously both ID (NVIS “NATS” ID registration and Intelligent Key ID registration).
  The NVIS (NATS) ID registration is the procedure that registers the ID stored into the transponder (integrated in Intelligent Key) to BCM.
  The Intelligent Key ID registration is the procedure that registers the ID to BCM.
- When performing the Intelligent Key system registration only, the engine cannot be started by inserting the key into the key slot. When performing the NVIS (NATS) registration only, the engine cannot be started by the operation when carrying the key. The registrations of both systems should be performed.

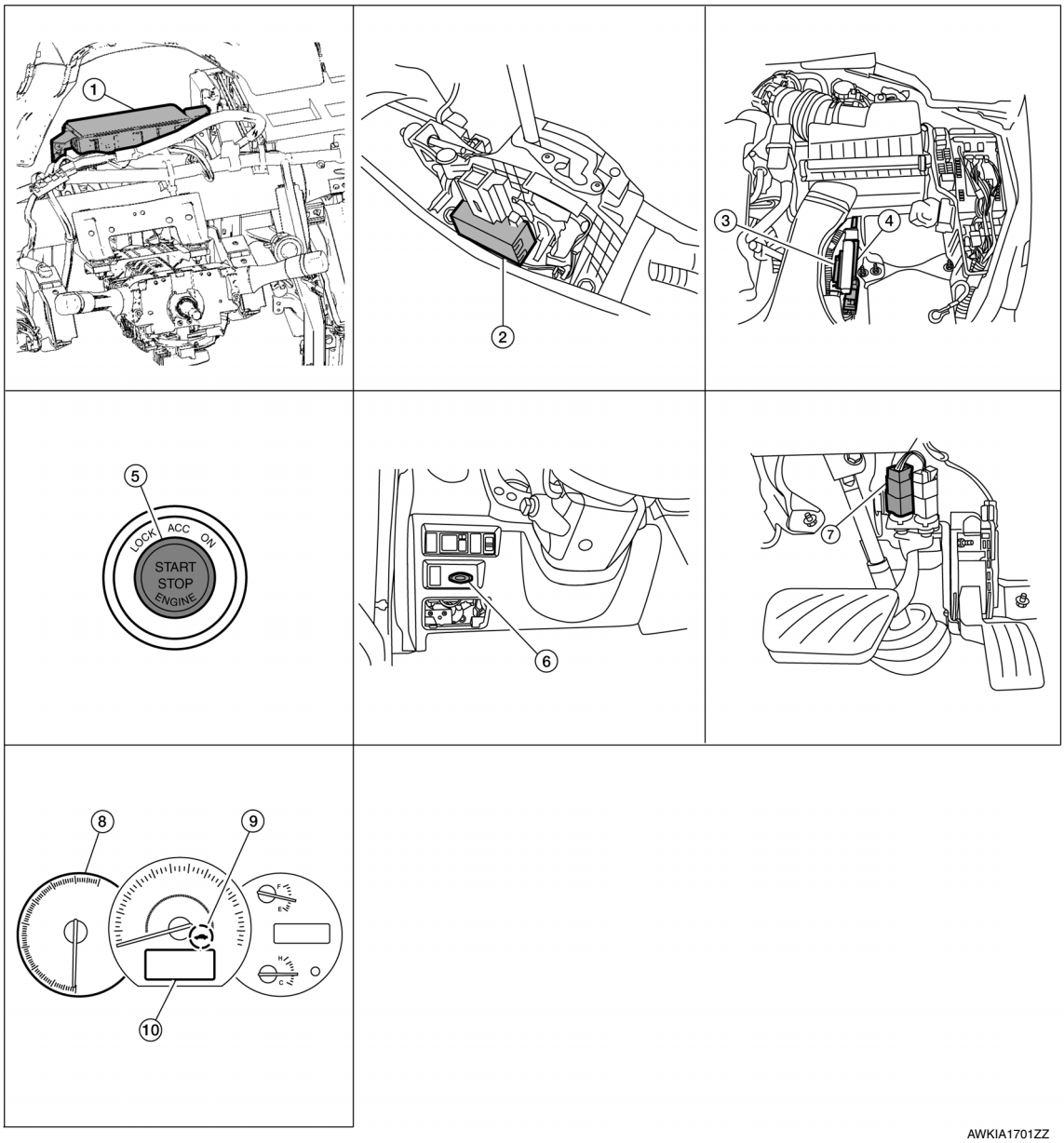
SECURITY INDICATOR

- Warns that the vehicle is equipped with NVIS (NATS).
- The security indicator always blinks when the Intelligent Key is removed from the key slot and when the ignition switch is in LOCK position.

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

Component Parts Location

INFOID:0000000010051906



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1. BCM M16, M17, M18, M19, M21 (view with instrument panel removed)
2. CVT shift selector M78
3. TCM F15
4. ECM E10
5. Push button ignition switch M38
6. Key slot M40
7. Stop lamp switch E38 (view with lower LH instrument panel removed)
8. Combination meter M24
9. Security indicator lamp
10. Information display

Component Description

INFOID:0000000010051907

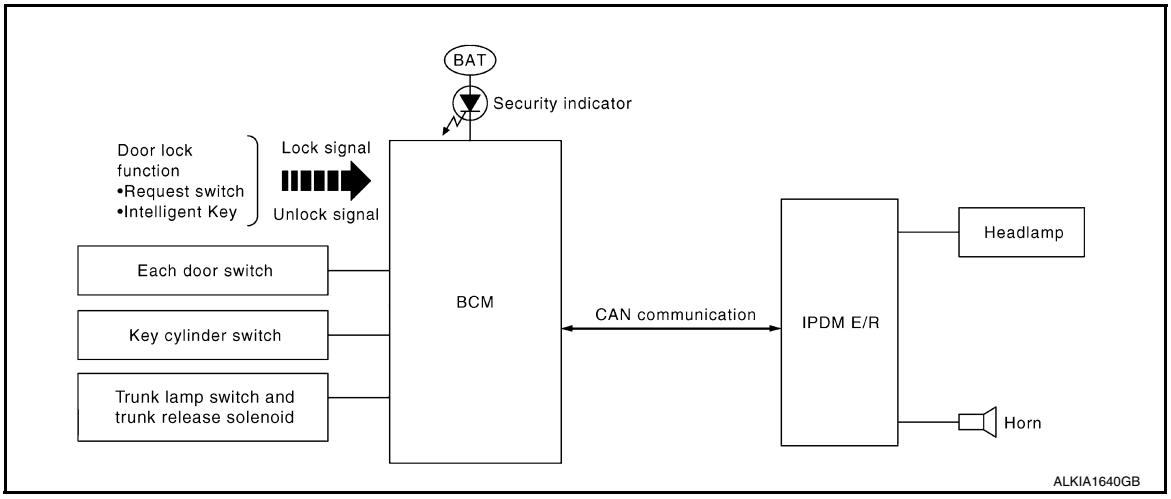
Component	Reference
BCM	SEC-31
Push-button ignition switch	SEC-46
Door switch	DLK-67
CVT shift selector	SEC-50

Component	Reference
Inside key antenna	DLK-60
Remote keyless entry receiver	DLK-110
Stop lamp switch	SEC-43
Transmission range switch	SEC-59
Starter relay	SEC-63
Starter control relay	SEC-49
Security indicator	SEC-92
Key warning lamp	SEC-91

VEHICLE SECURITY SYSTEM

System Diagram

INFOID:0000000010051908



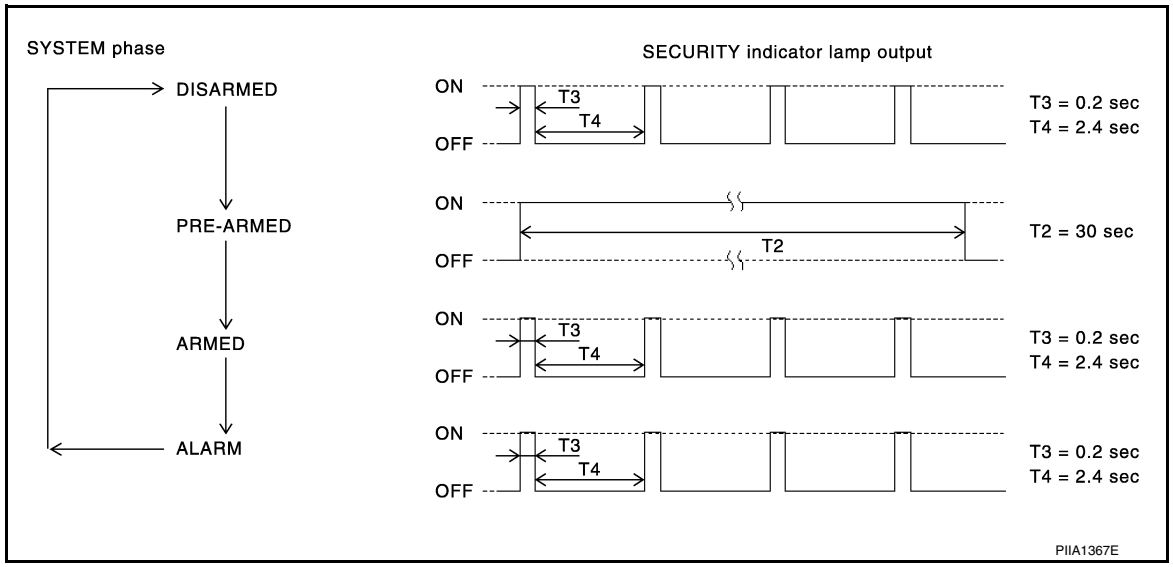
System Description

INFOID:0000000010051909

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM system	Actuator
All door switches	Open or close	Vehicle security system	• IPDM E/R • Headlamp • Horn • Security indicator lamp
Trunk lamp switch and trunk release solenoid			
Door key cylinder switch	Lock or unlock		
Door lock and unlock switch			
Door request switch			
Intelligent Key	Lock or unlock		
	Panic alarm		

OPERATION FLOW



SETTING THE VEHICLE SECURITY SYSTEM

Initial Condition

- Ignition switch is in OFF position.

Disarmed Phase

- When doors or trunk is open, the vehicle security system is set in the disarmed phase on the assumption that the owner is inside or near the vehicle.
- When the vehicle security system is in the disarmed phase, the security indicator lamp blinks every 2.4 seconds.

Pre-armed Phase and Armed Phase

When the following operation 1 or 2 is performed, the vehicle security system turns into the “pre-armed” phase. (The security indicator lamp illuminates.)

1. BCM receives LOCK signal from front door key cylinder switch or Intelligent Key, after trunk and all doors are closed.
2. Trunk and all doors are closed after front doors are locked by key or door lock and unlock switch.
   The security indicator lamp illuminates for 30 seconds. Then, the system automatically shifts into the “armed” phase.

CANCELING THE SET VEHICLE SECURITY SYSTEM

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

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

CANCELING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM

When unlocking the door with the key or Intelligent Key, the alarm operation is canceled.

ACTIVATING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM

Check that the system is in the armed phase. (The security indicator lamp blinks every 2.4 seconds.)
When the following operation 1 or 2 is performed, the system sounds the horns and flashes the headlamps for about 50 seconds.

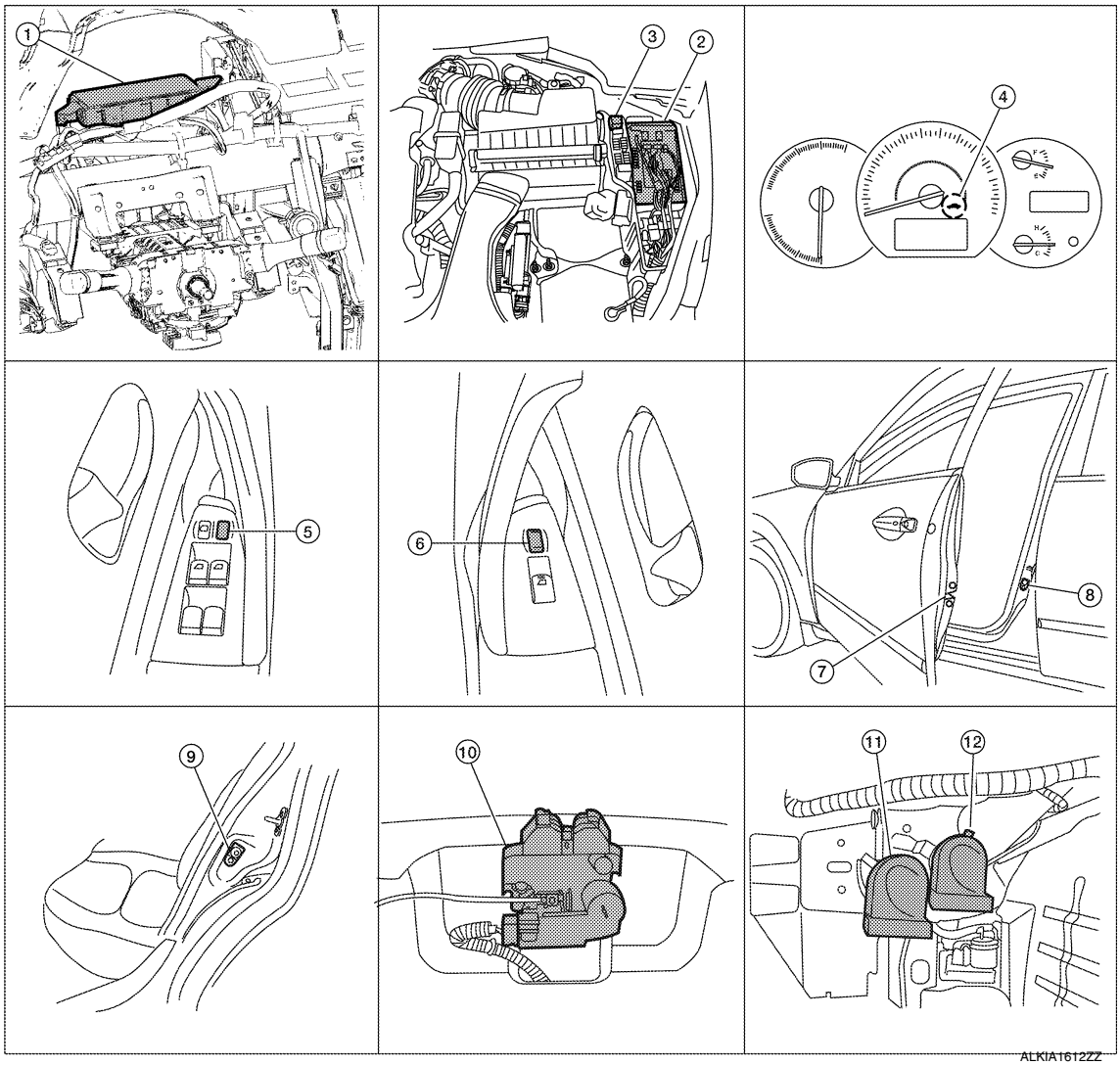
1. Trunk or any door is opened during armed phase.
2. Disconnecting and connecting the battery connector before canceling armed phase.

PANIC ALARM OPERATION

Intelligent Key system will not operate horn and headlamps if the ignition switch is in the ACC or ON position.
When the Intelligent Key system is triggered, ground is supplied intermittently to both headlamp relay and horn relay.
When headlamp relay and horn relay are energized, then power is supplied to headlamps (LH and RH) and horns (HIGH and LOW).
The headlamp flashes and the horn sounds intermittently.
The alarm automatically turns off after 50 seconds or when BCM receives any signal from Intelligent Key.

Component Parts Location

INFOID:0000000010051910



1. BCM M16, M17, M18, M19, M21 (view with instrument panel removed)
2. IPDM E/R E17, E18
3. Horn relay H-1
4. Security indicator lamp
5. Main power window and door lock/unlock switch D7, D8
6. Power window and door lock/unlock switch RH D105
7. Front door lock assembly LH D10
8. Front door switch LH B8 RH B108
9. Rear door switch LH B18 RH B116
10. Trunk lamp switch and trunk release solenoid T7
11. Horn (low) E215 (view with front fender protector LH removed)
12. Horn (high) E216

Component Description

INFOID:0000000010051911

Component	Reference
BCM	SEC-19
Horn relay	SEC-88
Security indicator	SEC-92
Door switch	DLK-67
Door lock actuator	DLK-97

Component	Reference
Trunk lid lock assembly	DLK-103
Door key cylinder switch	DLK-77
Door lock and unlock switch	DLK-70

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

INFOID:0000000010067235

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	Displays the diagnosis results judged by BCM.
Data Monitor	The BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Work support	Changes the setting for each system function.
Configuration	• Enables to read and save the vehicle specification. • Enables to write the vehicle specification when replacing BCM.
CAN Diag Support Mntr	Monitors the reception status of CAN communication viewed from BCM.

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			×	×	×		
Trunk open	TRUNK			×	×			
Vehicle security system	THEFT ALM			×	×	×		
RAP system	RETAINED PWR			×				
Signal buffer system	SIGNAL BUFFER			×	×			
TPMS	AIR PRESSURE MONITOR		×	×	×	×		

INTELLIGENT KEY

INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY)

INFOID:0000000010067236

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 trunk opener request switch
PUSH SW [On/Off]		Indicates condition of push button ignition switch
IGN RLY2 -F/B [On/Off]		Indicates condition of ignition relay 2
ACC RLY -F/B [On/Off]		Indicates condition of accessory relay
BRAKE SW 1 [On/Off]	×	Indicates condition of brake switch
BRAKE SW 2 [On/Off]		Indicates condition of brake switch
DETE/CANCL SW [On/Off]	×	Indicates condition of P position
SFT PN/N SW [On/Off]	×	Indicates condition of P or N position
UNLK SEN -DR [On/Off]	×	Indicates condition of door unlock sensor
PUSH SW -IPDM [On/Off]		Indicates condition of push button ignition switch received from IPDM E/R on CAN communication line
IGN RLY1 -F/B [On/Off]		Indicates condition of ignition relay 1 received from IPDM E/R on CAN communication line
DETE SW -IPDM [On/Off]		Indicates condition of detent switch received from TCM on CAN communication line
SFT PN -IPDM [On/Off]		Indicates condition of P or N position from TCM on CAN communication line
SFT P -MET [On/Off]		Indicates condition of P position from TCM on CAN communication line
SFT N -MET [On/Off]		Indicates condition of N position from IPDM E/R on CAN communication line
ENGINE STATE [Stop/Start/Crank/Run]	×	Indicates condition of engine state from ECM on CAN communication line
VEH SPEED 1 [mph/km/h]	×	Indicates condition of vehicle speed signal received from ABS on CAN communication line
VEH SPEED 2 [mph/km/h]	×	Indicates condition of vehicle speed signal received from combination meter on CAN communication line
DOOR STAT -DR [LOCK/READY/UNLK]	×	Indicates condition of driver side door status.
DOOR STAT -AS [LOCK/READY/UNLK]	×	Indicates condition of passenger side door status.
ID OK FLAG [Set/Reset]		Indicates condition of Intelligent Key ID.
PRMT ENG STRT [Set/Reset]		Indicates condition of engine start possibility.
PRMT RKE STRT [Set/Reset]		Indicates condition of engine start possibility from Intelligent Key.
KEY SW -SLOT [On/Off]		Indicates condition of key slot.
TRNK/HAT MNTR [On/Off]		Indicates condition of trunk lid.
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-TR/BD [On/Off]		Indicates condition of trunk open signal from Intelligent Key.
RKE-PANIC [On/Off]		Indicates condition of panic signal from Intelligent Key.
RKE-P/W OPEN [On/Off]		Indicates condition of power window down signal from Intelligent Key.
RKE-MODE CHG [On/Off]		Indicates condition of mode change signal 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 OPE COUN2 [0-19]	×	When remote keyless entry receiver receives the signal transmitted while operating on Intelligent Key, the numerical value start changing.
REVERSE SW [On/Off]		Indicates condition of reverse switch status.

ACTIVE TEST

Test Item	Description
BATTERY SAVER	This test is able to check battery saver operation [On/Off].
PW REMOTO DOWN SET	This test is able to check power window down operation [On/Off].
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation [Off/On].
INSIDE BUZZER	This test is able to check combination meter warning chime operation [Key/Knob/Take Out/Off].
INDICATOR	This test is able to check combination meter warning lamp operation [KEY IND/KEY ON/Off].
INT LAMP	This test is able to check interior room lamp operation [On/Off].
LCD	This test is able to check combination meter display information [Off/LK WN/OUTKEY/NO KY/BATT/INSRT/SFT P/ROTAT/ID NG/BP I/BP N].
TRUNK/GLASS HATCH	This test is able to check trunk lid opener actuator open operation [Open].
FLASHER	This test is able to check hazard lamp operation [Off/LH/RH].
HORN	This test is able to check horn operation [On].
P RANGE	This test is able to check CVT shift selector illumination operation [On/Off].
ENGINE SW ILLUMI	This test is able to check push button ignition switch illumination operation [On/Off].
LOCK INDICATOR	This test is able to check LOCK indicator in push button ignition switch operation [On/Off].
ACC INDICATOR	This test is able to check ACC indicator in push button ignition switch operation [On/Off].
IGNITION ON IND	This test is able to check ignition ON indicator in push button ignition switch operation [On/Off].
KEY SLOT ILLUMI	This test is able to check key slot illumination operation [On/Off].
TRUNK/BACK DOOR	This test is able to check trunk lid opener actuator operation [Open].

WORK SUPPORT

Support Item	Setting		Description
CONFIRM KEY FOB ID	MEMORY 1		Intelligent Key ID code can be checked.
	MEMORY 2		
	MEMORY 3		
	MEMORY 4		
	NON REGIST		
AUTO LOCK SET	MODE 4	2 min	Auto door lock time can be set in this mode.
	MODE 3	30 sec	
	MODE 2	5 min	
	MODE 1*	1 min	
LOCK/UNLOCK BY I-KEY	On*		Door lock/unlock function from Intelligent Key ON.
	Off		Door lock/unlock function from Intelligent Key OFF.
ENGINE START BY I-KEY	On*		Engine start function from Intelligent Key ON.
	Off		Engine start function from Intelligent Key OFF.
TRUNK/GLASS HATCH OPEN	On*		Buzzer reminder function by trunk opener request switch ON.
	Off		Buzzer reminder function by trunk opener request switch OFF.
PANIC ALARM SET	MODE 3	1.5 sec	Panic alarm button set time on Intelligent Key can be set in this mode.
	MODE 2	OFF	
	MODE 1*	0.5 sec	
PW DOWN SET	MODE 3	5 sec	Unlock button press time on Intelligent Key to lower front window can be set in this mode.
	MODE 2	OFF	
	MODE 1*	3 sec	

Support Item	Setting		Description
TRUNK OPEN DELAY	MODE 3	1.5 sec	Trunk button pressing time on Intelligent Key button can be selected from the following with this mode.
	MODE 2	OFF	
	MODE 1*	0.5 sec	
LO- BATT OF KEY FOB WARN	On*		Intelligent Key low battery warning mode ON.
	Off		Intelligent Key low battery warning mode OFF.
ANTI KEY LOCK IN FUNCTI	On*		Key reminder function mode ON.
	Off		Key reminder function mode OFF.
HAZARD ANSWER BACK	Lock/Unlock*		Hazard warning lamp activation when doors are locked or unlocked with Intelligent Key.
	Unlock Only		Hazard warning lamp activation when doors are unlocked with Intelligent Key.
	Lock Only		Hazard warning lamp activation when doors are locked with Intelligent Key.
	Off		No hazard warning lamp activation when doors are locked or unlocked with Intelligent Key.
ANS BACK I-KEY LOCK	Horn Chirp		Horn chirp reminder when doors are unlocked with Intelligent Key
	Buzzer*		Buzzer or horn chirp reminder when doors are unlocked with Intelligent Key
	Off		No buzzer or horn chirp reminder when doors are unlocked with Intelligent Key
ANS BACK I-KEY UNLOCK	Off		No buzzer or horn chirp reminder when doors are unlocked with Intelligent Key
	On*		Buzzer or horn chirp reminder when doors are unlocked with Intelligent Key
SHORT CRANKING OUTPUT	Start	70 msec	Starter motor operation duration times.
		100 msec	
		200 msec	
	End		
INSIDE ANT DIAGNOSIS	Start		This function allows inside key antenna self-diagnosis.
HORN WITH KEYLESS LOCK	Off		No horn reminder activation when doors are locked with Intelligent Key.
	On*		Horn reminder activation when doors are locked with Intelligent Key.

*: Initial Setting

IMMU

IMMU : CONSULT Function (BCM - IMMU)

INFOID:0000000010067238

SELF DIAGNOSTIC RESULT

Refer to BCS-64, "DTC Index".

DATA MONITOR

Monitor Item [Unit]	Description
CONFRM ID ALL [Yet/DONE]	Switches to DONE when a registered Intelligent Key is inserted into the key slot.
CONFIRM ID4 [Yet/DONE]	
CONFIRM ID3 [Yet/DONE]	
CONFIRM ID2 [Yet/DONE]	
CONFIRM ID1 [Yet/DONE]	

Monitor Item [Unit]	Description
TP 4 [Yet/DONE]	DONE indicates the number of Intelligent Key ID which has been registered.
TP 3 [Yet/DONE]	
TP 2 [Yet/DONE]	
TP 1 [Yet/DONE]	
PUSH SW [On/Off]	Indicates condition of push button ignition switch
KEY SW -SLOT [On/Off]	Indicates condition of key slot

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:0000000010067239

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 trunk opener request switch
PUSH SW [On/Off]	Indicates condition of push button ignition switch
UNLK SEN -DR [On/Off]	Indicates condition of door unlock sensor
KEY SW -SLOT [On/Off]	Indicates condition of key slot
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 trunk 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
TR/BD OPEN SW [On/Off]	Indicates condition of trunk lid opener switch
TRNK/HAT MNTR [On/Off]	Indicates condition of trunk room lamp 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
RKE-TR/BD [On/Off]	Indicates condition of trunk open signal from Intelligent Key

ACTIVE TEST

Test Item	Description
THEFT IND	This test is able to check security indicator lamp operation [On/Off].
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].
FLASHER	This test is able to check turn signal lamp operation [Off/LH/RH].

WORK SUPPORT

Support Item	Setting	Description
SECURITY ALARM SET	On	Security alarm ON
	Off	Security alarm OFF
THEFT ALM TRG	Off/On	The switch which triggered vehicle security alarm is recorded [On]. This mode is able to confirm and erase the record of vehicle security alarm. The trigger data can be erased by touching [CLEAR].
	CLEAR	

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:0000000010051916

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Modern vehicle is equipped with many electronic control unit, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN-H line, CAN-L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.
CAN Communication Signal Chart, refer to LAN-24, "CAN Communication Signal Chart".

DTC Logic

INFOID:0000000010051917

DTC DETECTION LOGIC

CONSULT display description	DTC Detection Condition	Possible cause
CAN COMM CIRCUIT [U1000]	When BCM cannot communicate CAN communication signal continuously for 2 seconds or more.	In CAN communication system, any item (or items) of the following listed below is malfunctioning. • Transmission • Receiving (ECM) • Receiving (VDC/TCS/ABS) • Receiving (METER/M&A) • Receiving (TCM) • Receiving (MULTI AV) • Receiving (IPDM E/R)

Diagnosis Procedure

INFOID:0000000010051918

1.PERFORM SELF DIAGNOSTIC

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

Is “CAN COMM CIRCUIT” displayed?

YES >> Refer to LAN-7, "CAN Communication Control Circuit".
NO >> Refer to GI-41, "Intermittent Incident".

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:0000000010051919

DTC DETECTION LOGIC

CONSULT display description	DTC Detection Condition	Possible cause
CAN COMM CIRCUIT [U1010]	BCM detected internal CAN communication circuit malfunction.	BCM

Diagnosis Procedure

INFOID:0000000010051920

1. REPLACE BCM

When DTC U1010 is detected, replace BCM.

>> Replace BCM. Refer to BCS-79, "Removal and Installation".

P1610 LOCK MODE

Description

INFOID:0000000010051921

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

DTC Logic

INFOID:0000000010051922

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1610	LOCK MODE	Inactive communication between key slot and BCM.	• Harness or connectors (The key slot circuit is open or shorted) • Key slot • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Insert Intelligent Key into the key slot.
2. Check “Self Diagnostic Result” with CONSULT.

Is DTC detected?

YES >> Refer to SEC-31, "Diagnosis Procedure".
NO >> GO TO 2

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Press the push-button ignition switch.
2. Check “Self Diagnostic Result” with CONSULT.

Is DTC detected?

YES >> Refer to SEC-31, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000010051923

Regarding Wiring Diagram information, refer to SEC-147, "Wiring Diagram".

1. INSPECTION START

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

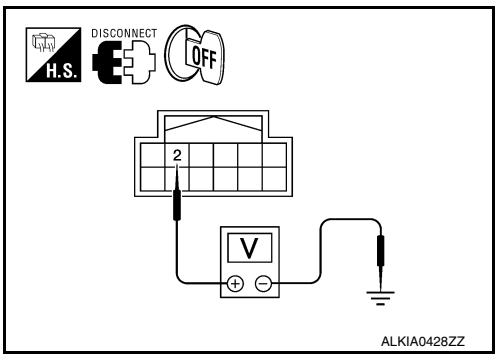
In which case is DTC detected?

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

2.CHECK KEY SLOT INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect key slot harness connector.

3. Check voltage between key slot harness connector M40 terminal 2 and ground.



Key slot		Ground	Voltage [V] (approx.)
Connector	Terminal		
M40	2	Ground	Battery voltage

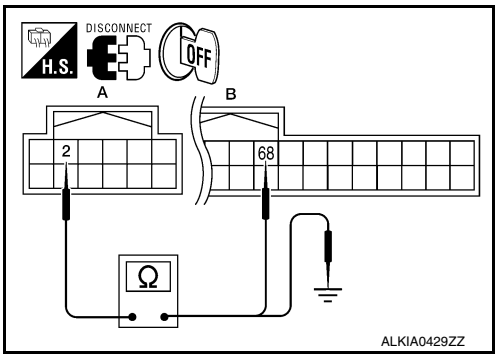
Is the inspection result normal?

YES >> Replace key slot. Refer to SEC-163, "Removal and Installation".

NO >> GO TO 3

3.CHECK KEY SLOT CIRCUIT

1. Disconnect BCM harness connector.
2. Check continuity between key slot harness connector M40 (A) terminal 2 and BCM harness connector M19 (B) terminal 68.



Key slot		BCM		Continuity
Connector	Terminal	Connector	Terminal	
A: M40	2	B: M19	68	Yes

3. Check continuity between key slot harness connector M40 (A) terminal 2 and ground.

Key slot		Ground	Continuity
Connector	Terminal		
A: M40	2	Ground	No

Is the inspection result normal?

YES >> GO TO 8

NO >> Repair harness or connector.

4.CHECK PUSH-IGNITION SWITCH OPERATION

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

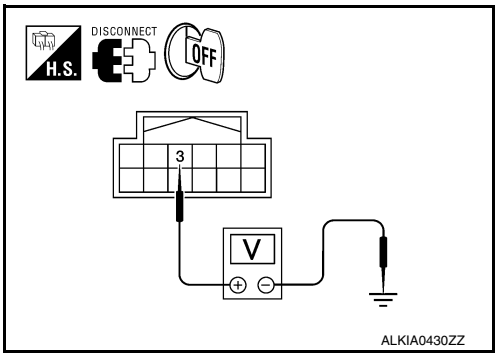
Does ignition switch turn to ON?

YES >> GO TO 5

NO >> GO TO 7

5.CHECK KEY SLOT COMMUNICATION SIGNAL

1. Turn ignition switch OFF.
2. Disconnect key slot harness connector.
3. Check voltage between key slot harness connector M40 terminal 3 and ground.



Key slot		Ground	Voltage [V] (approx.)
Connector	Terminal		
M40	3	Ground	Battery voltage

Is the inspection result normal?

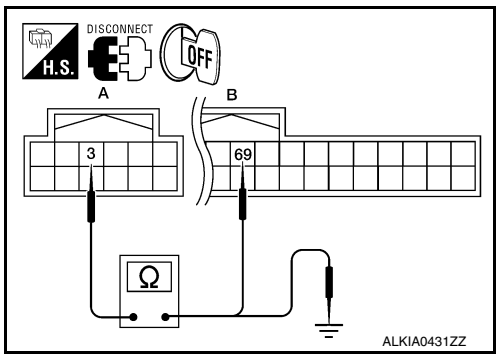
YES >> Replace key slot. Refer to SEC-163, "Removal and Installation".

NO >> GO TO 6

6.CHECK KEY SLOT COMMUNICATION SIGNAL CIRCUIT

1. Disconnect BCM harness connector.

2. Check continuity between key slot harness connector M40 (A) terminal 3 and BCM harness connector M19 (B) terminal 69.



Key slot		BCM		Continuity
Connector	Terminal	Connector	Terminal	
A: M40	3	B: M19	69	Yes

3. Check continuity between key slot harness connector M40 (A) terminal 3 and ground.

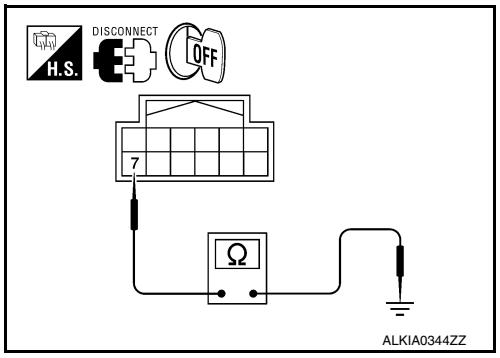
Key slot		Ground	Continuity
Connector	Terminal		
A: M40	3	Ground	No

Is the inspection result normal?

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

7. CHECK KEY SLOT GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect key slot harness connector.
3. Check continuity between key slot harness connector M40 terminal 7 and ground.



Key slot		Ground	Continuity
Connector	Terminal		
M40	7	Ground	Yes

Is the inspection result normal?

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

8. CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> Inspection End.

P1611 ID DISCORD, IMMU-ECM

Description

INFOID:0000000010051924

BCM performs the ID verification with ECM that allows the engine to start. Start the engine if the ID is OK. ECM prevents the engine from starting if the ID is not registered. BCM starts the communication with ECM if ignition switch is turned ON.

DTC Logic

INFOID:0000000010051925

DTC DETECTION LOGIC

NOTE:

- If DTC P1611 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-29, "DTC Logic".
- If DTC P1611 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-30, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1611	ID DISCORD, IMMU-ECM	The ID verification results between BCM and ECM are NG. The registration is necessary.	• BCM • ECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions:
- CVT selector lever is in the P or N position.
- Do not depress the brake pedal.
2. Check “Self Diagnostic Result” with CONSULT.

Is DTC detected?

YES >> Refer to SEC-34, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000010051926

1.PERFORM INITIALIZATION

Perform initialization with CONSULT. Re-register all Intelligent Keys.
For initialization and registration of Intelligent Key, refer to “CONSULT Immobilizer mode and follow the on-screen instructions.

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

YES >> ID was unregistered.
NO >> BCM is malfunctioning.
- Replace BCM. Refer to BCS-79, "Removal and Installation".
- Perform initialization again.
- Replace ECM.

P1612 CHAIN OF ECM-IMMU

Description

INFOID:0000000010051927

BCM performs the ID verification with ECM that allows the engine to start. Start the engine if the ID is OK. ECM prevents the engine from starting if the ID is not registered. BCM starts the communication with ECM if ignition switch is turned ON.

DTC Logic

INFOID:0000000010051928

DTC DETECTION LOGIC

NOTE:

- If DTC P1612 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-29, "DTC Logic".
- If DTC P1612 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-30, "DTC Logic".

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions:
- CVT selector lever is in the P or N position.
- Do not depress brake pedal.
2. Check “Self Diagnostic Result” with CONSULT.

Is DTC detected?

YES >> Refer to SEC-35, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000010051929

1.REPLACE BCM

1. Replace BCM. Refer to BCS-79, "Removal and Installation".
2. Perform initialization with CONSULT.
   For initialization, refer to CONSULT Immobilizer mode and follow the on-screen instructions.

Does the engine start?

YES >> BCM is malfunctioning.
- Replace BCM. Refer to BCS-79, "Removal and Installation".
- Perform initialization again.

NO >> ECM is malfunctioning.
- Replace ECM.
- Perform ECM re-communicating function.

P1615 DIFFRENCE OF KEY

Description

INFOID:0000000010051930

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

DTC Logic

INFOID:0000000010051931

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1615	DIFFERENCE OF KEY	The ID verification results between BCM and Intelligent Key are NG. The registration is necessary.	• Intelligent Key

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Insert the Intelligent Key in the key slot. Press the push-button ignition switch.
2. Check “Self Diagnostic Result” with CONSULT.

Is DTC detected?

YES >> Refer to SEC-36, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000010051932

1.PERFORM INITIALIZATION

Perform initialization with CONSULT. Re-register all Intelligent Keys.
For initialization and registration of Intelligent Key, refer to CONSULT Immobilizer mode and follow the on-screen instructions.

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

YES >> Intelligent Key was unregistered.
NO >> BCM is malfunctioning.
- Replace BCM. Refer to BCS-79, "Removal and Installation".
- Perform initialization again.

B2190 NATS ANTENNA AMP.

Description

INFOID:0000000010051933

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

DTC Logic

INFOID:0000000010051934

DTC DETECTION LOGIC

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Insert Intelligent Key into the key slot.
2. Check “Self Diagnostic Result” with CONSULT.

Is DTC detected?

YES >> Refer to SEC-37, "Diagnosis Procedure".
NO >> GO TO 2

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Press the push-button ignition switch.
2. Check “Self Diagnostic Result” with CONSULT.

Is DTC detected?

YES >> Refer to SEC-37, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000010051935

Regarding Wiring Diagram information, refer to SEC-147, "Wiring Diagram".

1. INSPECTION START

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

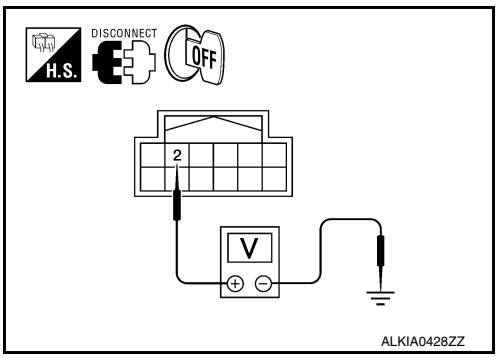
In which case is DTC detected?

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

2.CHECK KEY SLOT INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect key slot harness connector.

3. Check voltage between key slot harness connector M40 terminal 2 and ground.



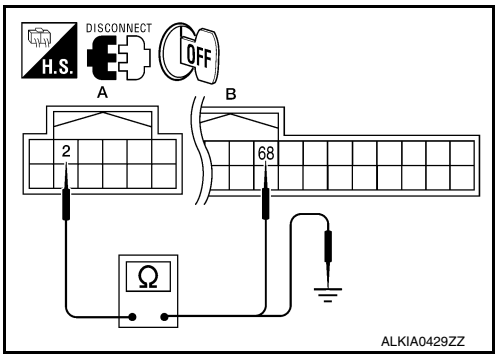
Key slot		Ground	Voltage [V] (approx.)
Connector	Terminal		
M40	2	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace key slot. Refer to SEC-163, "Removal and Installation".
NO >> GO TO 3

3.CHECK KEY SLOT CIRCUIT

1. Disconnect BCM harness connector.
2. Check continuity between key slot harness connector M40 (A) terminal 2 and BCM harness connector M19 (B) terminal 68.



Key slot		BCM		Continuity
Connector	Terminal	Connector	Terminal	
A: M40	2	B: M19	68	Yes

3. Check continuity between key slot harness connector M40 (A) terminal 2 and ground.

Key slot		Ground	Continuity
Connector	Terminal		
A: M40	2	Ground	No

Is the inspection result normal?

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

4.CHECK PUSH-IGNITION SWITCH OPERATION

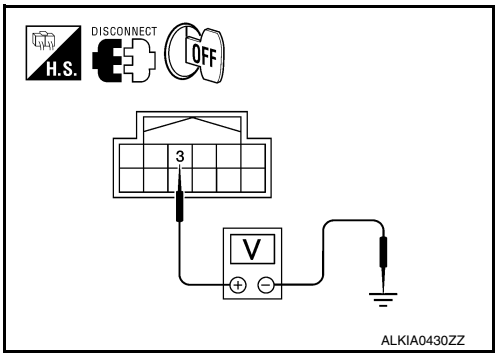
Press push-button ignition switch and check if it turns ON.

Does ignition switch turn to ON?

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

5.CHECK KEY SLOT COMMUNICATION SIGNAL

1. Turn ignition switch OFF.
2. Disconnect key slot harness connector.
3. Check voltage between key slot harness connector M40 terminal 3 and ground.



Key slot		Ground	Voltage [V] (approx.)
Connector	Terminal		
M40	3	Ground	Battery voltage

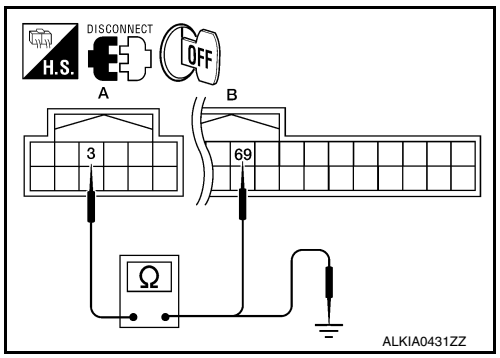
Is the inspection result normal?

YES >> Replace key slot. Refer to SEC-163, "Removal and Installation".
NO >> GO TO 6

6.CHECK KEY SLOT COMMUNICATION SIGNAL CIRCUIT

1. Disconnect BCM harness connector.

2. Check continuity between key slot harness connector M40 (A) terminal 3 and BCM harness connector M19 (B) terminal 69.



Key slot		BCM		Continuity
Connector	Terminal	Connector	Terminal	
A: M40	3	B: M19	69	Yes

3. Check continuity between key slot harness connector M40 (A) terminal 3 and ground.

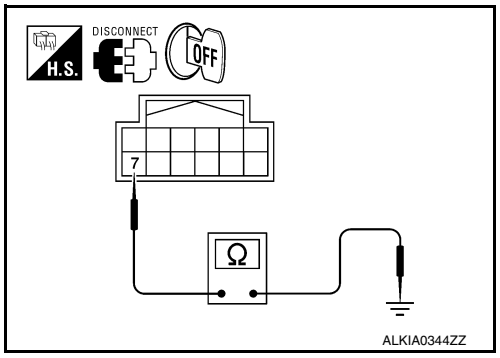
Key slot		Ground	Continuity
Connector	Terminal		
A: M40	3	Ground	No

Is the inspection result normal?

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

7. CHECK KEY SLOT GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect key slot harness connector.
3. Check continuity between key slot harness connector M40 terminal 7 and ground.



Key slot		Ground	Continuity
Connector	Terminal		
M40	7	Ground	Yes

Is the inspection result normal?

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

8. CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> Inspection End.

B2191 DIFFERENCE OF KEY

Description

INFOID:0000000010051936

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

DTC Logic

INFOID:0000000010051937

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2191	DIFFERENCE OF KEY	The ID verification results between BCM and Intelligent Key are NG. The registration is necessary.	• Intelligent Key

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Insert the Intelligent Key in the key slot. Press the push-button ignition switch.
2. Check “Self Diagnostic Result” with CONSULT.

Is DTC detected?

YES >> Refer to SEC-40, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000010051938

1.PERFORM INITIALIZATION

Perform initialization with CONSULT. Re-register all Intelligent Keys.
For initialization and registration of Intelligent Key, refer to CONSULT Immobilizer mode and follow the on-screen instructions.

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

YES >> Intelligent Key was unregistered.
NO >> BCM is malfunctioning.
- Replace BCM. Refer to BCS-79, "Removal and Installation".
- Perform initialization again.

B2192 ID DISCORD, IMMU-ECM

Description

INFOID:0000000010051939

BCM performs the ID verification with ECM that allows the engine to start. Start the engine if the ID is OK. ECM prevents the engine from starting if the ID is not registered. BCM starts the communication with ECM if ignition switch is turned ON.

DTC Logic

INFOID:0000000010051940

DTC DETECTION LOGIC

NOTE:

- If DTC B2192 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-29, "DTC Logic".
- If DTC B2192 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-30, "DTC Logic".

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions:
- CVT selector lever is in the P or N position.
- Do not depress the brake pedal.
2. Check “Self Diagnostic Result” with CONSULT.

Is DTC detected?

YES >> Refer to SEC-41, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000010051941

1.PERFORM INITIALIZATION

Perform initialization with CONSULT. Re-register all Intelligent Keys.
For initialization and registration of Intelligent Key, refer to CONSULT Immobilizer mode and follow the on-screen instructions.

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

YES >> ID was unregistered.
NO >> BCM is malfunctioning.
- Replace BCM. Refer to BCS-79, "Removal and Installation".
- Perform initialization again.
- Replace ECM.

B2193 CHAIN OF ECM-IMMU

Description

INFOID:0000000010051942

BCM performs the ID verification with ECM that allows the engine to start. Start the engine if the ID is OK. ECM prevents the engine from starting if the ID is not registered. BCM starts the communication with ECM if ignition switch is turned ON.

DTC Logic

INFOID:0000000010051943

DTC DETECTION LOGIC

NOTE:

- If DTC B2193 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-29, "DTC Logic".
- If DTC B2193 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-30, "DTC Logic".

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions:
- CVT selector lever is in the P or N position.
- Do not depress brake pedal.
2. Check “Self Diagnostic Result” with CONSULT.

Is DTC detected?

YES >> Refer to SEC-42, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000010051944

1.REPLACE BCM

1. Replace BCM. Refer to BCS-79, "Removal and Installation".
2. Perform initialization with CONSULT.
   For initialization, refer to CONSULT Immobilizer mode and follow the on-screen instructions.

Does the engine start?

YES >> BCM is malfunctioning.
- Replace BCM. Refer to BCS-79, "Removal and Installation".
- Perform initialization again.

NO >> ECM is malfunctioning.
- Replace ECM.
- Perform ECM re-communicating function.

B2555 STOP LAMP

Description

INFOID:0000000010051945

BCM detects the stop lamp status and confirms the stop lamp switch ON/OFF status. BCM confirms the engine start condition according to the stop lamp switch ON/OFF status.

DTC Logic

INFOID:0000000010051946

DTC DETECTION LOGIC

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Depress the brake pedal and wait for at least 1 second.
2. Check “Self Diagnostic Result” with CONSULT.

Is DTC detected?

YES >> Refer to SEC-43, "Diagnosis Procedure".
NO >> Inspection End.

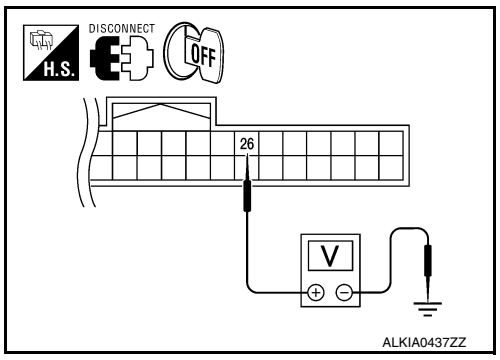
Diagnosis Procedure

INFOID:0000000010051947

Regarding Wiring Diagram information, refer to SEC-147, "Wiring Diagram" or SEC-128, "Wiring Diagram".

1.CHECK STOP LAMP SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect BCM harness connector.
3. Check voltage between BCM harness connector M18 terminal 26 and ground.



BCM		Ground	Stop lamp switch position	Voltage [V]
Connector	Terminal			
M18	26	Ground	Depressed	Battery voltage
			Released	0

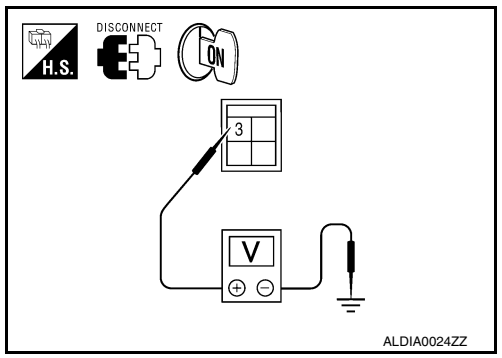
Is the inspection result normal?

YES >> Stop lamp switch is OK.
NO >> GO TO 2

2.CHECK STOP LAMP SWITCH POWER SUPPLY CIRCUIT

1. Disconnect stop lamp switch harness connector.

2. Check voltage between stop lamp harness connector E38 terminal 3 and ground.



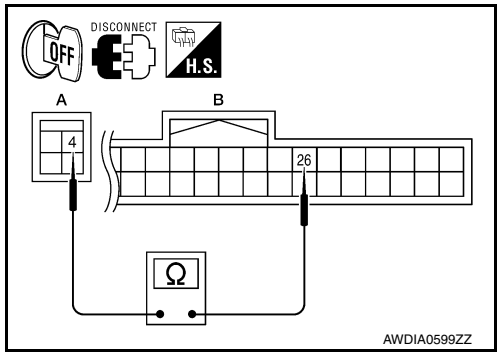
Stop lamp switch		Ground	Voltage [V]
Connector	Terminal		
E38	3	Ground	Battery voltage

Is the inspection result normal?

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

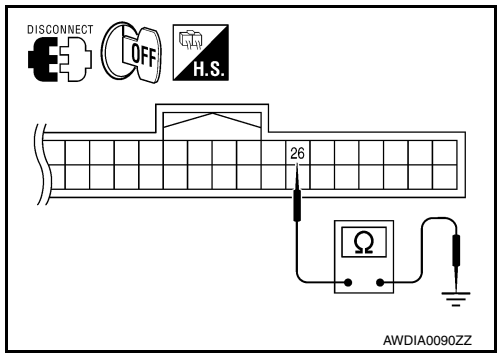
3.CHECK STOP LAMP SWITCH CIRCUIT

1. Check continuity between stop lamp switch harness connector E38 (A) terminal 4 and BCM harness connector M18 (B) terminal 26.



Stop lamp switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
A: E38	4	B: M18	26	Yes

2. Check continuity between BCM harness connector M18 terminal 26 and ground.



BCM		Ground	Continuity
Connector	Terminal		
M18	26	Ground	No

Is the inspection result normal?

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

4.CHECK STOP LAMP SWITCH

Refer to SEC-44, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5
NO >> Replace stop lamp switch.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> Inspection End.

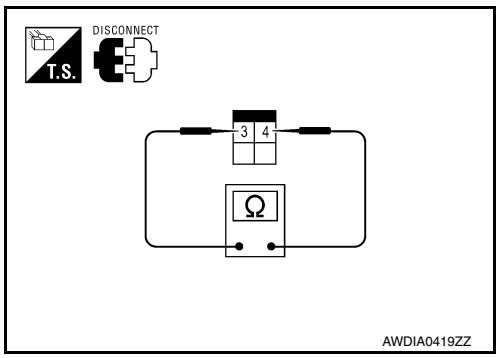
Component Inspection

INFOID:0000000010051948

1.CHECK STOP LAMP SWITCH

1. Turn ignition switch OFF.
2. Disconnect stop lamp switch harness connector.

3. Check continuity between stop lamp switch terminals under the following conditions.



Stop lamp switch		Condition		Continuity
Terminal				
3	4	Brake pedal	Not depressed	No
			Depressed	Yes

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace stop lamp switch.

B2556 PUSH-BUTTON IGNITION SWITCH

Description

INFOID:0000000010051949

The switch that changes the power supply position. BCM maintains the power supply position status. BCM changes the power supply position with the operation of the push-button ignition switch.

DTC Logic

INFOID:0000000010051950

DTC DETECTION LOGIC

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine and wait for at least 100 seconds.
2. Check “Self Diagnostic Result” with CONSULT.

Is DTC detected?

YES >> Refer to SEC-46, "Diagnosis Procedure".
NO >> Inspection End.

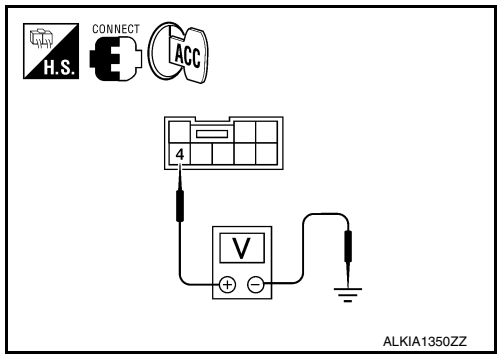
Diagnosis Procedure

INFOID:0000000010051951

Regarding Wiring Diagram information, refer to SEC-147, "Wiring Diagram" or SEC-128, "Wiring Diagram".

1.CHECK PUSH-BUTTON IGNITION SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect push-button ignition switch harness connector.
3. Check voltage between push-button ignition switch harness connector M38 terminal 4 and ground.



Push-button ignition switch		Ground	Voltage [V]
Connector	Terminal		
M38	4	Ground	Battery voltage

Is the inspection result normal?

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

2.CHECK PUSH-BUTTON IGNITION SWITCH

Refer to SEC-47, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 3
NO >> Replace push-button ignition switch. Refer to SEC-164, "Removal and Installation".

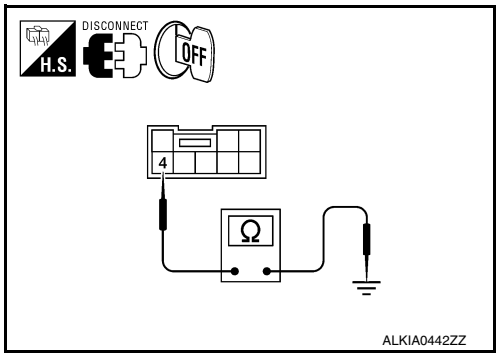
3.CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> Inspection End.

4. CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT FOR SHORT

1. Disconnect BCM harness connector and IPDM E/R harness connector.
2. Check continuity between push-button ignition switch harness connector M38 terminal 4 and ground.



Push-button ignition switch		Ground	Continuity
Connector	Terminal		
M38	4	Ground	No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-79, "Removal and Installation".

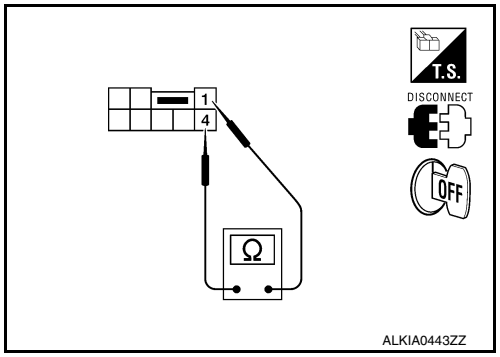
NO >> Repair harness or connector.

Component Inspection

INFOID:0000000010051952

1. CHECK PUSH-BUTTON IGNITION SWITCH

1. Turn ignition switch OFF.
2. Disconnect push-button ignition switch harness connector.
3. Check continuity between push-button ignition switch terminals under the following conditions.



Push-button ignition switch		Condition	Continuity
Terminal			
1	4	Pressed	Yes
		Not pressed	No

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace push-button ignition switch. Refer to SEC-164, "Removal and Installation".

B2557 VEHICLE SPEED

Description

INFOID:0000000010051953

BCM receives the 2 vehicle speed signals via CAN communication. One signal is transmitted by the “combination meter”. Another signal is transmitted by “ABS actuator and electric unit (control unit)”. BCM compares both signals to detect the vehicle speed.

DTC Logic

INFOID:0000000010051954

DTC DETECTION LOGIC

NOTE:

- If DTC B2557 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-29, "DTC Logic".
- If DTC B2557 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-30, "DTC Logic".

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B2557	VEHICLE SPEED	BCM detects the following difference between the vehicle speed from “combination meter” and the one from “ABS actuator and electric unit” for 10 seconds continuously • One is 10 km/h or more and the other is 4 km/h or less.	• Wheel sensor • Combination meter • ABS actuator and electric unit (control unit)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Drive the vehicle at the vehicle speed of 10 km/h or more and wait for at least 10 seconds.
2. Check “Self Diagnostic Result” with CONSULT.

Is DTC detected?

YES >> Refer to SEC-48, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000010051955

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

Check “Self Diagnostic Result” with CONSULT. Refer to BRC-82, "DTC No. Index".

Is the inspection result normal?

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

2.CHECK COMBINATION METER.

Check combination meter. Refer to MWI-4, "Work Flow".

>> Inspection End.

B2560 STARTER CONTROL RELAY

Description

INFOID:0000000010051956

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

DTC Logic

INFOID:0000000010051957

DTC DETECTION LOGIC

NOTE:

- If DTC B2560 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-29, "DTC Logic".
- If DTC B2560 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-30, "DTC Logic".

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions and wait for at least 2 seconds:
- CVT selector lever is in the P position.
- Depress the brake pedal.
2. Check “Self Diagnostic Result” with CONSULT.

Is DTC detected?

YES >> Refer to SEC-49, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000010051958

1.CHECK DTC WITH IPDM E/R

Check “Self Diagnostic Result” with CONSULT. Refer to PCS-27, "DTC Index".

Is the inspection result normal?

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

2.CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> Inspection End.

B2601 SHIFT POSITION

Description

INFOID:0000000010051959

BCM confirms the shift position with the following 2 signals.
- CVT selector lever
- P position signal from IPDM E/R (CAN)

DTC Logic

INFOID:0000000010051960

DTC DETECTION LOGIC

NOTE:
- If DTC B2601 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-29, "DTC Logic".
- If DTC B2601 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-30, "DTC Logic".
- If DTC B2601 is displayed with DTC B2605, first perform the trouble diagnosis for DTC B2605. Refer to SEC-61, "DTC Logic".

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to SEC-50, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

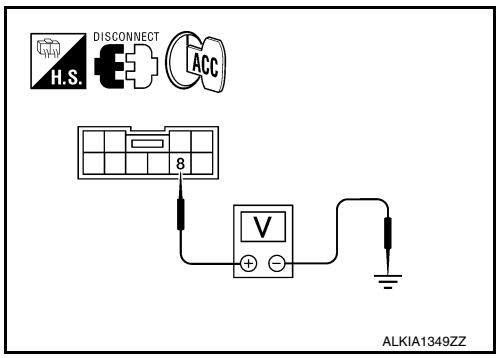
INFOID:0000000010051961

Regarding Wiring Diagram information, refer to SEC-147, "Wiring Diagram" or SEC-128, "Wiring Diagram".

1.CHECK CVT SHIFT SELECTOR POWER SUPPLY

1. Turn ignition switch to ACC.
2. Disconnect CVT shift selector harness connector.

3. Check voltage between CVT shift selector harness connector M78 terminal 8 and ground.



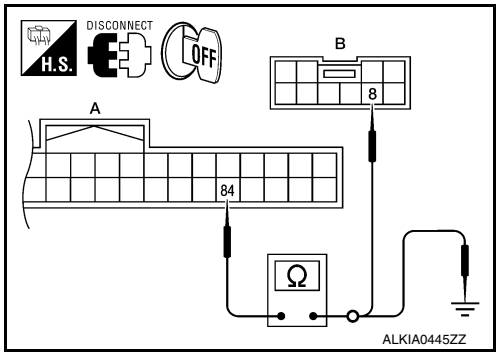
CVT shift selector (park position switch)		Ground	Voltage [V]
Connector	Terminal		
M78	8	Ground	Battery voltage

Is the inspection result normal?

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

2. CHECK CVT SHIFT SELECTOR POWER SUPPLY CIRCUIT

1. Disconnect BCM harness connector.
2. Check continuity between BCM harness connector M19 (A) terminal 84 and CVT shift selector harness connector M78 (B) terminal 8.



BCM		CVT shift selector (park position switch)		Continuity
Connector	Terminal	Connector	Terminal	
A: M19	84	B: M78	8	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 84 and ground.

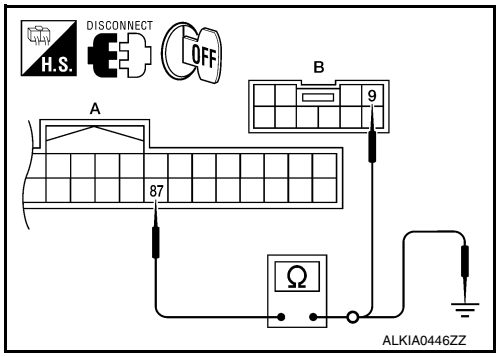
BCM		Ground	Continuity
Connector	Terminal		
A: M19	84	Ground	No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-79, "Removal and Installation".
NO >> Repair harness or connector.

3. CHECK CVT SHIFT SELECTOR CIRCUIT (BCM)

1. Disconnect BCM harness connector and IPDM E/R harness connector.
2. Check continuity between BCM harness connector M19 (A) terminal 87 and CVT shift selector harness connector M78 (B) terminal 9.



BCM		CVT shift selector (park position switch)		Continuity
Connector	Terminal	Connector	Terminal	
A: M19	87	B: M78	9	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 87 and ground.

BCM		Ground	Continuity
Connector	Terminal		
A: M19	87	Ground	No

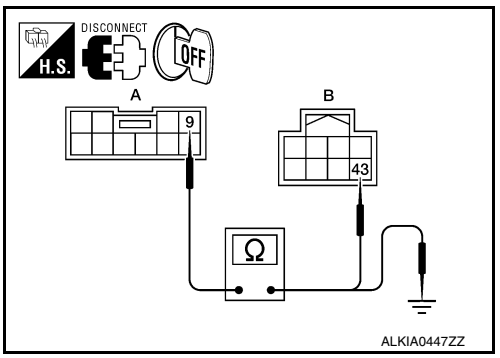
Is the inspection result normal?

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

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

1. Disconnect IPDM E/R harness connector.

2. Check continuity between CVT shift selector harness connector M78 (A) terminal 9 and IPDM E/R harness connector E17 (B) terminal 43.



CVT shift selector (park position switch)		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
A: M78	9	B: E17	43	Yes

3. Check continuity between CVT shift selector harness connector M78 (A) terminal 9 and ground.

CVT shift selector (park position switch)		Ground	Continuity
Connector	Terminal		
A: M78	9	Ground	No

Is the inspection result normal?

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

5.CHECK CVT SHIFT SELECTOR

Refer to SEC-52, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Replace CVT shift selector. Refer to TM-170, "Removal and Installation".

6.CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

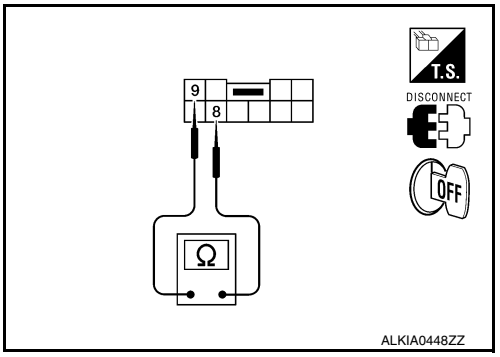
>> Inspection End.

Component Inspection

INFOID:0000000010051962

1.CHECK CVT SHIFT SELECTOR

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



CVT shift selector (park position switch)		Condition		Continuity
Terminal				
8	9	CVT selector lever	P position	No
			Other than above	Yes

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace CVT shift selector. Refer to TM-170, "Removal and Installation".

B2602 SHIFT POSITION

Description

INFOID:0000000010051963

BCM confirms the shift position with the following 2 signals.
- CVT selector lever
- Speed signal from meter

DTC Logic

INFOID:0000000010051964

DTC DETECTION LOGIC

NOTE:
- If DTC B2602 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-29, "DTC Logic".
- If DTC B2602 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-30, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2602	SHIFT POSITION	BCM detects the following status for 10 seconds. • Shift position is in P position • Vehicle speed is 4km/h (2 MPH) or more • Ignition switch is in the ON position	• Harness or connectors (CVT drive circuit is open or shorted) • CVT shift selector • Combination meter

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine under the following conditions and wait for at least 10 seconds.
- CVT selector lever is in the P or N position
- Depress the brake pedal.
2. Drive the vehicle for at least 10 seconds at a speed greater than 4 km/h (2 MPH).
3. Check “Self diagnostic result” with CONSULT.

Is DTC detected?

YES >> Refer to SEC-53, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000010051965

Regarding Wiring Diagram information, refer to SEC-147, "Wiring Diagram" or SEC-128, "Wiring Diagram".

1.CHECK DTC WITH “COMBINATION METER”

Check “Self diagnostic result” with CONSULT. Refer to PCS-27, "DTC Index".

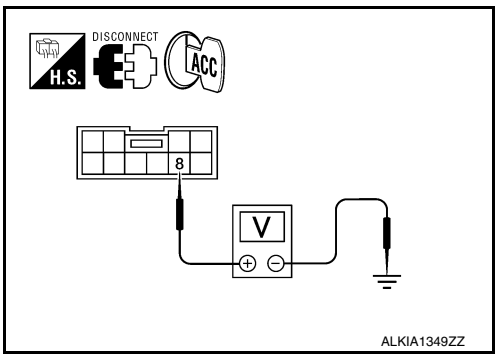
Is the inspection result normal?

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

2.CHECK CVT SHIFT SELECTOR POWER SUPPLY

1. Turn ignition switch to ACC.
2. Disconnect CVT shift selector harness connector.

3. Check voltage between CVT shift selector harness connector M78 terminal 8 and ground.



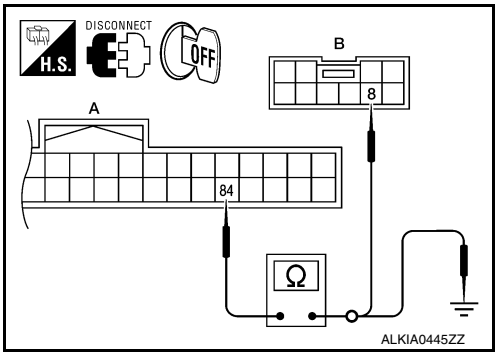
CVT shift selector		Ground	Voltage [V]
Connector	Terminal		
M78	8	Ground	Battery voltage

Is the inspection result normal?

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

3. CHECK CVT SHIFT SELECTOR POWER SUPPLY CIRCUIT

1. Disconnect BCM harness connector.
2. Check continuity between BCM harness connector M19 (A) terminal 84 and CVT shift selector harness connector M78 (B) terminal 8.



BCM		CVT shift selector		Continuity
Connector	Terminal	Connector	Terminal	
A: M19	84	B: M78	8	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 84 and ground.

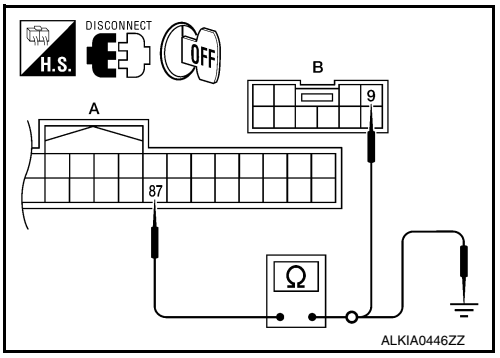
BCM		Ground	Continuity
Connector	Terminal		
A: M19	84	Ground	No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-79, "Removal and Installation".
NO >> Repair harness or connector.

4. CHECK CVT SHIFT SELECTOR CIRCUIT

1. Disconnect BCM harness connector.
2. Check continuity between CVT shift selector harness connector M78 (B) terminal 9 and BCM harness connector M19 (A) terminal 87.



BCM		CVT shift selector		Continuity
Connector	Terminal	Connector	Terminal	
A: M19	87	B: M78	9	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 87 and ground.

BCM		Ground	Continuity
Connector	Terminal		
A: M19	87	Ground	No

Is the inspection result normal?

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

5. CHECK CVT SHIFT SELECTOR

Refer to SEC-52, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Replace CVT shift selector. Refer to TM-170, "Removal and Installation".

6. CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> Inspection End.

B2603 SHIFT POSITION STATUS

Description

INFOID:0000000010051966

BCM confirms the shift position with the following 2 signals.
- CVT selector lever
- P/N position switch

DTC Logic

INFOID:0000000010051967

DTC DETECTION LOGIC

NOTE:
- If DTC B2603 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-29, "DTC Logic".
- If DTC B2603 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-30, "DTC Logic".

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B2603	SHIFT POSITION STATUS	BCM detects the followings status for 500 ms or more when shift is in P position and, ignition switch is in ON position. • transmission range switch: approx. 0V • CVT shift selector: approx. 0V	• Harness or connector (CVT shift selector circuit is open or shorted.) • Harness or connectors [transmission range switch circuit is open or shorted.] • CVT shift selector • Transmission range switch

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P position.
- Do not depress the brake pedal.
2. Shift to N and wait for at least 1 second.
3. Shift to any gear other than P or N and wait for at least 1 second.
4. Check “Self diagnostic result” with CONSULT.

Is DTC detected?

YES >> Refer to SEC-56, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000010051968

Regarding Wiring Diagram information, refer to SEC-147, "Wiring Diagram" or SEC-128, "Wiring Diagram".

1.CHECK DTC WITH IPDM E/R

Check “Self diagnostic result” with CONSULT. Refer to PCS-27, "DTC Index".

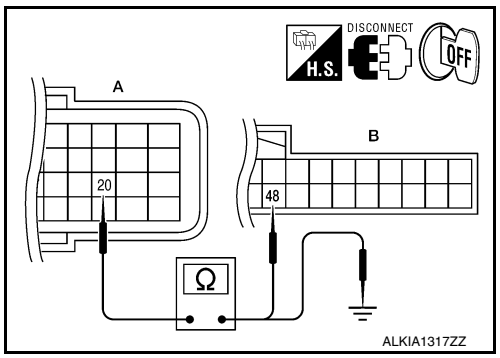
Is the inspection result normal?

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

2.CHECK TRANSMISSION RANGE SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect TCM harness connector and BCM harness connector.

3. Check continuity between TCM harness connector F15 (A) terminal 20 and BCM harness connector M18 (B) terminal 48.



TCM		BCM		Continuity
Connector	Terminal	Connector	Terminal	
A: F15	20	B: M18	48	Yes

4. Check continuity between TCM harness connector F15 (A) terminal 20 and ground.

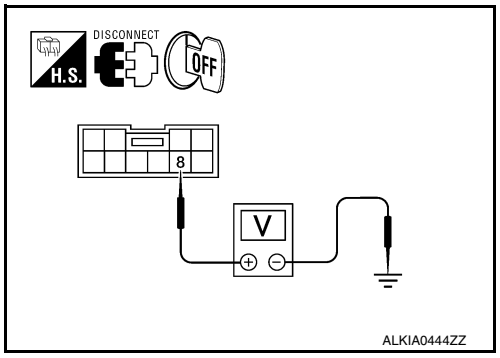
TCM		Ground	Continuity
Connector	Terminal		
A: F15	20	Ground	No

Is the inspection result normal?

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

3.CHECK CVT SHIFT SELECT POWER SUPPLY

1. Turn ignition switch OFF.
2. Disconnect CVT shift selector harness connector.
3. Check voltage between CVT shift selector harness connector M78 terminal 8 and ground.



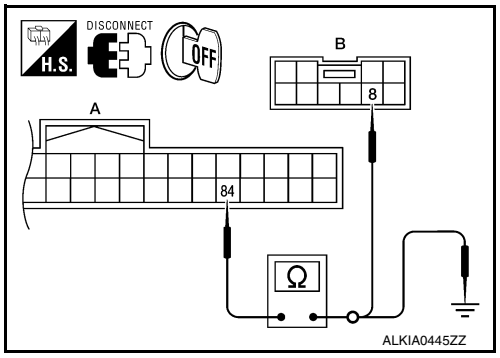
CVT shift selector		Ground	Voltage [V]
Connector	Terminal		
M78	8	Ground	Battery voltage

Is the inspection result normal?

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

4.CHECK CVT SHIFT SELECTOR POWER SUPPLY CIRCUIT

1. Disconnect BCM harness connector.
2. Check continuity between BCM harness connector M19 (A) terminal 84 and CVT shift selector harness connector M78 (B) terminal 8.



BCM		CVT shift selector		Continuity
Connector	Terminal	Connector	Terminal	
A: M19	84	B: M78	8	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 84 and ground.

BCM		Ground	Continuity
Connector	Terminal		
A: M19	84	Ground	No

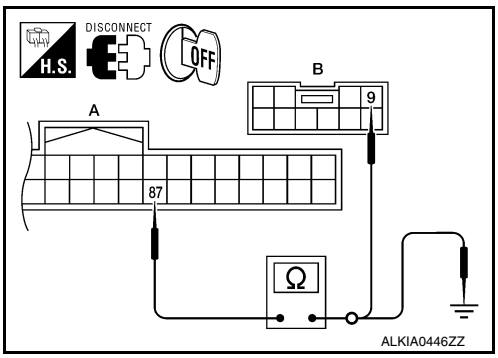
Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-79, "Removal and Installation".
NO >> Repair harness or connector.

5.CHECK CVT SHIFT SELECTOR CIRCUIT

1. Disconnect BCM harness connector.

2. Check continuity between BCM harness connector M19 (A) terminal 87 and CVT shift selector harness connector M78 (B) terminal 9.



BCM		CVT shift selector		Continuity
Connector	Terminal	Connector	Terminal	
A: M19	87	B: M78	9	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 87 and ground.

BCM		Ground	Continuity
Connector	Terminal		
A: M19	87	Ground	No

Is the inspection result normal?

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

6.CHECK CVT SHIFT SELECTOR

Refer to SEC-52, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 7.
NO >> Replace CVT shift selector. Refer to TM-170, "Removal and Installation".

7.CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> Inspection End.

B2604 TRANSMISSION RANGE SWITCH

Description

INFOID:0000000010051969

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

DTC Logic

INFOID:0000000010051970

DTC DETECTION LOGIC

NOTE:
- If DTC B2604 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-29, "DTC Logic".
- If DTC B2604 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-30, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2604	TRANSMISSION RANGE SWITCH	BCM detects the following status for 500 ms or more when the ignition switch is in the ON position. • Transmission range switch indicates vehicle is in P or N shift position. Signal from TCM indicates vehicle is in forward or reverse gear. • Transmission range switch indicates vehicle is in forward or reverse gear. Signal from TCM indicates vehicle is in P or N.	• Harness or connectors [The transmission range switch circuit is open or shorted.] • Transmission range switch • TCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P position
- Do not depress the brake pedal
2. Use CVT selector lever to select each gear one at a time. Wait at each gear for at least 1 second.
3. Check “Self diagnostic result” with CONSULT.

Is DTC detected?

YES >> Refer to SEC-59, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000010051971

Regarding Wiring Diagram information, refer to SEC-147, "Wiring Diagram" or SEC-128, "Wiring Diagram".

1.CHECK DTC WITH TCM

Check “Self diagnostic result” with CONSULT. Refer to PCS-27, "DTC Index".

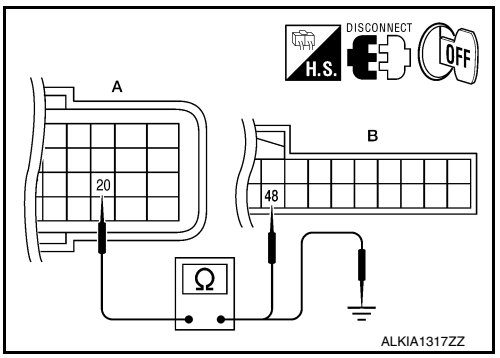
Is the inspection result normal?

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

2.CHECK TRANSMISSION RANGE SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect TCM harness connector and BCM harness connector.

3. Check continuity between TCM harness connector F15 (A) terminal 20 and BCM harness connector M18 (B) terminal 48.



TCM		BCM		Continuity
Connector	Terminal	Connector	Terminal	
A: F15	20	B: M18	48	Yes

4. Check continuity between TCM harness connector F15 (A) terminal 20 and ground.

TCM		Ground	Continuity
Connector	Terminal		
A: F15	20	Ground	No

Is the inspection result normal?

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

3.CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> Inspection End.

B2605 TRANSMISSION RANGE SWITCH

Description

INFOID:0000000010051972

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

DTC Logic

INFOID:0000000010051973

DTC DETECTION LOGIC

NOTE:
- If DTC B2605 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-29, "DTC Logic".
- If DTC B2605 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-30, "DTC Logic".

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to SEC-61, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000010051974

Regarding Wiring Diagram information, refer to SEC-147, "Wiring Diagram" or SEC-128, "Wiring Diagram".

1.CHECK DTC WITH IPDM E/R

Check “Self diagnostic result” with CONSULT. Refer to PCS-27, "DTC Index".

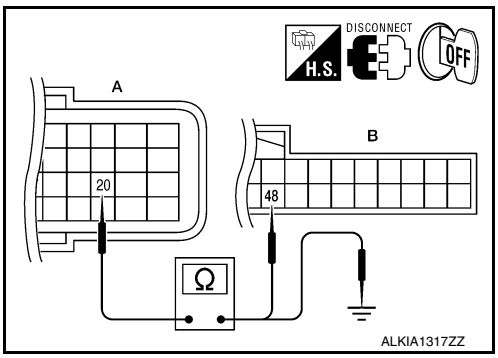
Is the inspection result normal?

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

2.CHECK TRANSMISSION RANGE SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect TCM harness connector and BCM harness connector.

3. Check continuity between TCM connector F15 (A) terminal 20 and BCM harness connector M18 (B) terminal 48.



TCM		BCM		Continuity
Connector	Terminal	Connector	Terminal	
A: F15	20	B: M18	48	Yes

4. Check continuity between TCM harness connector F15 (A) terminal 20 and ground.

TCM		Ground	Continuity
Connector	Terminal		
A: F15	20	Ground	No

Is the inspection result normal?

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

3.CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> Inspection End.

B2608 STARTER RELAY

Description

INFOID:0000000010051975

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

DTC Logic

INFOID:0000000010051976

DTC DETECTION LOGIC

NOTE:

- If DTC B2608 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-29, "DTC Logic".
- If DTC B2608 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-30, "DTC Logic".

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press the push-button ignition switch under the following conditions.
- CVT selector lever is in the P or N position.
- Depress the brake pedal.
2. Check “Self diagnostic result” with CONSULT.

Is DTC detected?

YES >> Refer to SEC-63, "Diagnosis Procedure".
NO >> Inspection End.

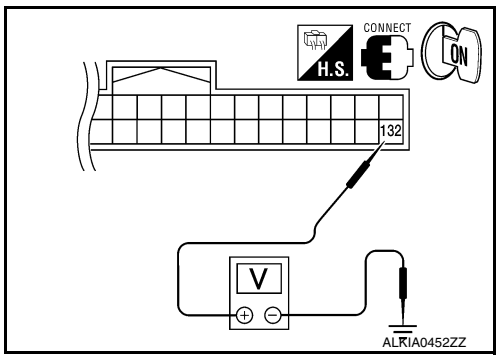
Diagnosis Procedure

INFOID:0000000010051977

Regarding Wiring Diagram information, refer to SEC-147, "Wiring Diagram" or SEC-128, "Wiring Diagram".

1.CHECK STARTER RELAY

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



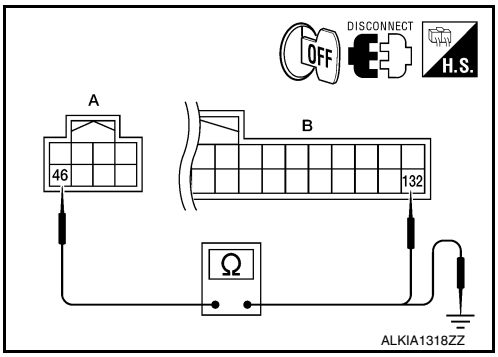
BCM		Ground	Condition		Voltage (V)
Connector	Terminal				
M21	132	Ground	CVT selector lever	N or P position	Battery voltage
				Other than above	0

Is the measurement value within the specification?

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

2.CHECK STARTER RELAY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM harness connector M21 and IPDM E/R harness connector E17.
3. Check continuity between IPDM E/R harness connector E17 (A) terminal 46 and BCM harness connector M21 (B) terminal 132.



IPDM E/R		BCM		Continuity
Connector	Terminal	Connector	Terminal	
A: E17	46	B: M21	132	Yes

4. Check continuity between IPDM E/R harness connector E17 (A) terminal 46 and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
A: E17	46	Ground	No

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-35, "Removal and Installation".
NO >> Repair harness or connector.

3.CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> Inspection End.

B260F ENGINE STATUS

Description

INFOID:0000000010051978

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

DTC Logic

INFOID:0000000010051979

DTC DETECTION LOGIC

NOTE:

- If DTC B260F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-29, "DTC Logic".
- If DTC B260F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-30, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260F	INTERRUPTION OF ENGINE STATUS SIGNAL	BCM has not yet received the engine status signal from ECM when ignition switch is in ON position	• ECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to SEC-65, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000010051980

1.INSPECTION START

1. Turn ignition switch ON.
2. Check “Self diagnostic result” with CONSULT.
3. Touch “ERASE”.
4. **Perform DTC Confirmation Procedure.**
   See SEC-65, "DTC Logic".

Is the DTC B260F displayed again?

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

2.REPLACE ECM

1. Replace ECM.
2. Go to EC-17, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description".

>> Inspection End.

B26E1 NO RECEPTION OF ENGINE STATUS SIGNAL

Description

INFOID:0000000010051981

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

DTC Logic

INFOID:0000000010051982

DTC DETECTION LOGIC

NOTE:

- If DTC B26E1 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-29, "DTC Logic".
- If DTC B26E1 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-30, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26E1	NO RECEPTION OF ENGINE STATUS SIGNAL	BCM does not receive the engine status signal from ECM when ignition switch is in the ON position	• ECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to SEC-66, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000010051983

1.INSPECTION START

1. Turn ignition switch ON.
2. Check “Self diagnostic result” with CONSULT.
3. Touch “ERASE”.
4. **Perform DTC Confirmation Procedure.**
   See SEC-66, "DTC Logic".

Is the DTC B26E1 displayed again?

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

2.REPLACE ECM

1. Replace ECM.
2. Go to EC-17, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description".

>> Inspection End.

B2617 STARTER RELAY CIRCUIT

Description

INFOID:0000000010051984

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

DTC Logic

INFOID:0000000010051985

DTC DETECTION LOGIC

NOTE:

- If DTC B2617 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-29, "DTC Logic".
- If DTC B2617 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-30, "DTC Logic".
- If DTC B2617 is displayed with DTC B210E, first perform the trouble diagnosis for DTC B210E. Refer to SEC-67, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2617	STARTER RELAY CIRCUIT	• An immediate operation of starter relay is requested by BCM, but there is no response for more than 1 second • BCM is not commanding starter relay activation, but BCM detects starter relay output is active	• Harness or connectors (Starter relay circuit is open or shorted.) • IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to SEC-67, "Diagnosis Procedure".
NO >> Inspection End.

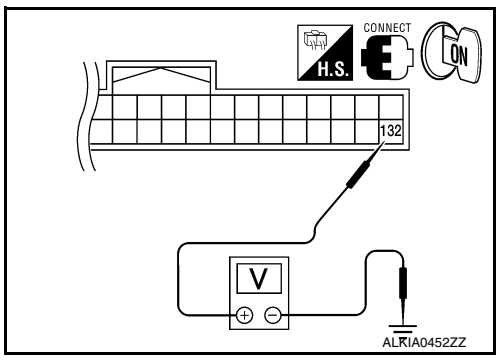
Diagnosis Procedure

INFOID:0000000010051986

Regarding Wiring Diagram information, refer to SEC-147, "Wiring Diagram" or SEC-128, "Wiring Diagram".

1.CHECK STARTER RELAY

1. Turn ignition switch ON.
2. Check voltage between BCM harness connector M21 terminal 132 and ground under the following condition.



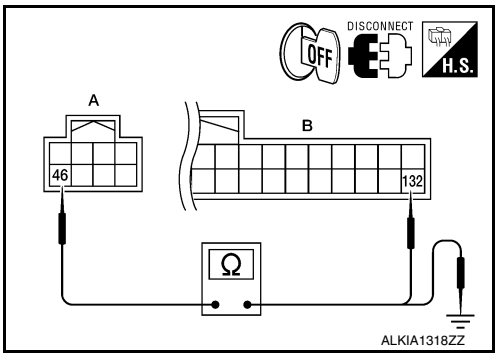
BCM		Ground	Transmission select lever position	Condition	Voltage (V)
Connector	Terminal				
M21	132	Ground	Park	Ignition switch cranking or request to start	Battery voltage
				Other than above	0

Is the measurement value within the specification.

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

2.CHECK STARTER RELAY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM harness connector and IPDM E/R harness connector.
3. Check continuity between IPDM E/R harness connector E17 (A) terminal 46 and BCM harness connector M21 (B) terminal 132.



IPDM E/R		BCM		Continuity
Connector	Terminal	Connector	Terminal	
A: E17	46	B: M21	132	Yes

4. Check continuity between IPDM E/R harness connector E17 (A) terminal 46 and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
A: E17	46	Ground	No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-79, "Removal and Installation".
NO >> Repair harness or connector.

3.CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> Inspection End.

B210B STARTER CONTROL RELAY

DTC Logic

INFOID:0000000010052721

DTC DETECTION LOGIC

NOTE:

- If DTC B210B is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-29, "DTC Logic".
- If DTC B210B is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-30, "DTC Logic".

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn the power supply position to start under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P (Park) or N (Neutral) position.
- Depress the brake pedal
2. Check “Self-diagnostic result” with CONSULT.

Is DTC detected?

YES >> Refer to SEC-69, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000010052722

1.INSPECTION START

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

Is display history of DTC B210B CRNT?

YES >> Replace IPDM E/R. Refer to PCS-35, "Removal and Installation".
NO >> Refer to GI-41, "Intermittent Incident".

B210C STARTER CONTROL RELAY

DTC Logic

INFOID:0000000010052723

DTC DETECTION LOGIC

NOTE:

- If DTC B210C is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-29, "DTC Logic".
- If DTC B210C is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-30, "DTC Logic".
- When IPDM E/R power supply voltage is low (Approx. 7 - 8 V for about 1 second), the DTC B210C may be detected.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210C	START CONT RLY OFF CIRC	When comparing the following items, IPDM E/R detects that starter control relay is stuck in the OFF position for 1 second or more. • Starter control relay signal (CAN) from BCM • Starter relay status signal (CAN) from BCM • Starter control relay and starter relay status signal (IPDM E/R input) • Starter control relay control signal (IPDM E/R output)	• IPDM E/R • BCM • Battery

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn the power supply position to start under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P (Park) or N (Neutral) position.
- Depress the brake pedal
2. Check “Self-diagnostic result” with CONSULT.

Is DTC detected?

YES >> Refer to SEC-70, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000010052724

Regarding Wiring Diagram information, refer to SEC-147, "Wiring Diagram".

1.PERFORM SELF DIAGNOSTIC RESULT

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

Is display history of DTC B210C CRNT?

YES >> GO TO 2.
NO >> Refer to GI-41, "Intermittent Incident".

2.CHECK STARTER CONTROL RELAY CONTROL CIRCUITS VOLTAGE

Check voltage between IPDM E/R connectors and ground.

IPDM E/R		Ground	Voltage (Approx.)
Connector	Terminal		
E17	46	—	Battery voltage

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-35, "Removal and Installation".
NO >> GO TO 3.

3. CHECK STARTER CONTROL RELAY CONTROL CIRCUIT CONTINUITY

1. Disconnect IPDM E/R connector E17 and BCM connector M21.
2. Check continuity between IPDM E/R connector E17 and BCM connector M21.

IPDM E/R		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E17	46	M21	132	Yes

3. Check continuity between IPDM E/R connector E17 and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E17	46	—	No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-79, "Removal and Installation".
NO >> Repair or replace harness or connectors.

B210D STARTER RELAY

DTC Logic

INFOID:0000000010052725

DTC DETECTION LOGIC

NOTE:

- If DTC B210D is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-29, "DTC Logic".
- If DTC B210D is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-30, "DTC Logic".
- If DTC B210D is displayed with DTC B2617, first perform the trouble diagnosis for DTC B2617. Refer to SEC-67, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210D	STARTER RELAY ON CIRC	When comparing the following items, IPDM E/R detects that starter control relay is stuck in the ON position for 5 second or more. • Starter control relay signal (CAN) from BCM • Starter relay status signal (CAN) from BCM • Starter control relay and starter relay status signal (IPDM E/R input) • Starter control relay control signal (IPDM E/R output)	• Harness or connectors (starter motor relay control circuit open or short) • IPDM E/R • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Ignition switch ON under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P (Park) or N (Neutral) position
- Do not depress the brake pedal
2. Check “Self-diagnostic result” with CONSULT.

Is DTC detected?

YES >> Refer to SEC-72, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000010052726

Regarding Wiring Diagram information, refer to SEC-147, "Wiring Diagram".

1. PERFORM SELF DIAGNOSTIC RESULT

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

Is display history of DTC B210D CRNT?

YES >> GO TO 2.
NO >> Refer to GI-41, "Intermittent Incident".

2.CHECK STARTER CONTROL RELAY CONTROL CIRCUITS VOLTAGE

Check voltage between IPDM E/R connectors and ground.

IPDM E/R		Ground	Voltage (Approx.)
Connector	Terminal		
E17	46	—	Battery voltage

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-35, "Removal and Installation".
NO >> GO TO 3.

3.CHECK STARTER CONTROL RELAY CONTROL CIRCUIT CONTINUITY

1. Disconnect IPDM E/R connectors E17 and BCM connector M21.
2. Check continuity between IPDM E/R connector E17 and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E17	46	—	No

Is the inspection result normal?

YES >> Refer to SEC-63, "Diagnosis Procedure".
NO >> Repair or replace harness or connectors.

B210E STARTER RELAY

DTC Logic

INFOID:0000000010052727

DTC DETECTION LOGIC

NOTE:

- If DTC B210E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-29, "DTC Logic".
- If DTC B210E is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-30, "DTC Logic".
- When IPDM E/R power supply voltage is low (Approx. 7 - 8 V for about 1 second), the DTC B210F may be detected.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210E	STARTER RELAY OFF	When comparing the following items, IPDM E/R detects that starter control relay is stuck in the OFF position for 5 second or more. • Starter control relay signal (CAN) from BCM • Starter relay status signal (CAN) from BCM • Starter control relay and starter relay status signal (IPDM E/R input) • Starter control relay control signal (IPDM E/R output)	• IPDM E/R • BCM • Battery

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P (Park) or N (Neutral) position
- Do not depress the brake pedal
2. Check Self-diagnostic result with CONSULT.

Is DTC detected?

YES >> Refer to SEC-74, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000010052728

Regarding Wiring Diagram information, refer to SEC-147, "Wiring Diagram".

1. PERFORM SELF DIAGNOSTIC RESULT

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

Is display history of DTC B210E CRNT?

YES >> GO TO 2.
NO >> Refer to GI-41, "Intermittent Incident".

2.CHECK STARTER CONTROL RELAY CONTROL CIRCUITS VOLTAGE

Check voltage between IPDM E/R connectors and ground.

IPDM E/R		Ground	Voltage (Approx.)
Connector	Terminal		
E17	46	—	Battery voltage

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-35, "Removal and Installation".
NO >> GO TO 3.

3.CHECK STARTER CONTROL RELAY CONTROL CIRCUIT CONTINUITY

1. Disconnect IPDM E/R connector E17 and BCM connector M21.
2. Check continuity between IPDM E/R connector E17 and BCM connector M21.

IPDM E/R		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E17	46	M21	132	Yes

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-79, "Removal and Installation".
NO >> Repair or replace harness or connectors.

B210F TRANSMISSION RANGE SWITCH

Description

INFOID:0000000010051999

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

DTC Logic

INFOID:0000000010052000

DTC DETECTION LOGIC

NOTE:
- If DTC B210F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-29, "DTC Logic"
- If DTC B210F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-30, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210F	TRANSMISSION RANGE SWITCH	IPDM E/R detects a mismatch between the signals below for 1 second or more. • Transmission range switch input signal • Shift position signal from BCM (CAN)	• Harness or connectors Transmission range switch circuit is open or shorted • Transmission range switch

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to SEC-76, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000010052001

Regarding Wiring Diagram information, refer to SEC-147, "Wiring Diagram" or SEC-128, "Wiring Diagram".

1.CHECK DTC WITH BCM

Refer to BCS-64, "DTC Index".

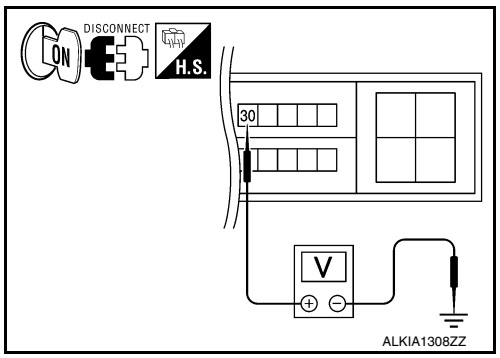
Is the inspection result normal?

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

2.CHECK TRANSMISSION RANGE SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R harness connector.
3. Turn ignition switch ON.

4. Check voltage between IPDM E/R harness connector E18 terminal 30 and ground under following condition.



IPDM E/R		Ground	Condition		Voltage (V)
Connector	Terminal				
E18	30	Ground	CVT selector lever	P or N	Battery voltage
				Other than above	0

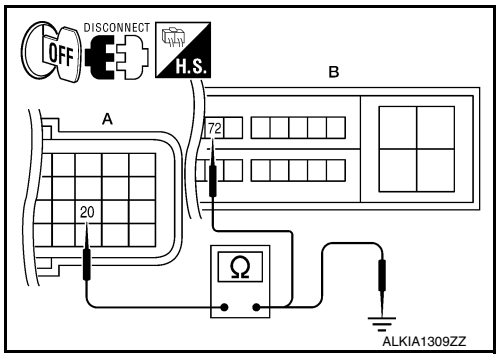
Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-35, "Removal and Installation".

NO >> GO TO 3.

3. CHECK TRANSMISSION RANGE SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect TCM harness connector.
3. Check continuity between IPDM E/R harness connector E18 (B) terminal 72 and TCM harness connector F15 (A) terminal 20.



TCM		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
A: F15	20	B: E18	72	Yes

4. Check continuity between TCM harness connector F15 (A) terminal 20 and ground.

TCM		Ground	Continuity
Connector	Terminal		
A: F15	20	Ground	No

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> Inspection End.

B2110 TRANSMISSION RANGE SWITCH

Description

INFOID:0000000010052002

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

DTC Logic

INFOID:0000000010052003

DTC DETECTION LOGIC

NOTE:
- If DTC B2110 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-29, "DTC Logic".
- If DTC B2110 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-30, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2110	TRANSMISSION RANGE SWITCH	IPDM E/R detects mismatch between the signal below for 1 second or more. • Transmission range switch input signal	• Harness or connectors Transmission range switch circuit is open or shorted • Transmission range switch

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to SEC-78, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000010052004

Regarding Wiring Diagram information, refer to SEC-147, "Wiring Diagram" or SEC-128, "Wiring Diagram".

1.CHECK DTC WITH BCM

Refer to BCS-64, "DTC Index".

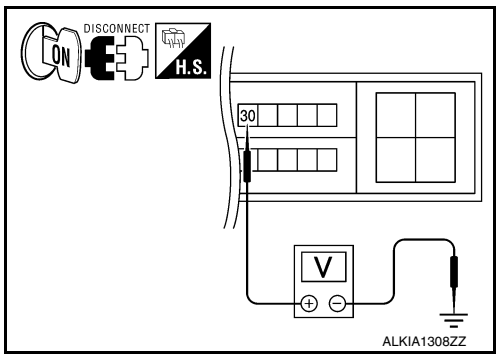
Is the inspection result normal?

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

2.CHECK TRANSMISSION RANGE SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R harness connector.
3. Turn ignition switch ON.

4. Check voltage between IPDM E/R harness connector E18 terminal 30 and ground under following condition.



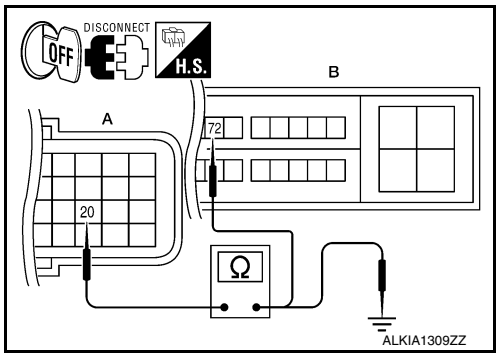
IPDM E/R		Ground	Condition		Voltage (V)
Connector	Terminal				
E18	30	Ground	CVT selector lever	P or N	Battery voltage
				Other than above	0

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-35, "Removal and Installation".
NO >> GO TO 3.

3. CHECK TRANSMISSION RANGE SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect TCM harness connector.
3. Check continuity between IPDM E/R harness connector E18 (B) terminal 72 and TCM harness connector F15 (A) terminal 20.



TCM		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
A: F15	20	B: E18	72	Yes

4. Check continuity between TCM harness connector F15 (A) terminal 20 and ground.

TCM		Ground	Continuity
Connector	Terminal		
A: F15	20	Ground	No

Is the inspection result normal?

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

4. CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> Inspection End.

POWER SUPPLY AND GROUND CIRCUIT
BCM
BCM : Diagnosis Procedure

INFOID:0000000010068741

Regarding Wiring Diagram information, refer to BCS-67, "Wiring Diagram".

1. CHECK FUSE AND FUSIBLE LINK

Check if the following BCM fuses or fusible link are blown.

Terminal No.	Signal name	Fuse and fusible link No.
1	Battery power supply	H
11		10
24		7

Is the fuse or fusible link blown?

YES >> Replace the blown fuse or fusible link after repairing the affected circuit.
NO >> GO TO 2

2. CHECK POWER SUPPLY CIRCUIT

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

Terminals			Voltage (Approx.)
(+)		(–)	
BCM		Ground	
Connector	Terminal		
M16	1		Battery voltage
M17	11		
M18	24		

Is the measurement normal?

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

3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M17	13		Yes

Does continuity exist?

YES >> Inspection End.
NO >> Repair or replace harness.

BCM : Special Repair Requirement

INFOID:0000000010068742

1. REQUIRED WORK WHEN REPLACING BCM

Initialize control unit. Refer to BCS-5, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Work Procedure".

>> Work End.

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) : Diagnosis Procedure

INFOID:0000000010068744

Regarding Wiring Diagram information, refer to PCS-28, "Wiring Diagram".

1. CHECK FUSES AND FUSIBLE LINK

Check that the following IPDM E/R fuses or fusible link are not blown.

Terminal No.	Signal name	Fuses and fusible link No.
1	Battery power supply	B
2		A, D
36		A, E, L

Is the fuse blown?

YES >> Replace the blown fuse or fusible link after repairing the affected circuit.
NO >> GO TO 2

2. CHECK POWER SUPPLY CIRCUIT

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

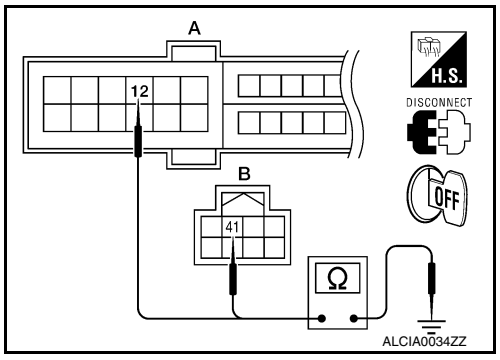
Terminals			Voltage (V) (Approx.)
(+)		(−)	
IPDM E/R			
Connector	Terminal	Ground	Battery voltage
E16	1		
	2		
E18	36		

Is the measurement value normal?

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

3. CHECK GROUND CIRCUIT

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



IPDM E/R		Ground	Continuity
Connector	Terminal		
A: E18	12		Yes
B: E17	41		

Does continuity exist?

YES >> Inspection End.
NO >> Repair harness or connector.

KEY SLOT

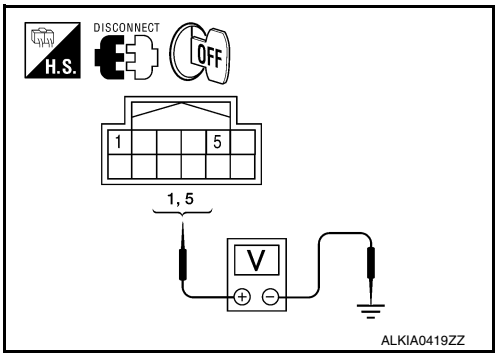
Diagnosis Procedure

INFOID:0000000010052008

Regarding Wiring Diagram information, refer to SEC-147, "Wiring Diagram" or SEC-128, "Wiring Diagram".

1.CHECK KEY SLOT POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect key slot connector.
3. Check voltage between slot harness connector M40 terminal 1, 5 and ground.



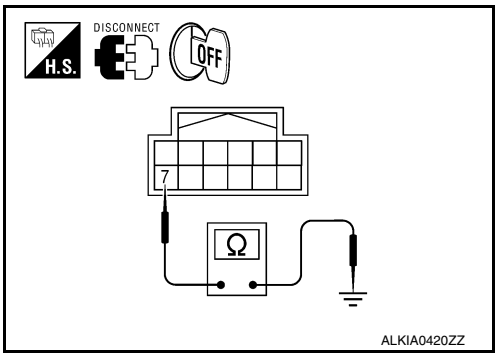
Key slot		Ground	Voltage (V) (Approx.)
Connector	Terminal		
M40	1	Ground	Battery voltage
	5		

Is the inspection result normal?

YES >> GO TO 2
NO >> Repair or replace key slot power supply circuit.

2.CHECK KEY SLOT GROUND CIRCUIT

Check continuity between key slot harness connector M40 terminal 7 and ground.



Key slot		Ground	Continuity
Connector	Terminal		
M40	7	Ground	Yes

Is the inspection result normal?

YES >> GO TO 3
NO >> Repair or replace key slot ground circuit.

3.CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> Inspection End.

KEY SLOT ILLUMINATION

Description

INFOID:0000000010052009

Blinks when Intelligent Key insertion is required.

Component Function Check

INFOID:0000000010052010

1.CHECK FUNCTION

With CONSULT
Check key slot illumination (“KEY SLOT ILLUMI”) Active Test mode.

Is the inspection result normal?

YES >> Key slot function is OK.
NO >> Refer to SEC-83, "Diagnosis Procedure".

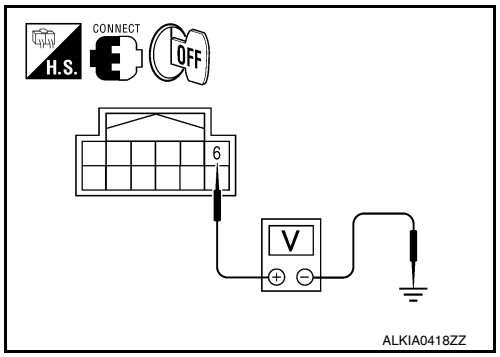
Diagnosis Procedure

INFOID:0000000010052011

Regarding Wiring Diagram information, refer to SEC-147, "Wiring Diagram" or SEC-128, "Wiring Diagram".

1.CHECK KEY SLOT ILLUMINATION OUTPUT SIGNAL

Check voltage between key slot harness connector M40 terminal 6 and ground.



Terminals			Condition	Key slot illumination	Voltage (V) (Approx.)
(+)		(–)			
Key slot connector	Terminal				
M40	6	Ground	Intelligent Key inserted	OFF	Battery voltage
			Intelligent Key removed	ON	0

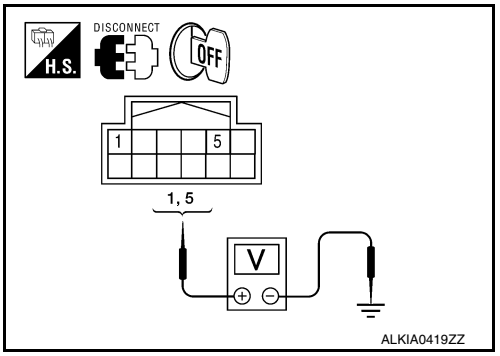
Is the inspection result normal?

YES >> GO TO 6
NO >> GO TO 2

2.CHECK KEY SLOT POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect key slot connector.

3. Check voltage between slot harness connector M40 terminal 1, 5 and ground.



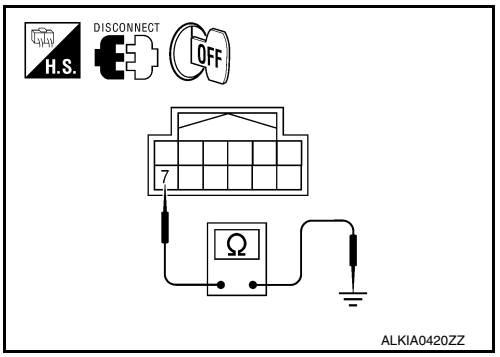
Terminals			Voltage (V) (Approx.)
(+)		(–)	
Key slot connector	Terminal		
M40	1	Ground	Battery voltage
	5		

Is the inspection result normal?

YES >> GO TO 3
NO >> Repair or replace key slot power supply circuit.

3.CHECK KEY SLOT GROUND CIRCUIT

Check continuity between key slot harness connector M40 terminal 7 and ground.



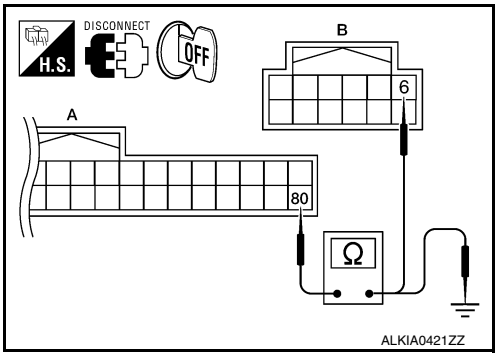
Key slot connector	Terminal	Ground	Continuity
M40	7		Yes

Is the inspection result normal?

YES >> GO TO 4
NO >> Repair or replace key slot ground circuit.

4.CHECK KEY SLOT CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM and key slot connector.
3. Check continuity between BCM harness connector M19 (A) terminal 80 and key slot harness connector M40 (B) terminal 6.



BCM connector	Terminal	Key slot connector	Terminal	Continuity
A: M19	80	B: M40	6	Yes

4. Check continuity between BCM harness connector M19 (A) terminal 80 and ground.

BCM connector	Terminal	Ground	Continuity
A: M19	80		No

Is the inspection result normal?

YES >> GO TO 5
NO >> Repair or replace harness between BCM and key slot.

5.CHECK KEY SLOT

Refer to SEC-83, "Description".

Is the inspection result normal?

YES >> GO TO 6
NO >> Replace key slot. Refer to SEC-163, "Removal and Installation".

6.CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> Inspection End.

KEY CYLINDER SWITCH

Description

INFOID:0000000010052012

The main power window and door lock/unlock switch detects condition of the door key cylinder switch and transmits to BCM as the LOCK or UNLOCK signal.

Component Function Check

INFOID:0000000010052013

1.CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

Check KEY CYL UN-SW, KEY CYL UN-SW in “DATA MONITOR” mode for “POWER DOOR LOCK SYSTEM” with CONSULT. Refer to BCS-19, "DOOR LOCK : CONSULT Function (BCM - DOOR LOCK)".

Monitor item	Condition	
KEY CYL LK-SW	Lock	: ON
	Neutral / Unlock	: OFF
KEY CYL UN-SW	Unlock	: ON
	Neutral / Lock	: OFF

Is the inspection result normal?

YES >> Key cylinder switch is OK.
NO >> Refer to SEC-85, "Diagnosis Procedure".

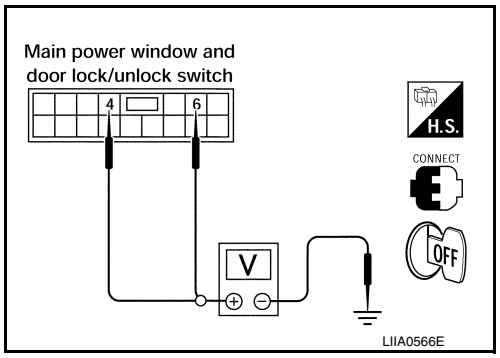
Diagnosis Procedure

INFOID:0000000010052014

Regarding Wiring Diagram information, refer to SEC-136, "Wiring Diagram".

1.CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

1. Turn ignition switch ON.
2. Check voltage between main power window and door lock/unlock switch harness connector D7 terminal 4, 6 and ground.



Terminals			Key position	Voltage (V) (Approx.)
(+)		(–)		
Main power window and door lock/unlock switch connector	Terminal			
D7	4	Ground	Lock	0
			Neutral / Unlock	5
	6		Unlock	0
			Neutral / Lock	5

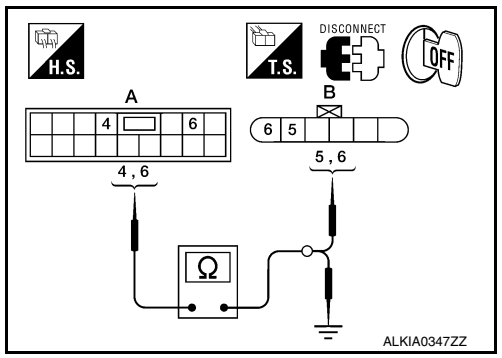
Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-107, "Removal and Installation". After that, refer to SEC-87, "Special Repair Requirement".
NO >> GO TO 2

2.CHECK DOOR KEY CYLINDER SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch connector and front door lock assembly LH connector.

3. Check continuity between main power window and door lock/unlock switch harness connector D7 (A) terminal 4, 6 and front door lock assembly LH harness connector D10 (B) 5, 6.



Main power window and door lock/unlock switch connector	Terminal	Front door lock assembly LH connector	Terminal	Continuity
A: D7	4	B: D10	6	Yes
	6		5	

4. Check continuity between main power window and door lock/unlock switch harness connector D7 (A) 4, 6 and ground.

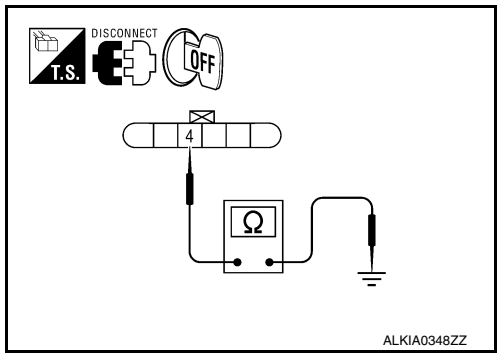
Power window main switch connector	Terminal	Ground	Continuity
A: D7	4		No
	6		

Is the inspection result normal?

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

3.CHECK DOOR KEY CYLINDER SWITCH GROUND CIRCUIT

Check continuity between front door lock assembly LH harness connector D10 terminal 4 and ground.



Front door lock assembly LH connector	Terminal	Ground	Continuity
D10	4		Yes

Is the inspection result normal?

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

4.CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch.
Refer to SEC-86, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-41, "Intermittent Incident".
NO >> Replace front door lock assembly LH. Refer to DLK-221, "FRONT DOOR LOCK : Removal and Installation". After that, refer to SEC-87, "Special Repair Requirement".

Component Inspection

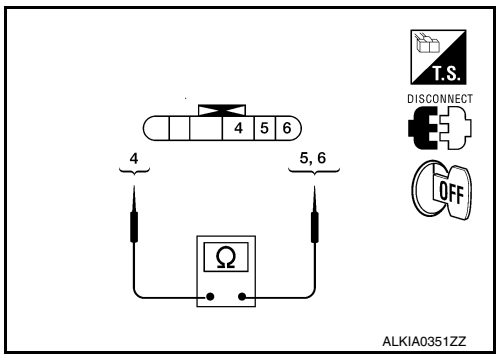
INFOID:0000000010052015

COMPONENT INSPECTION

1.CHECK DOOR KEY CYLINDER SWITCH

Check front door lock assembly LH.

Terminal		Key position	Continuity
Front door lock assembly LH connector			
5	4	Unlock	Yes
		Neutral / Lock	No
6		Lock	Yes
		Neutral / Unlock	No



Is the inspection result normal?

YES >> Key cylinder switch is OK.
NO >> Replace front door lock assembly LH. Refer to DLK-221, "FRONT DOOR LOCK : Removal and Installation". After that, refer to SEC-87, "Special Repair Requirement"

Special Repair Requirement

INFOID:0000000010052016

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-7, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-7, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-7, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" and PWC-7, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

>> End.

HORN

Description

INFOID:0000000010052017

Horn (high/low) is located inside of front bumper and operates when theft warning system is in alarm phase.

Component Function Check

INFOID:0000000010052018

1.CHECK FUNCTION

1. Select HORN in “ACTIVE TEST” mode with CONSULT.
2. Check the horn (high/low) operation.

Test item		Description	
HORN	ON	Horn relay	ON (for 20 ms)

Is the operation normal?

YES >> Inspection End.
NO >> Refer to SEC-88, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000010052019

Regarding Wiring Diagram information, refer to SEC-136, "Wiring Diagram".

1.CHECK HORN FUNCTION

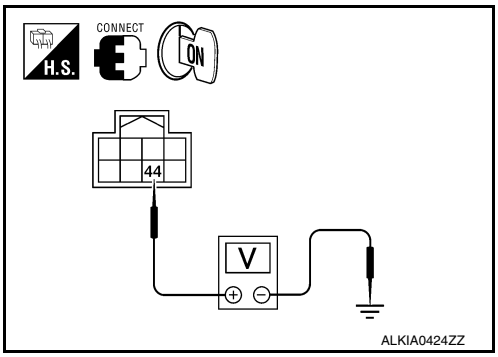
Check horn function with horn switch

Do the horns sound?

YES >> GO TO 2
NO >> Refer to SEC-136, "Wiring Diagram".

2.CHECK HORN RELAY POWER SUPPLY

1. Turn ignition switch ON.
2. Perform “ACTIVE TEST” (“HORN”) with CONSULT.
3. Using an analog voltmeter or an oscilloscope, check voltage between IPDM E/R harness connector E17 terminal 44 and ground.



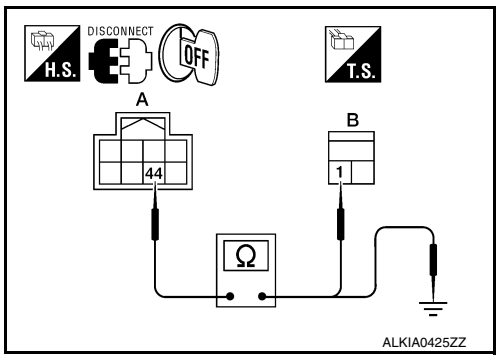
IPDM E/R		Ground	Test item		Voltage (V) (Approx.)
Connector	Terminal				
E17	44	Ground	HORN	ON	Battery voltage → 0 → Battery voltage
				Other than above	Battery voltage

Is the inspection result normal?

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

3.CHECK HORN RELAY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R and horn relay connector.
3. Check continuity between IPDM E/R harness connector E17 (A) terminal 44 and horn relay harness connector H1 (B) terminal 1.



IPDM E/R		Horn relay		Continuity
Connector	Terminal	Connector	Terminal	
A: E17	44	B: H-1	1	Yes

4. Check continuity between IPDM E/R harness connector E17 (A) terminal 44 and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
A: E17	44	Ground	No

Is the inspection result normal?

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

4. CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-35, "Removal and Installation".
NO >> Repair or replace the malfunctioning part.

HEADLAMP

Description

INFOID:0000000010052020

Headlamp lighting when theft warning system is in alarm phase.

Component Function Check

INFOID:0000000010052021

1.CHECK HEADLAMP OPERATION

Check if headlamps operate by lighting switch.

Does headlamp come on when turning switch “ON”?

YES >> Headlamp circuit is OK.
NO >> Check headlamp system. Refer to SEC-90, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000010052022

1.CHECK HEADLAMP OPERATION

Refer to EXL-6, "Work Flow" (xenon type) or EXL-171, "Work Flow" (halogen type).

Is the inspection result normal?

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

2.CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> Inspection End.

WARNING LAMP

Description

INFOID:0000000010052023

- Warning lamp is built in combination meter.
- Intelligent Key system malfunction is reported to the driver by the warning lamp illumination.

Component Function Check

INFOID:0000000010052024

1.CHECK FUNCTION

1. Perform “INDICATOR” in the “Active Test” mode with CONSULT.
2. Check warning lamp operation.

Test item		Description	
INDICATOR	ON	Warning lamp	ON
	OFF		OFF

Is the inspection result normal?

YES >> Inspection End.
NO >> Refer to SEC-91, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000010052025

1.CHECK “COMBINATION METER.”

Check combination meter function. Refer to MWI-4, "Work Flow".

Is the inspection result normal?

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

2.CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> Inspection End.

VEHICLE SECURITY INDICATOR

Description

INFOID:0000000010052026

- Vehicle security indicator is built in combination meter.
- NVIS (Nissan Vehicle Immobilizer System-NATS) and vehicle security system conditions are indicated by blink or illumination of vehicle security indicator.

Component Function Check

INFOID:0000000010052027

1.CHECK FUNCTION

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

Test item		Description	
THEFT IND	ON	Vehicle security indicator	ON
	OFF		OFF

Is the inspection result normal?

YES >> Inspection End.
NO >> Refer to SEC-92, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000010052028

1.CHECK COMBINATION METER

Check combination meter. Refer to MWI-4, "Work Flow".

Is the inspection result normal?

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

2.CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> Inspection End.

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:0000000010068746

NOTE:
The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs
- Check Intelligent Key relative signal strength
- Confirm vehicle Intelligent Key antenna signal strength

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
FR WIPER HI	Other than front wiper switch HI	OFF
	Front wiper switch HI	ON
FR WIPER LOW	Other than front wiper switch LO	OFF
	Front wiper switch LO	ON
FR WASHER SW	Front washer switch OFF	OFF
	Front washer switch ON	ON
FR WIPER INT	Other than front wiper switch INT	OFF
	Front wiper switch INT	ON
FR WIPER STOP	Front wiper is not in STOP position	OFF
	Front wiper is in STOP position	ON
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position
TURN SIGNAL R	Other than turn signal switch RH	OFF
	Turn signal switch RH	ON
TURN SIGNAL L	Other than turn signal switch LH	OFF
	Turn signal switch LH	ON
TAIL LAMP SW	Other than lighting switch 1ST and 2ND	OFF
	Lighting switch 1ST or 2ND	ON
HI BEAM SW	Other than lighting switch HI	OFF
	Lighting switch HI	ON
HEAD LAMP SW 1	Other than lighting switch 2ND	OFF
	Lighting switch 2ND	ON
HEAD LAMP SW 2	Other than lighting switch 2ND	OFF
	Lighting switch 2ND	ON
PASSING SW	Other than lighting switch PASS	OFF
	Lighting switch PASS	ON
AUTO LIGHT SW	Other than lighting switch AUTO	OFF
	Lighting switch AUTO	ON
FR FOG SW	Front fog lamp switch OFF	OFF
	Front fog lamp switch ON	ON
DOOR SW-DR	Driver door closed	OFF
	Driver door opened	ON

Monitor Item	Condition	Value/Status
DOOR SW-AS	Passenger door closed	OFF
	Passenger door opened	ON
DOOR SW-RR	Rear door RH closed	OFF
	Rear door RH opened	ON
DOOR SW-RL	Rear door LH closed	OFF
	Rear door LH opened	ON
DOOR SW-BK	Trunk door closed	OFF
	Trunk door opened	ON
CDL LOCK SW	Other than power door lock switch LOCK	OFF
	Power door lock switch LOCK	ON
CDL UNLOCK SW	Other than power door lock switch UNLOCK	OFF
	Power door lock switch UNLOCK	ON
KEY CYL LK-SW	Other than driver door key cylinder LOCK position	OFF
	Driver door key cylinder LOCK position	ON
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK position	OFF
	Driver door key cylinder UNLOCK position	ON
HAZARD SW	When hazard switch is not pressed	OFF
	When hazard switch is pressed	ON
REAR DEF SW	When rear window defogger switch is pressed	ON
TR CANCEL SW	Trunk lid opener cancel switch OFF	OFF
	Trunk lid opener cancel switch ON	ON
TR/BD OPEN SW	Trunk lid opener switch OFF	OFF
	While the trunk lid opener switch is turned ON	ON
TRNK/HAT MNTR	Trunk lid closed	OFF
	Trunk lid opened	ON
RKE-LOCK	When LOCK button of Intelligent Key is not pressed	OFF
	When LOCK button of Intelligent Key is pressed	ON
RKE-UNLOCK	When UNLOCK button of Intelligent Key is not pressed	OFF
	When UNLOCK button of Intelligent Key is pressed	ON
RKE-TR/BD	When TRUNK OPEN button of Intelligent Key is not pressed	OFF
	When TRUNK OPEN button of Intelligent Key is pressed	ON
RKE-PANIC	When PANIC button of Intelligent Key is not pressed	OFF
	When PANIC button of Intelligent Key is pressed	ON
RKE-P/W OPEN	When UNLOCK button of Intelligent Key is not pressed and held	OFF
	When UNLOCK button of Intelligent Key is pressed and held	ON
RKE-MODE CHG	When LOCK/UNLOCK button of Intelligent Key is not pressed and held simultaneously	OFF
	When LOCK/UNLOCK button of Intelligent Key is pressed and held simultaneously	ON
OPTICAL SENSOR	When outside of the vehicle is bright	Close to 5 V
	When outside of the vehicle is dark	Close to 0 V
REQ SW -DR	When front door request switch is not pressed (driver side)	OFF
	When front door request switch is pressed (driver side)	ON
REQ SW -AS	When front door request switch is not pressed (passenger side)	OFF
	When front door request switch is pressed (passenger side)	ON

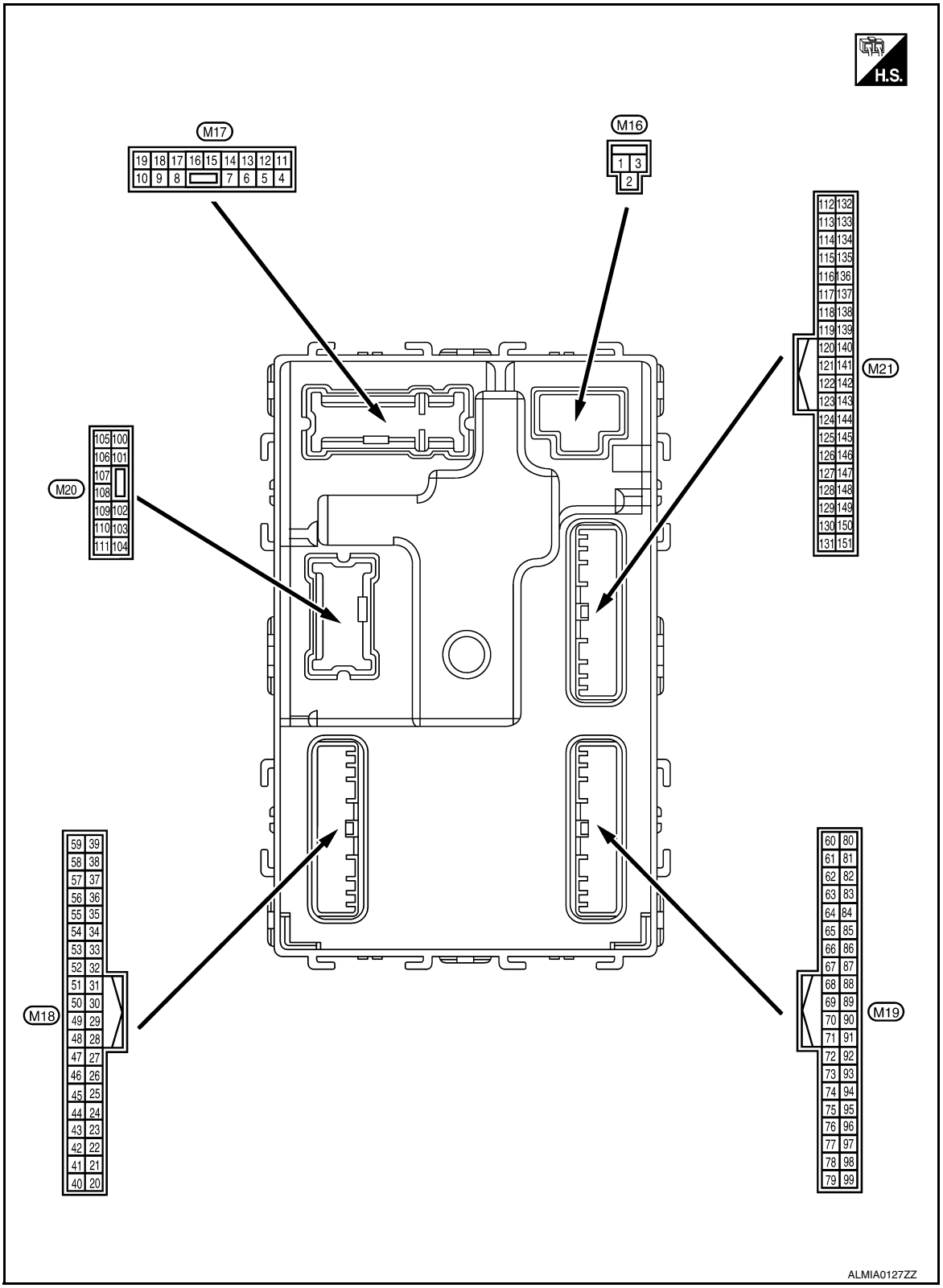
Monitor Item	Condition	Value/Status
REQ SW -RL	When rear door request switch is not pressed (driver side)	OFF
	When rear door request switch is pressed (driver side)	ON
REQ SW -RR	When rear door request switch is not pressed (passenger side)	OFF
	When rear door request switch is pressed (passenger side)	ON
REQ SW -BD/TR	When trunk opener request switch is not pressed	OFF
	When trunk opener request switch is pressed	ON
PUSH SW	When engine switch (push switch) is not pressed	OFF
	When engine switch (push switch) is pressed	ON
IGN RLY2 -F/B	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
ACC RLY -F/B	Ignition switch OFF	OFF
	Ignition switch ACC or ON	ON
BRAKE SW 1	When the brake pedal is not depressed	ON
	When the brake pedal is depressed	OFF
DETE/CANCL SW	When selector lever is in P position	OFF
	When selector lever is in any position other than P	ON
SFT PN/N SW	When selector lever is in any position other than P or N	OFF
	When selector lever is in P or N position	ON
UNLK SEN -DR	Driver door UNLOCK status	OFF
	Driver door LOCK status	ON
PUSH SW -IPDM	When engine switch (push switch) is not pressed	OFF
	When engine switch (push switch) is pressed	ON
IGN RLY1 -F/B	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
DETE SW -IPDM	When selector lever is in P position	OFF
	When selector lever is in any position other than P	ON
SFT PN -IPDM	When selector lever is in any position other than P or N	OFF
	When selector lever is in P or N position	ON
SFT P -MET	When selector lever is in any position other than P	OFF
	When selector lever is in P position	ON
SFT N -MET	When selector lever is in any position other than N	OFF
	When selector lever is in N position	ON
ENGINE STATE	Engine stopped	STOP
	While the engine stalls	STALL
	At engine cranking	CRANK
	Engine running	RUN
VEH SPEED 1	While driving	Equivalent to speedometer reading
VEH SPEED 2	While driving	Equivalent to speedometer reading
DOOR STAT-DR	Driver door LOCK status	LOCK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door UNLOCK status	UNLK
DOOR STAT-AS	Passenger door LOCK status	LOCK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door UNLOCK status	UNLK

Monitor Item	Condition	Value/Status
ID OK FLAG	Ignition switch ACC or ON	RESET
	Ignition switch OFF	SET
PRMT ENG STRT	When the engine start is prohibited	RESET
	When the engine start is permitted	SET
KEY SW -SLOT	When Intelligent Key is not inserted into key slot	OFF
	When Intelligent Key is inserted into key slot	ON
RKE OPE COUN1	During the operation of Intelligent Key	Operation frequency of Intelligent Key
CONFRM ID ALL	The key ID that the key slot receives does not accord with any key ID registered to BCM.	YET
	The key ID that the key slot receives accords with any key ID registered to BCM.	DONE
CONFIRM ID4	The key ID that the key slot receives does not accord with the fourth key ID registered to BCM.	YET
	The key ID that the key slot receives accords with the fourth key ID registered to BCM.	DONE
CONFIRM ID3	The key ID that the key slot receives does not accord with the third key ID registered to BCM.	YET
	The key ID that the key slot receives accords with the third key ID registered to BCM.	DONE
CONFIRM ID2	The key ID that the key slot receives does not accord with the second key ID registered to BCM.	YET
	The key ID that the key slot receives accords with the second key ID registered to BCM.	DONE
CONFIRM ID1	The key ID that the key slot receives does not accord with the first key ID registered to BCM.	YET
	The key ID that the key slot receives accords with the first key ID registered to BCM.	DONE
TP 4	The ID of fourth key is not registered to BCM	YET
	The ID of fourth key is registered to BCM	DONE
TP 3	The ID of third key is not registered to BCM	YET
	The ID of third key is registered to BCM	DONE
TP 2	The ID of second key is not registered to BCM	YET
	The ID of second key is registered to BCM	DONE
TP 1	The ID of first key is not registered to BCM	YET
	The ID of first key is registered to BCM	DONE
AIR PRESS FL	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of rear LH tire
ID REGST FL1	When ID of front LH tire transmitter is registered	DONE
	When ID of front LH tire transmitter is not registered	YET
ID REGST FR1	When ID of front RH tire transmitter is registered	DONE
	When ID of front RH tire transmitter is not registered	YET
ID REGST RR1	When ID of rear RH tire transmitter is registered	DONE
	When ID of rear RH tire transmitter is not registered	YET

Monitor Item	Condition	Value/Status
ID REGST RL1	When ID of rear LH tire transmitter is registered	DONE
	When ID of rear LH tire transmitter is not registered	YET
WARNING LAMP	Tire pressure indicator OFF	OFF
	Tire pressure indicator ON	ON
BUZZER	Tire pressure warning alarm is not sounding	OFF
	Tire pressure warning alarm is sounding	ON

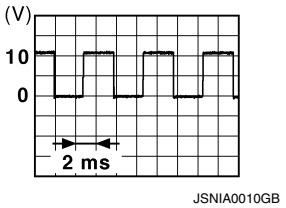
Terminal Layout

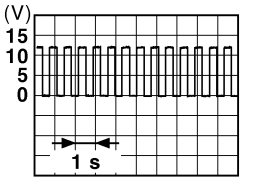
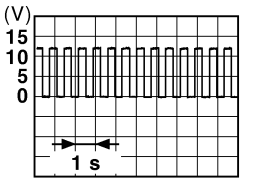
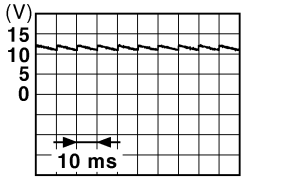
INFOID:0000000010068747

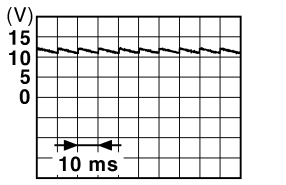
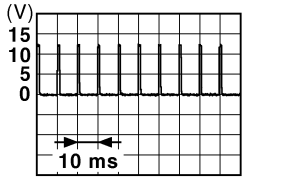
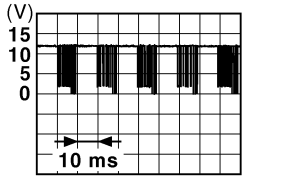


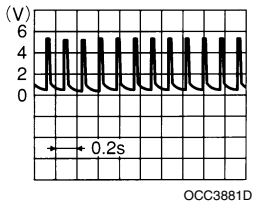
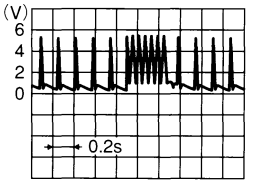
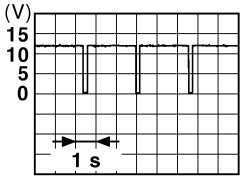
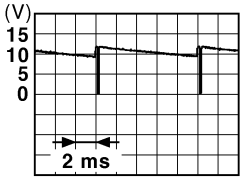
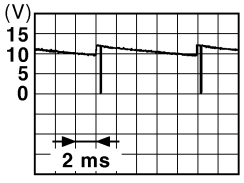
Physical Values

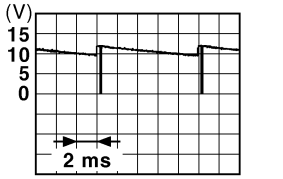
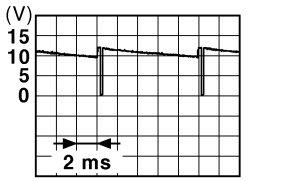
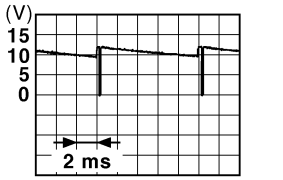
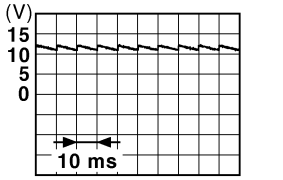
INFOID:0000000010068748

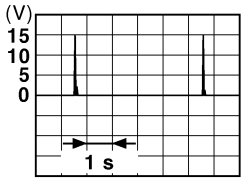
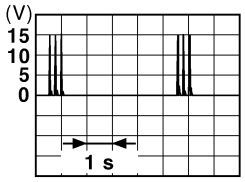
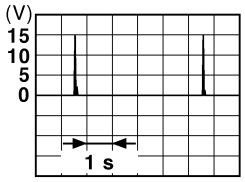
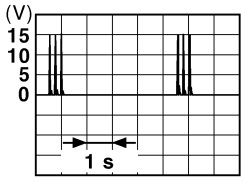
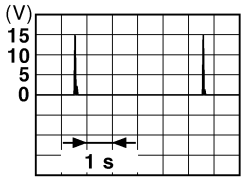
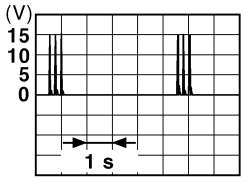
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
1 (W/B)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (R/Y)	Ground	Battery power supply output	Output	Ignition switch OFF		Battery voltage
3 (L/W)	Ground	Ignition power supply output	Output	Ignition switch ON		Battery voltage
4 (P/W)	Ground	Interior room lamp power supply	Output	After passing the interior room lamp battery saver operation time		0V
				Any other time after passing the interior room lamp battery saver operation time		Battery voltage
5 (G)	Ground	Front door RH UNLOCK	Output	Front door RH	UNLOCK (actuator is activated)	Battery voltage
					Other than UNLOCK (actuator is not activated)	0V
7 (R/W)	Ground	Step lamp	Output	Step lamp	ON	0V
					OFF	Battery voltage
8 (V)	Ground	All doors LOCK	Output	All doors	LOCK (actuator is activated)	Battery voltage
					Other than LOCK (actuator is not activated)	0V
9 (L)	Ground	Front door LH UNLOCK	Output	Front door LH	UNLOCK (actuator is activated)	Battery voltage
					Other than UNLOCK (actuator is not activated)	0V
10 (G)	Ground	Rear door RH and rear door LH UNLOCK	Output	Rear door RH and rear door LH	UNLOCK (actuator is activated)	Battery voltage
					Other than UNLOCK (actuator is not activated)	0V
11 (Y/R)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
13 (B)	Ground	Ground	—	Ignition switch ON		0V
14 (GR/W)	Ground	Engine switch (push switch) illumination ground	Input	Tail lamp	OFF	0V
					ON	**NOTE:** When the illumination brightening/dimming level is in the neutral position  JSNIA0010GB
15 (Y/L)	Ground	ACC indicator lamp	Output	Ignition switch	OFF	Battery voltage
					ACC or ON	0V

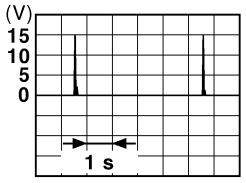
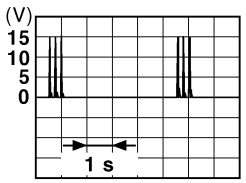
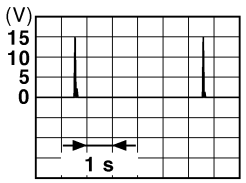
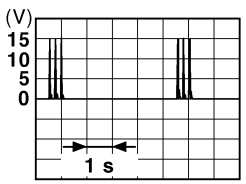
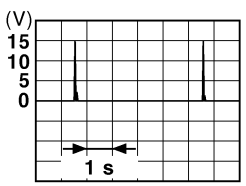
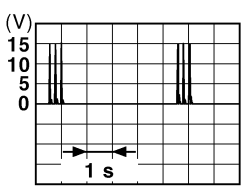
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
17 (G/B)	Ground	Turn signal (RH)	Output	Ignition switch ON	Turn signal switch OFF	0V
					Turn signal switch RH	 PKID0926E 6.5 V
18 (G/Y)	Ground	Turn signal (LH)	Output	Ignition switch ON	Turn signal switch OFF	0V
					Turn signal switch LH	 PKID0926E 6.5 V
19 (Y)	Ground	Room lamp timer control	Output	Interior room lamp	OFF	Battery voltage
					ON	0V
21 (P/B)	Ground	Optical sensor signal	Input	Ignition switch ON	When outside of the vehicle is bright	Close to 5V
					When outside of the vehicle is dark	Close to 0V
24 (R/W)	Ground	Stop lamp switch 1	Input	—		Battery voltage
26 (O/L)	Ground	Stop lamp switch 2	Input	Stop lamp switch	OFF (brake pedal is released)	0V
					ON (brake pedal is depressed)	Battery voltage
27 (O)	Ground	Front door lock assembly LH (unlock sensor)	Input	Front door LH	LOCK status	 JPMIA0011GB 11.8V
					UNLOCK status	0V
29 (Y)	Ground	Key slot switch	Input	When Intelligent Key is inserted into key slot		Battery voltage
				When Intelligent Key is not inserted into key slot		0V
31 (G)	Ground	Rear window defogger feedback signal	Input	Rear window defogger switch	OFF	0V
					ON	Battery voltage

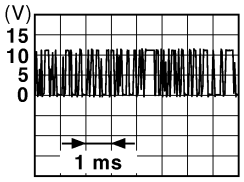
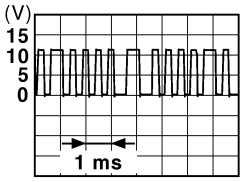
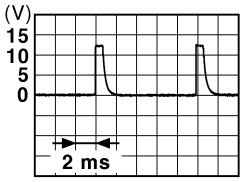
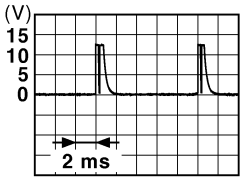
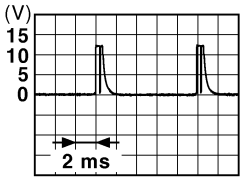
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
32 (R/B)	Ground	Front door RH switch	Input	Front door RH switch	OFF (when front door RH closes)	 JPMIA0011GB 11.8 V
					ON (when front door RH opens)	0V
37 (O)	Ground	Trunk lid opener cancel switch	Input	Trunk lid opener cancel switch	CANCEL	 JPMIA0012GB 1.1V
					ON	0V
38 (GR/ W)	Ground	Rear window defogger ON signal	Input	Rear window defogger switch	OFF	5V
					ON	0V
40 (Y/G)	Ground	Power window serial link	Input/ Output	Ignition switch ON		 JPMIA0013GB 10.2V
				Ignition switch OFF or ACC		0V
41 (W)	Ground	Engine switch (push switch) illumination	Output	Engine switch (push switch) illumination	ON	5.5V
					OFF	0V
42 (R)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	ON	0V
					OFF	Battery voltage
45 (P)	Ground	Receiver & sensor ground	Input	Ignition switch ON		0V
46 (V/W)	Ground	Receiver & sensor power supply output	Output	Ignition switch	OFF	0V
					ACC or ON	5.0V

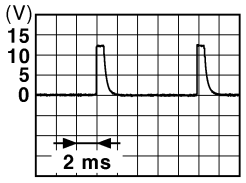
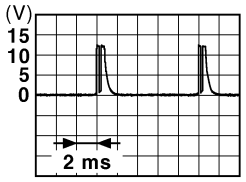
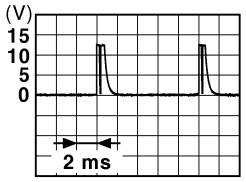
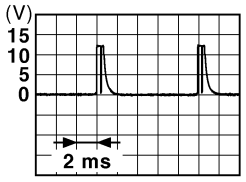
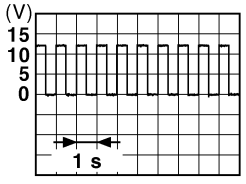
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
47 (G/O)	Ground	Tire pressure receiver signal	Input/ Output	Ignition switch ON	Standby state	 OCC3881D
					When receiving the signal from the transmitter	 OCC3880D
48 (R/G)	Ground	Selector lever transmission range switch signal	Input	Selector lever	P or N position	12.0V
					Except P and N positions	0V
49 (L/O)	Ground	Security indicator signal	Output	Security indicator	ON	0V
					Blinking	 JPMIA0014GB 11.3V
					OFF	Battery voltage
50 (LG/ B)	Ground	Combination switch OUTPUT 5	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	0V
					Lighting switch 1ST	 JPMIA0031GB 10.7V
					Lighting switch high-beam	
					Lighting switch 2ND	
					Turn signal switch RH	
51 (L/W)	Ground	Combination switch OUTPUT 1	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	0V
					Front wiper switch HI (Wiper intermittent dial 4)	 JPMIA0032GB 10.7V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • WIper intermittent dial 2 • Wiper intermittent dial 3 • Wiper intermittent dial 6 • Wiper intermittent dial 7	

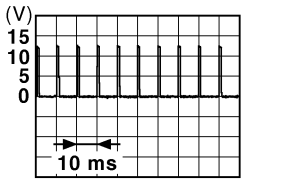
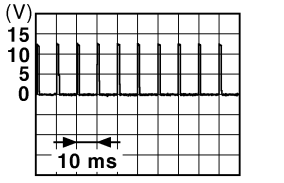
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
52 (G/B)	Ground	Combination switch OUTPUT 2	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	0V
					Front washer switch ON (Wiper intermittent dial 4)	 JPMIA0033GB 10.7V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • WIper intermittent dial 5 • Wiper intermittent dial 6	
53 (LG/ R)	Ground	Combination switch OUTPUT 3	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	0V
					Front wiper switch INT	 JPMIA0034GB 10.7V
					Front wiper switch LO	
					Lighting switch AUTO	
54 (G/Y)	Ground	Combination switch OUTPUT 4	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	0V
					Front fog lamp switch ON	 JPMIA0035GB 10.7V
					Lighting switch 2ND	
					Lighting switch flash-to-pass	
					Turn signal switch LH	
57 (W)	Ground	Tire pressure warning check switch	Input	—		5V
58 (SB)	Ground	Front door LH switch	Input	Front door LH switch	OFF (front door LH CLOSE)	 JPMIA0011GB 11.8V
					ON (front door LH OPEN)	0V
59 (G/R)	Ground	Rear window defogger relay	Output	Rear window defogger	Active	Battery voltage
					Not activated	0V

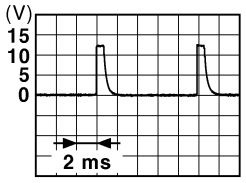
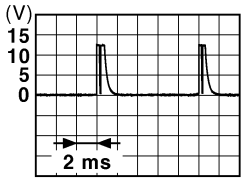
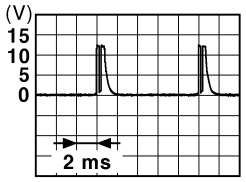
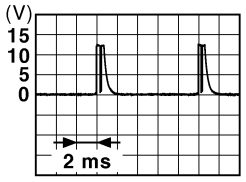
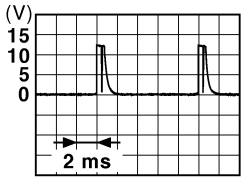
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
60 (B/R)	Ground	Front console antenna 2 (-)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
61 (W/R)	Ground	Center console antenna 2 (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
62 (V)	Ground	Front outside handle RH antenna (-)	Output	When the front door RH request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB

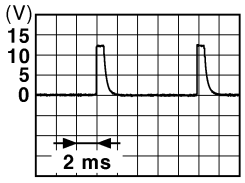
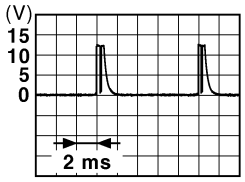
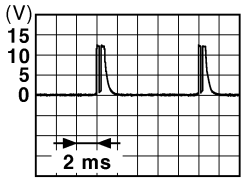
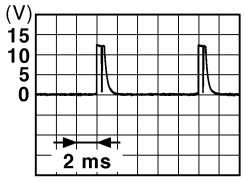
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
63 (P)	Ground	Front outside handle RH antenna (+)	Output	When the front door RH request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
64 (V)	Ground	Front outside handle LH antenna (-)	Output	When the front door LH request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
65 (P)	Ground	Front outside handle LH antenna (+)	Output	When the front door LH request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB

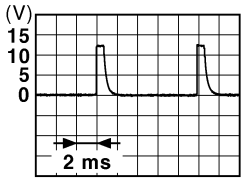
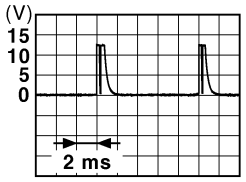
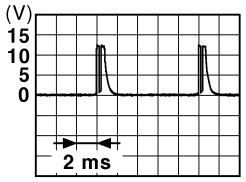
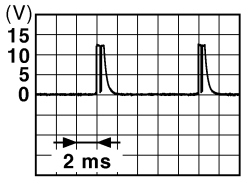
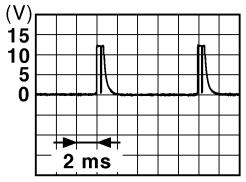
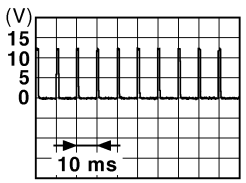
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
68 (G/O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
69 (O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
70 (R/B)	Ground	Ignition relay-2 control	Output	Ignition switch	OFF or ACC	0V
					ON	Battery voltage
71 (L/O)	Ground	Remote keyless entry receiver signal	Input/ Output	During waiting		 JMKIA0064GB
				When operating either button on Intelligent Key		 JMKIA0065GB
75 (R/Y)	Ground	Combination switch INPUT 5	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	 JPMIA0041GB 1.4V
					Front fog lamp switch ON (Wiper intermittent dial 4)	 JPMIA0037GB 1.3V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	 JPMIA0040GB 1.3V

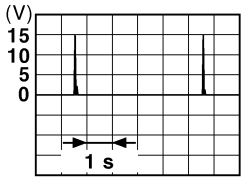
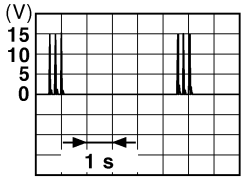
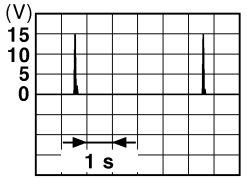
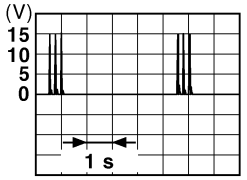
Terminal No. (Wire color) (+)	Terminal No. (Wire color) (-)	Description Signal name	Description Input/ Output	Condition		Value (Approx.)
76 (R/G)	Ground	Combination switch INPUT 3	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	 JPMIA0041GB 1.4V
					Lighting switch high-beam (Wiper intermittent dial 4)	 JPMIA0036GB 1.3V
					Lighting switch 2ND (Wiper intermittent dial 4)	 JPMIA0037GB 1.3V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	 JPMIA0040GB 1.3V
78 (P)	Ground	CAN-L	Input/ Output	—		—
79 (L)	Ground	CAN-H	Input/ Output	—		—
80 (R/L)	Ground	Key slot illumination	Output	Key slot illumination	OFF	Battery voltage
					Blinking	 JPMIA0015GB 6.5V
					ON	0V
81 (LG)	Ground	ON indicator lamp	Output	Ignition switch	OFF or ACC	0V
					ON	Battery voltage

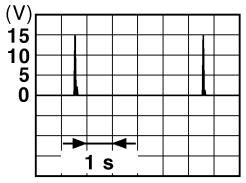
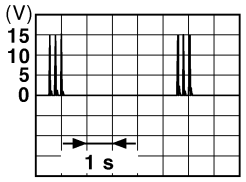
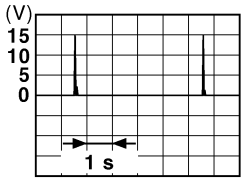
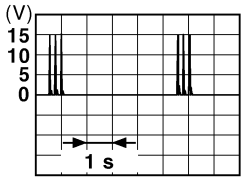
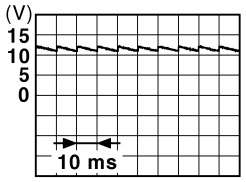
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
83 (L)	Ground	ACC relay control	Output	Ignition switch	OFF	0V
					ACC or ON	Battery voltage
84 (Y/R)	Ground	CVT shift selector	Output	—		Battery voltage
87 (G/B)	Ground	Selector lever P position switch	Input	Selector lever	P position	0V
					Any position other than P	Battery voltage
88 (R)	Ground	Front door RH request switch	Input	Front door RH request switch	ON (pressed)	0V
					OFF (not pressed)	 JPMIA0016GB 1.0V
89 (R)	Ground	Front door LH request switch	Input	Front door LH request switch	ON (pressed)	0V
					OFF (not pressed)	 JPMIA0016GB 1.0V
90 (Y)	Ground	Blower fan motor relay control	Output	Ignition switch	OFF or ACC	0V
					ON	Battery voltage
91 (L/R)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OFF		Battery voltage

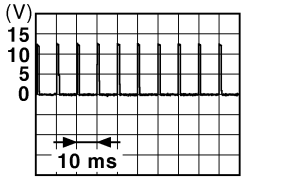
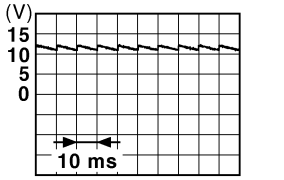
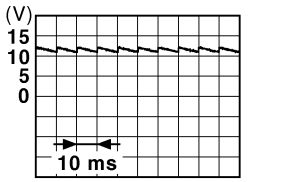
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
95 (R/W)	Ground	Combination switch INPUT 1	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF	 JPMIA0041GB 1.4V
					Turn signal switch LH	 JPMIA0037GB 1.3V
					Turn signal switch RH	 JPMIA0036GB 1.3V
					Front wiper switch LO	 JPMIA0038GB 1.3V
					Front washer switch ON	 JPMIA0039GB 1.3V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
96 (P/B)	Ground	Combination switch INPUT 4	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	 JPMIA0041GB 1.4V
					Lighting switch AUTO (Wiper intermittent dial 4)	 JPMIA0038GB 1.3V
					Lighting switch 1ST (Wiper intermittent dial 4)	 JPMIA0036GB 1.3V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	 JPMIA0039GB 1.3V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
97 (R/B)	Ground	Combination switch INPUT 2	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF	 JPMIA0041GB 1.4V
					Lighting switch flash-to-pass	 JPMIA0037GB 1.3V
					Lighting switch 2ND	 JPMIA0036GB 1.3V
					Front wiper switch INT	 JPMIA0038GB 1.3V
					Front wiper switch HI	 JPMIA0040GB 1.3V
98 (G/O)	Ground	Hazard switch	Input	Hazard switch	Pressed	0 V
					Not pressed	 JPMIA0012GB 1.1V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
103 (V)	Ground	Trunk lid opening.	Output	Trunk lid	Open (trunk lid opener actuator is activated)	Battery voltage
					Close (trunk lid opener actuator is not activated)	0V
110 (V/W)	Ground	Trunk room lamp	Output	Trunk room lamp	ON	0V
					OFF	Battery voltage
114 (B)	Ground	Trunk room antenna 1 (-)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
115 (W)	Ground	Trunk room antenna 1 (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
118 (L/O)	Ground	Rear bumper antenna (-)	Output	When the trunk lid request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
119 (BR/ W)	Ground	Rear bumper antenna (+)	Output	When the trunk lid request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
127 (BR/ W)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	Battery voltage
					ON	0V
130 (W)	Ground	Trunk room lamp switch	Input	Trunk room lamp switch	OFF (trunk is closed)	 JPMIA0011GB 11.8V
					ON (trunk is open)	0V
132 (R)	Ground	Starter motor relay control	Output	Ignition switch ON	When selector lever is in P or N position and the brake is depressed	Battery voltage
					When selector lever is in P or N position and the brake is not depressed	0V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
140 (BR)	Ground	Engine switch (push switch)	Input	Engine switch (push switch)	Pressed	0V
					Not pressed	Battery voltage
141 (BR)	Ground	Trunk opener request switch	Input	Trunk opener request switch	ON (pressed)	0V
					OFF (not pressed)	 JPMIA0016GB 1.0V
144 (GR)	Ground	Request switch buzzer	Output	Request switch buzzer	Sounding	0V
					Not sounding	Battery voltage
147 (L/R)	Ground	Trunk lid opener switch	Input	Trunk lid opener switch	Pressed	0V
					Not pressed	Battery voltage
148 (R/W)	Ground	Rear door RH switch	Input	Rear door RH switch	OFF (when rear door RH closes)	 JPMIA0011GB 11.8V
					ON (when rear door RH opens)	0V
149 (R/B)	Ground	Rear door LH switch	Input	Rear door LH switch	OFF (when rear door LH closes)	 JPMIA0011GB 11.8V
					ON (when rear door LH opens)	0V

Fail Safe

INFOID:0000000010068749

Display contents of CONSULT	Fail-safe	Cancellation
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI-SCANNING	Inhibit engine cranking	Erase DTC
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent • Starter control relay signal • Starter relay status signal

Display contents of CONSULT	Fail-safe	Cancellation
B2562: LO VOLTAGE	Inhibit engine cranking	100 ms after the power supply voltage increases to more than 8.8 V
B2608: STARTER RELAY	Inhibit engine cranking	500 ms after the following signal communication status becomes consistent • Starter motor relay control signal • Starter relay status signal (CAN)
B260A: IGNITION RELAY	Inhibit engine cranking	500 ms after the following conditions are fulfilled • IGN relay (IPDM E/R) control signal: OFF (Battery voltage) • Ignition ON signal (CAN to IPDM E/R): OFF (Request signal) • Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions is fulfilled • Power position changes to ACC • Receives engine status signal (CAN)
B2617: STARTER RELAY CIRC	Inhibit engine cranking	1 second after the starter motor relay control inside BCM becomes normal
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM becomes normal
B26E1: ENG STATE NO RECIV	Inhibit engine cranking	When any of the following conditions are fulfilled • Power position changes to ACC • Receives engine status signal (CAN)

DTC Inspection Priority Chart

INFOID:0000000010068750

If some DTCs are displayed at the same time, perform inspections one by one based on the following priority chart.

Priority	DTC
1	• B2562: LO VOLTAGE
2	• U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN)
3	• B2190: NATS ANTENNA AMP • B2191: DIFFERENCE OF KEY • B2192: ID DISCORD BCM-ECM • B2193: CHAIN OF BCM-ECM
4	• B2553: IGNITION RELAY • B2555: STOP LAMP • B2556: PUSH-BTN IGN SW • B2557: VEHICLE SPEED • B2560: STARTER CONT RELAY • B2601: SHIFT POSITION • B2602: SHIFT POSITION • B2603: SHIFT POSI STATUS • B2604: PNP SWITCH • B2605: PNP SWITCH • B2608: STARTER RELAY • B260A: IGNITION RELAY • B260F: ENG STATE SIG LOST • B2614: ACC RELAY CIRC • B2615: BLOWER RELAY CIRC • B2616: IGN RELAY CIRC • B2617: STARTER RELAY CIRC • B2618: BCM • B261A: PUSH-BTN IGN SW • B26E1: ENG STATE NO RECIV • C1729: VHCL SPEED SIG ERR • U0415: VEHICLE SPEED SIG

Priority	DTC
5	• C1704: LOW PRESSURE FL • C1705: LOW PRESSURE FR • C1706: LOW PRESSURE RR • C1707: LOW PRESSURE RL • C1708: [NO DATA] FL • C1709: [NO DATA] FR • C1710: [NO DATA] RR • C1711: [NO DATA] RL • C1712: [CHECKSUM ERR] FL • C1713: [CHECKSUM ERR] FR • C1714: [CHECKSUM ERR] RR • C1715: [CHECKSUM ERR] RL • C1716: [PRESSDATA ERR] FL • C1717: [PRESSDATA ERR] FR • C1718: [PRESSDATA ERR] RR • C1719: [PRESSDATA ERR] RL • C1720: [CODE ERR] FL • C1721: [CODE ERR] FR • C1722: [CODE ERR] RR • C1723: [CODE ERR] RL • C1724: [BATT VOLT LOW] FL • C1725: [BATT VOLT LOW] FR • C1726: [BATT VOLT LOW] RR • C1727: [BATT VOLT LOW] RL • C1734: CONTROL UNIT
6	• B2622: INSIDE ANTENNA • B2623: INSIDE ANTENNA

DTC Index

INFOID:0000000010068751

NOTE:

Details of time display

- CRNT: Displays when there is a malfunction now or after returning to the normal condition until turning ignition switch OFF → ON again.
- 1 - 39: Displayed if any previous malfunction is present when current condition is normal. It increases 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The counter remains at 39 even if the number of cycles exceeds it. It is counted from 1 again when turning ignition switch OFF → ON after returning to the normal condition if the malfunction is detected again.

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	—	—	—	—
U1000: CAN COMM CIRCUIT	—	—	—	BCS-32
U1010: CONTROL UNIT (CAN)	—	—	—	BCS-33
U0415: VEHICLE SPEED SIG	—	—	—	BCS-34
B2190: NATS ANTENNA AMP	×	—	—	SEC-37
B2191: DIFFERENCE OF KEY	×	—	—	SEC-40
B2192: ID DISCORD BCM-ECM	×	—	—	SEC-41
B2193: CHAIN OF BCM-ECM	×	—	—	SEC-42
B2553: IGNITION RELAY	—	—	—	PCS-46
B2555: STOP LAMP	—	—	—	SEC-43
B2556: PUSH-BTN IGN SW	—	×	—	SEC-46
B2557: VEHICLE SPEED	×	×	—	SEC-48
B2560: STARTER CONT RELAY	×	×	—	SEC-49

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2562: LOW VOLTAGE	—	—	—	BCS-35
B2601: SHIFT POSITION	×	×	—	SEC-50
B2602: SHIFT POSITION	×	×	—	SEC-53
B2603: SHIFT POSI STATUS	×	×	—	SEC-56
B2604: PNP SWITCH	×	×	—	SEC-59
B2605: PNP SWITCH	×	×	—	SEC-61
B2608: STARTER RELAY	×	×	—	SEC-63
B260A: IGNITION RELAY	×	×	—	PCS-48
B260F: ENG STATE SIG LOST	×	×	—	SEC-65
B2614: ACC RELAY CIRC	—	×	—	PCS-50
B2615: BLOWER RELAY CIRC	—	×	—	PCS-53
B2616: IGN RELAY CIRC	—	×	—	PCS-56
B2617: STARTER RELAY CIRC	×	×	—	SEC-67
B2618: BCM	×	×	—	PCS-59
B261A: PUSH-BTN IGN SW	—	×	—	PCS-60
B2622: INSIDE ANTENNA	—	—	—	DLK-60
B2623: INSIDE ANTENNA	—	—	—	DLK-63
B26E1: ENG STATE NO RES	×	×	—	SEC-66
C1704: LOW PRESSURE FL	—	—	×	WT-43
C1705: LOW PRESSURE FR	—	—	×	WT-43
C1706: LOW PRESSURE RR	—	—	×	WT-43
C1707: LOW PRESSURE RL	—	—	×	WT-43
C1708: [NO DATA] FL	—	—	×	WT-13
C1709: [NO DATA] FR	—	—	×	WT-13
C1710: [NO DATA] RR	—	—	×	WT-13
C1711: [NO DATA] RL	—	—	×	WT-13
C1712: [CHECKSUM ERR] FL	—	—	×	WT-15
C1713: [CHECKSUM ERR] FR	—	—	×	WT-15
C1714: [CHECKSUM ERR] RR	—	—	×	WT-15
C1715: [CHECKSUM ERR] RL	—	—	×	WT-15
C1716: [PRESSDATA ERR] FL	—	—	×	WT-17
C1717: [PRESSDATA ERR] FR	—	—	×	WT-17
C1718: [PRESSDATA ERR] RR	—	—	×	WT-17
C1719: [PRESSDATA ERR] RL	—	—	×	WT-17
C1720: [CODE ERR] FL	—	—	×	WT-15
C1721: [CODE ERR] FR	—	—	×	WT-15
C1722: [CODE ERR] RR	—	—	×	WT-15
C1723: [CODE ERR] RL	—	—	×	WT-15
C1724: [BATT VOLT LOW] FL	—	—	×	WT-15
C1725: [BATT VOLT LOW] FR	—	—	×	WT-15
C1726: [BATT VOLT LOW] RR	—	—	×	WT-15
C1727: [BATT VOLT LOW] RL	—	—	×	WT-15

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
C1729: VHCL SPEED SIG ERR	—	—	×	WT-19
C1734: CONTROL UNIT	—	—	×	WT-20

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

Reference Value

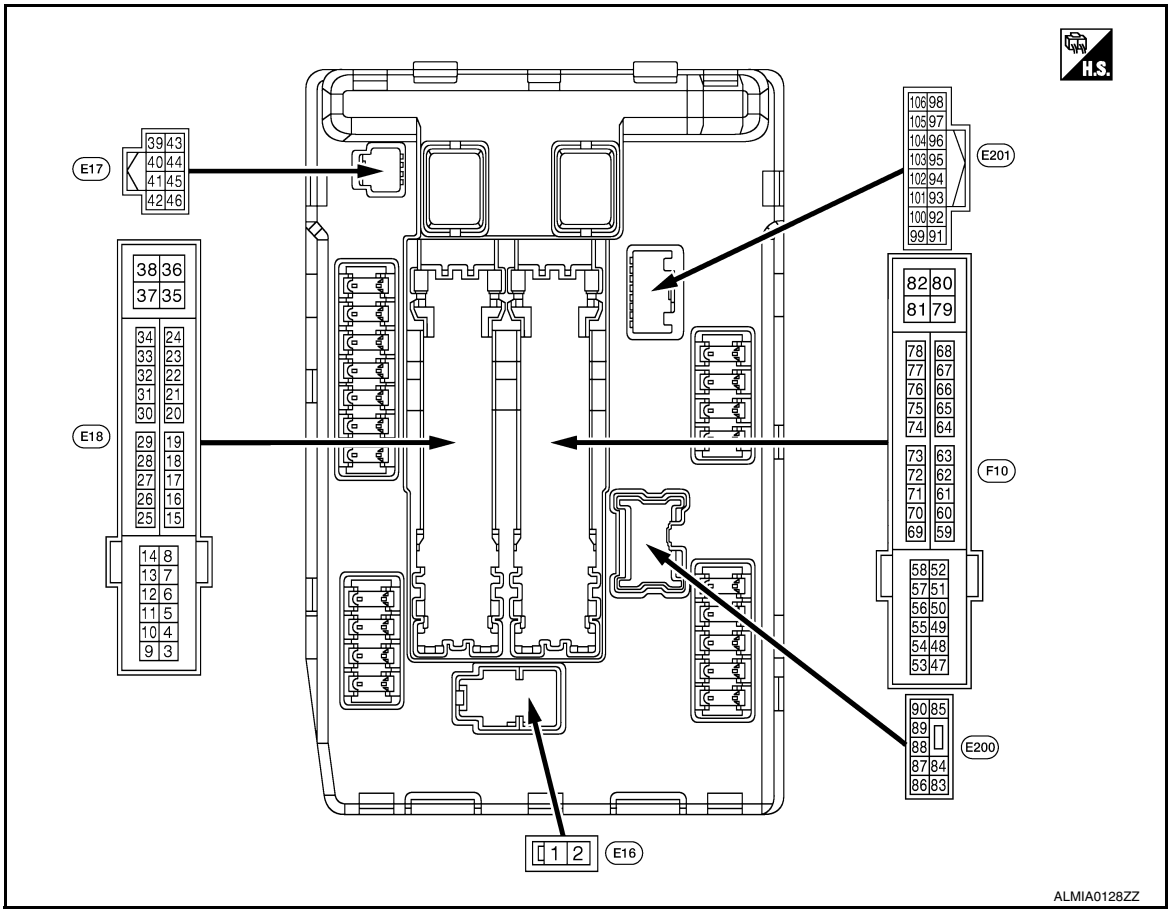
INFOID:0000000010068752

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition		Value/Status
MOTOR FAN REQ	Engine idle speed	Changes depending on engine coolant temperature, air conditioner operation status, vehicle speed, etc.	1,2,3,4
AC COMP REQ	Engine running	A/C switch OFF	Off
		A/C switch ON (Compressor is operating)	On
TAIL&CLR REQ	Lighting switch OFF		Off
	Lighting switch 1ST, 2ND, HI or AUTO (Light is illuminated)		On
HL LO REQ	Lighting switch OFF		Off
	Lighting switch 2ND HI or AUTO (Light is illuminated)		On
HL HI REQ	Lighting switch OFF		Off
	Lighting switch HI		On
FR FOG REQ	Lighting switch 2ND or AUTO (Light is illuminated)	Front fog lamp switch OFF	Off
		• Front fog lamp switch ON • Daytime running light activated (Only for Canada models)	On
FR WIP REQ	Ignition switch ON	Front wiper switch OFF	STOP
		Front wiper switch INT	1LOW
		Front wiper switch LO	Low
		Front wiper switch HI	Hi
WIP AUTO STOP	Ignition switch ON	Front wiper stop position	STOP P
		Any position other than front wiper stop position	ACT P
WIP PROT	Ignition switch ON	Front wiper operates normally	Off
		Front wiper stops at fail-safe operation	BLOCK
IGN RLY1 -REQ	Ignition switch OFF or ACC		Off
	Ignition switch ON		On
IGN RLY	Ignition switch OFF or ACC		Off
	Ignition switch ON		On
PUSH SW	Release the push-button ignition switch		Off
	Press the push-button ignition switch		On
INTER/NP SW	Ignition switch ON	CVT selector lever in any position other than P or N	Off
	Ignition switch ON	CVT selector lever in P or N position	On
ST RLY CONT	Ignition switch ON		Off
	At engine cranking		On
IHBT RLY -REQ	Ignition switch ON		Off
	At engine cranking		On

Monitor Item	Condition		Value/Status
ST/INHI RLY	Ignition switch ON		Off
	At engine cranking		ST →INHI
	The status of starter relay or starter control relay cannot be recognized by the battery voltage malfunction, etc. when the starter relay is ON and the starter control relay is OFF		UNKWN
DETENT SW	Ignition switch ON	• Press the selector button with CVT selector lever in P position • CVT selector lever in any position other than P	Off
	Release the CVT selector button with CVT selector lever in P position		On
DTRL -REQ	DTRL ON		On
	DTRL OFF		Off
OIL P SW	Ignition switch OFF, ACC or engine running		Open
	Ignition switch ON		Close
THFT HRN REQ	Not operated		Off
	• Panic alarm is activated • Horn is activated with VEHICLE SECURITY (THEFT WARNING) SYSTEM		On
HORN CHIRP	Not operated		Off
	Door locking with Intelligent Key (horn chirp mode)		On

TERMINAL LAYOUT

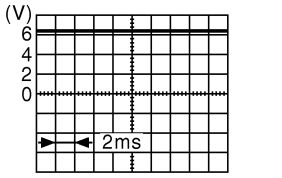
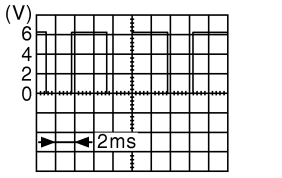
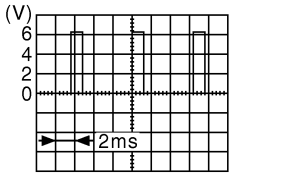


PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
		Signal name	Input/ Output			
+	–					
1 (R)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (L)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
4 (LG)	Ground	Front wiper LO	Output	Ignition switch ON	Front wiper switch OFF	0 V
					Front wiper switch LO	Battery voltage
5 (Y)	Ground	Front wiper HI	Output	Ignition switch ON	Front wiper switch OFF	0 V
					Front wiper switch HI	Battery voltage
6 (L)	Ground	Daytime light relay power supply (Canada models only)	Output	Ignition switch OFF		Battery voltage
7 (GR)	Ground	Tail, license plate lamps & interior lamps	Output	Ignition switch ON	Lighting switch OFF	0 V
					Lighting switch 1ST	Battery voltage
10 (BR)	Ground	ECM relay power supply	Output	Ignition switch OFF (For a few seconds after turning ignition switch OFF)		0 V
				• Ignition switch ON • Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		Battery voltage
12 (B)	Ground	Ground	—	Ignition switch ON		0 V
13 (SB)	Ground	Fuel pump power supply	Output	Approximately 1 second or more after turning the ignition switch ON		0 V
				• Approximately 1 second after turning the ignition switch ON • Engine running		Battery voltage
15 (W)	Ground	Ignition relay-1 power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
16 (R)	Ground	Front wiper auto stop	Input	Ignition switch ON	Front wiper stop position	0 V
					Any position other than front wiper stop position	Battery voltage
19 (Y)	Ground	Ignition relay-1 power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
20 (L)	Ground	Ambient sensor ground	—	Ignition switch ON		0V
21 (LG)	Ground	Ambient sensor	—	Ignition switch ON		5V
22 (SB)	Ground	Refrigerant pressure sensor ground	—	Ignition switch ON		0V
23 (GR)	Ground	Refrigerant pressure sensor	—	• Ignition switch ON (READY) • Both A/C switch and blower motor switch ON (electric compressor operates)		1.0 - 4.0V
24 (G)	Ground	Refrigerant pressure sensor power supply	—	Ignition switch ON		5V
25 (GR)	Ground	Ignition relay-1 power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
27 (W)	Ground	Ignition relay monitor	Input	Ignition switch OFF or ACC		Battery voltage
				Ignition switch ON		0 V
28 (SB)	Ground	Push-button ignition switch	Input	Press the push-button ignition switch		0 V
				Release the push-button ignition switch		Battery voltage
30 (BR)	Ground	Starter relay control	Input	CVT selector lever in any position other than P or N (ignition switch ON)		0 V
				CVT selector lever P or N (ignition switch ON)		Battery voltage
34 (O)	Ground	Cooling fan relay-3 control	Input	Ignition switch OFF or ACC		0 V
				Ignition switch ON		0.7 V
35 (P)	Ground	Cooling fan motor control	Output	Ignition switch OFF or ACC		0 V
				Ignition switch ON		0.7 V
36 (G)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
38 (GR)	Ground	Cooling fan motor control	Output	Ignition switch OFF or ACC		0 V
				Ignition switch ON		0.7 V
39 (P)	—	CAN - L	Input/ Output	—		—
40 (L)	—	CAN - H	Input/ Output	—		—
41 (B)	Ground	Ground	—	Ignition switch ON		0 V
42 (SB)	Ground	Cooling fan relay-2 control	Input	Ignition switch OFF or ACC		0 V
				Ignition switch ON		0.7 V
43 (Y)	Ground	CVT shift selector (Detention switch)	Input	Ignition switch ON	Press the CVT selector button (CVT selector lever P)	Battery voltage
					• CVT selector lever in any position other than P • Release the CVT selector button (CVT selector lever P)	0 V
44 (W)	Ground	Horn relay control	Input	The horn is deactivated		Battery voltage
				The horn is activated		0 V
45 (GR)	Ground	Anti theft horn relay control	Input	The horn is deactivated		Battery voltage
				The horn is activated		0 V
46 (BR)	Ground	Starter relay control	Input	CVT selector lever in any position other than P or N (ignition switch ON)		0 V
				CVT selector lever P or N (ignition switch ON)		Battery voltage
48 (W)	Ground	A/C relay power supply	Output	Engine running	A/C switch OFF	0 V
					A/C switch ON (A/C compressor is operating)	Battery voltage

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
49 (R/B)	Ground	ECM relay power supply	Output	Ignition switch OFF (For a few seconds after turning ignition switch OFF)		0 V
				• Ignition switch ON • Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		Battery voltage
51 (LG)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
52 (Y/G)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
53 (R/W)	Ground	ECM relay power supply	Output	Ignition switch OFF (For a few seconds after turning ignition switch OFF)		0 V
				• Ignition switch ON • Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		Battery voltage
54 (G/W)	Ground	Throttle control motor relay power supply	Output	Ignition switch OFF (For a few seconds after turning ignition switch OFF)		0 V
				• Ignition switch ON • Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		Battery voltage
55 (W/L)	Ground	ECM power supply	Output	Ignition switch OFF		Battery voltage
56 (R/Y)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
57 (O)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
58 (Y)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
69 (W/B)	Ground	ECM relay control	Output	Ignition switch OFF (For a few seconds after turning ignition switch OFF)		Battery voltage
				• Ignition switch ON • Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		0 - 1.5 V
70 (O)	Ground	Throttle control motor relay control	Output	Ignition switch ON → OFF		0 -1.0 V ↓ Battery voltage ↓ 0 V
				Ignition switch ON		0 - 1.0 V
72 (R/B)	Ground	Transmission range switch signal	Input	Ignition switch ON	CVT selector lever in P or N position	Battery voltage
					CVT selector lever in any position other than P or N position	0 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
75 (LG)	Ground	Oil pressure switch	Input	Ignition switch ON	Engine stopped	0 V
					Engine running	Battery voltage
76 (SB)	Ground	Power generation command signal	Output	Ignition switch ON		 JPMIA0001GB 6.3 V
				40% is set on “Active test”, “ALTERNATOR DUTY” of “ENGINE”		 JPMIA0002GB 3.8 V
				80% is set on “Active test”, “ALTERNATOR DUTY” of “ENGINE”		 JPMIA0003GB 1.4 V
77 (GR)	Ground	Fuel pump relay control	Output	• Approximately 1 second after turning the ignition switch ON • Engine running		0 - 1.0 V
				Approximately 1 second or more after turning the ignition switch ON		Battery voltage
80 (B)	Ground	Starter motor	Output	At engine cranking		Battery voltage
83 (R/Y)	Ground	Headlamp LO (RH)	Output	Ignition switch ON	Lighting switch OFF	0 V
					Lighting switch 2ND	Battery voltage
84 (L)	Ground	Headlamp LO (LH)	Output	Ignition switch ON	Lighting switch OFF	0 V
					Lighting switch 2ND	Battery voltage
86 (W/R)	Ground	Front fog lamp (RH)	Output	Lighting switch 2ND	• Front fog lamp switch ON • Daytime running light activated (Only for Canada models)	Battery voltage
					Front fog lamp switch OFF	0 V
87 (L/Y)	Ground	Front fog lamp (LH)	Output	Lighting switch 2ND	• Front fog lamp switch ON • Daytime running light activated (Only for Canada models)	Battery voltage
					Front fog lamp switch OFF	0 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
88 (R/W)	Ground	Washer pump power supply	Output	Ignition switch ON		Battery voltage
89 (L/W)	Ground	Headlamp HI (RH)	Output	Ignition switch ON	• Lighting switch HI • Lighting switch PASS	Battery voltage
					Lighting switch OFF	0 V
90 (G)	Ground	Headlamp HI (LH)	Output	Ignition switch ON	• Lighting switch HI • Lighting switch PASS	Battery voltage
					Lighting switch OFF	0 V
91 (LG/ R)	Ground	Parking lamp (RH)	Output	Ignition switch ON	Lighting switch 1ST	Battery voltage
		Side marker lamp (RH)			Lighting switch OFF	0 V
92 (LG/ B)	Ground	Parking lamp (LH)	Output	Ignition switch ON	Lighting switch 1ST	Battery voltage
		Side marker lamp (LH)			Lighting switch OFF	0 V
99 (BR/ W)	Ground	Ambient sensor ground	—	Ignition switch ON		0V
100 (SB)	Ground	Ambient sensor	—	Ignition switch ON		5V
101 (W)	Ground	Refrigerant pressure sensor ground	—	Ignition switch ON		0V
102 (R)	Ground	Refrigerant pressure sensor	—	• Ignition switch ON (READY) • Both A/C switch and blower motor switch ON (electric compressor operates)		1.0 - 4.0V
103 (P)	Ground	Refrigerant pressure sensor power supply	—	Ignition switch ON		5V
105 (V)	Ground	Daytime light relay control (Only for Canada models)	Output	Ignition switch ON	Daytime light system active	Battery voltage
				Ignition switch ON	Daytime light system inactive	0 V

Fail Safe

INFOID:0000000010068753

CAN COMMUNICATION CONTROL

When CAN communication with ECM and BCM is impossible, IPDM E/R performs fail-safe control. After CAN communication recovers normally, it also returns to normal control.

If No CAN Communication Is Available With ECM

Control part	Fail-safe in operation
Cooling fan	• Signals cooling fans ON when the ignition switch is turned ON • Signals cooling fans OFF when the ignition switch is turned OFF
A/C compressor	A/C relay OFF
Generator	Outputs the power generation command signal (PWM signal) 0%

If No CAN Communication Is Available With BCM

Control part	Fail-safe in operation
Headlamp	• Turns ON the headlamp low relay when the ignition switch is turned ON • Turns OFF the headlamp low relay when the ignition switch is turned OFF • Headlamp high relay OFF
• Parking lamps • Side marker lamps • License plate lamps • Illumination • Tail lamps	• Turns ON the tail lamp relay when the ignition switch is turned ON • Turns OFF the tail lamp relay when the ignition switch is turned OFF
Front wiper	• The status just before activation of fail-safe control is maintained until the ignition switch is turned OFF while the front wiper is operating at LO or HI speed. • The wiper is operated at LO speed until the ignition switch is turned OFF if the fail-safe control is activated while the front wiper is set in the INT mode and the front wiper motor is operating.
Front fog lamps (if equipped)	Front fog lamp relay OFF
Horn	Horn OFF
Ignition relay	The status just before activation of fail-safe is maintained.
Starter motor	Starter control relay OFF

IGNITION RELAY MALFUNCTION DETECTION FUNCTION

- IPDM E/R monitors the voltage at the contact circuit and excitation coil circuit of the ignition relay-1 inside it.
- IPDM E/R judges the ignition relay-1 error if the voltage differs between the contact circuit and the excitation coil circuit.
- If the ignition relay-1 cannot turn OFF due to contact seizure, it activates the tail lamp relay for 10 minutes to alert the user to the ignition relay-1 malfunction when the ignition switch is turned OFF.

DTC	Ignition switch	Ignition relay-1	Tail lamp relay
—	ON	ON	—
—	OFF	OFF	—
B2098: IGN RELAY ON	OFF	ON	ON (10 minutes)
B2099: IGN RELAY OFF	ON	OFF	—

NOTE:

The tail lamp turns OFF when the ignition switch is turned ON.

FRONT WIPER CONTROL

IPDM E/R detects front wiper stop position by a front wiper auto stop signal.
When a front wiper auto stop signal is in the conditions listed below, IPDM E/R stops power supply to wiper after repeating a front wiper 10 seconds activation and 20 seconds stop five times.

Ignition switch	Front wiper switch	Auto stop signal
ON	OFF	Front wiper stop position signal cannot be input 10 seconds.
	ON	The signal does not change for 10 seconds.

NOTE:

This operation status can be confirmed on the IPDM E/R “Data Monitor” that displays “BLOCK” for the item “WIP PROT” while the wiper is stopped.

STARTER MOTOR PROTECTION FUNCTION

IPDM E/R turns OFF the starter control relay to protect the starter motor when the starter control relay remains active for 90 seconds.

DTC Index

INFOID:0000000010068754

CONSULT display	Fail-safe	TIME[NOTE]		Refer to
No DTC is detected. further testing may be required.	—	—	—	—
U1000: CAN COMM CIRCUIT	×	CRNT	1 – 39	PCS-15
B2098: IGN RELAY ON	×	CRNT	1 – 39	PCS-16
B2099: IGN RELAY OFF	—	CRNT	1 – 39	PCS-17
B210B: START CONT RLY ON	—	CRNT	1 – 39	SEC-69
B210C: START CONT RLY OFF	—	CRNT	1 – 39	SEC-72
B210D: STARTER RELAY ON	—	CRNT	1 – 39	SEC-72
B210E: STARTER RELAY OFF	—	CRNT	1 – 39	SEC-74
B210F: INTRLCK/PNP SW ON	—	CRNT	1 – 39	SEC-76
B2110: INTRLCK/PNP SW OFF	—	CRNT	1 – 39	SEC-78

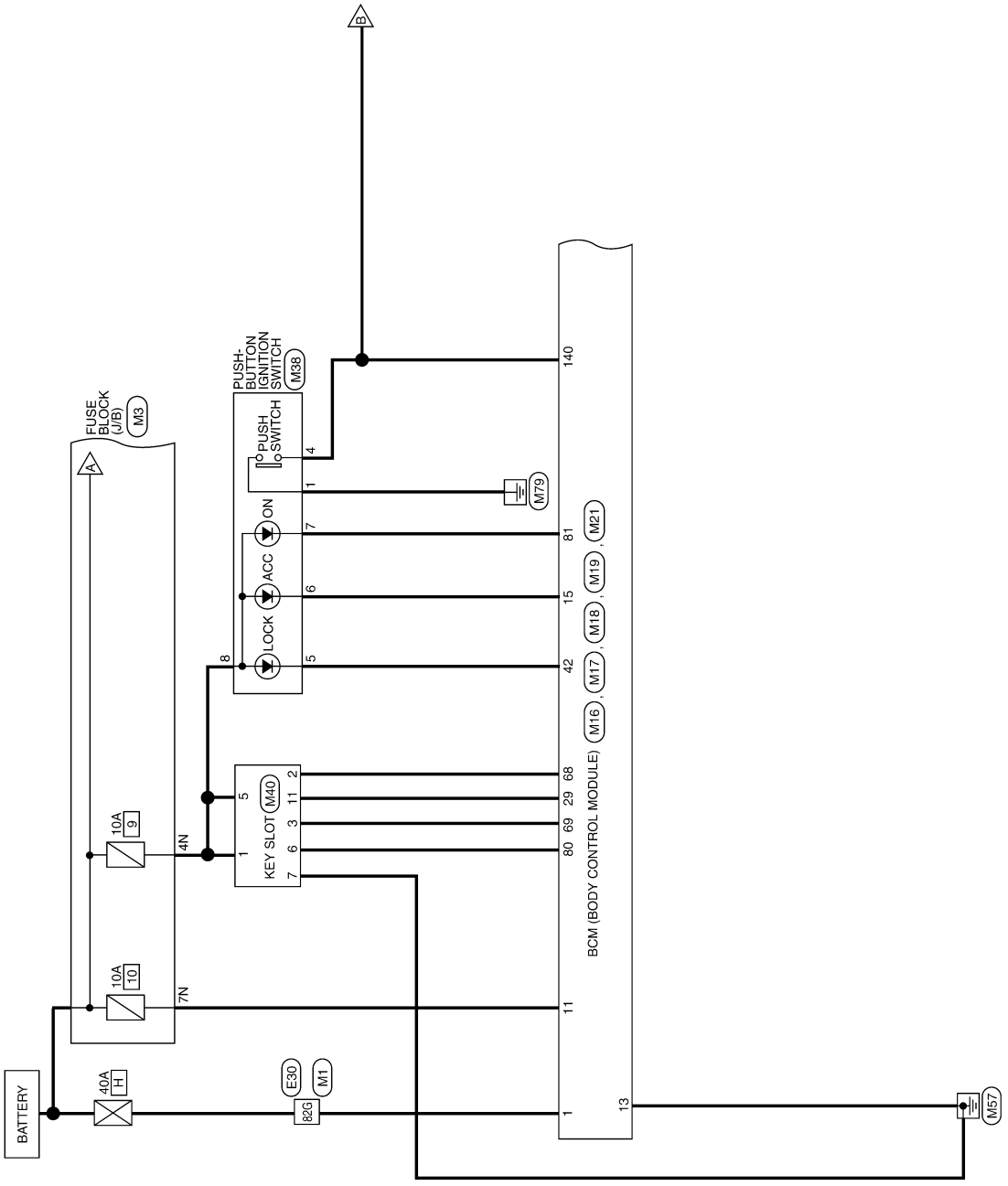
NOTE:
The details of TIME display are as follows.
- CRNT: The malfunctions that are detected now
- 1 - 39: The number is indicated when it is normal at present and a malfunction was detected in the past. It increases like 0 → 1 → 2 ··· 38 → 39 after returning to the normal condition whenever IGN OFF → ON. It is fixed to 39 until the self-diagnosis results are erased if it is over 39. It returns to 0 when a malfunction is detected again in the process.

WIRING DIAGRAM

NVIS

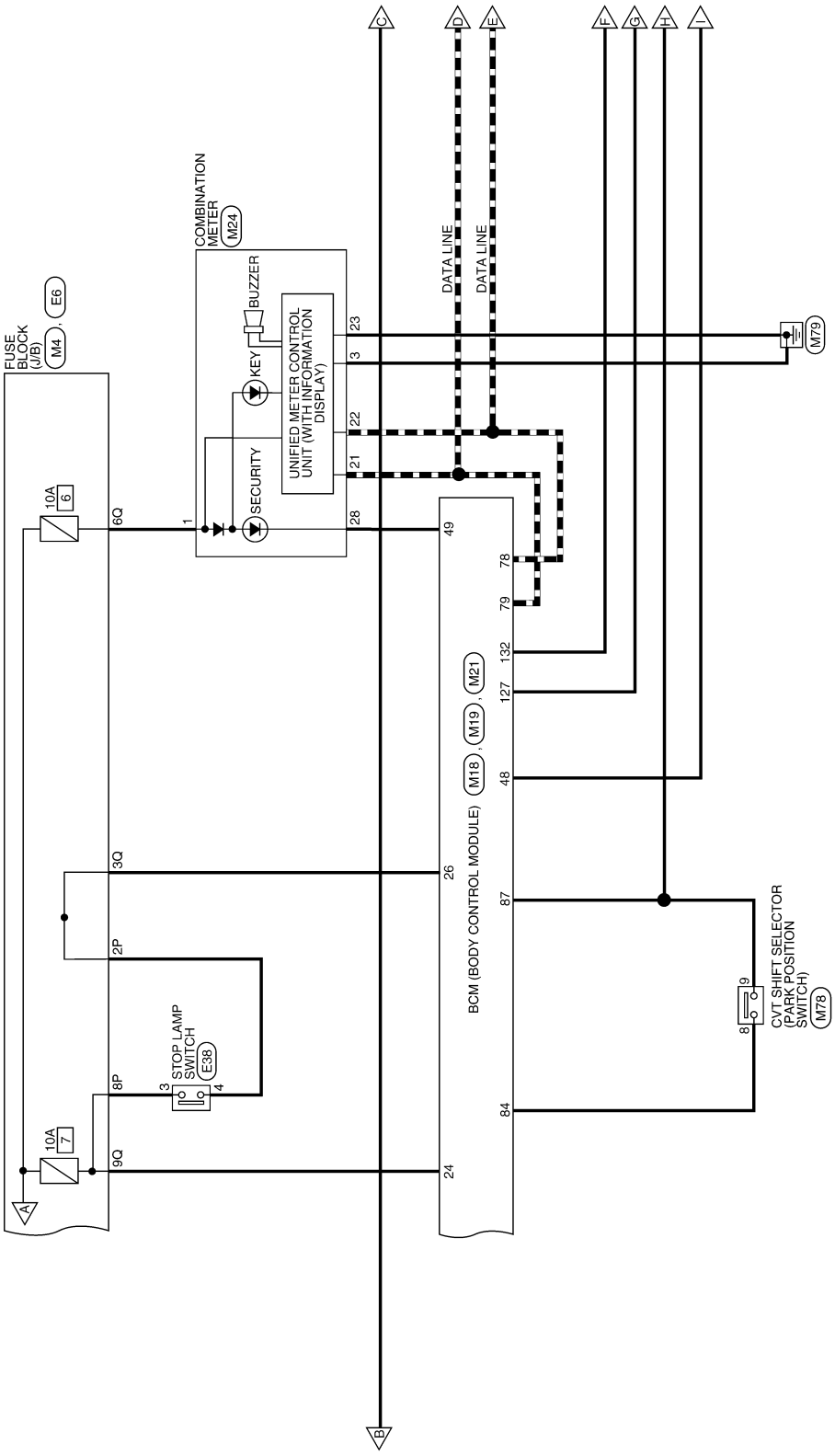
Wiring Diagram

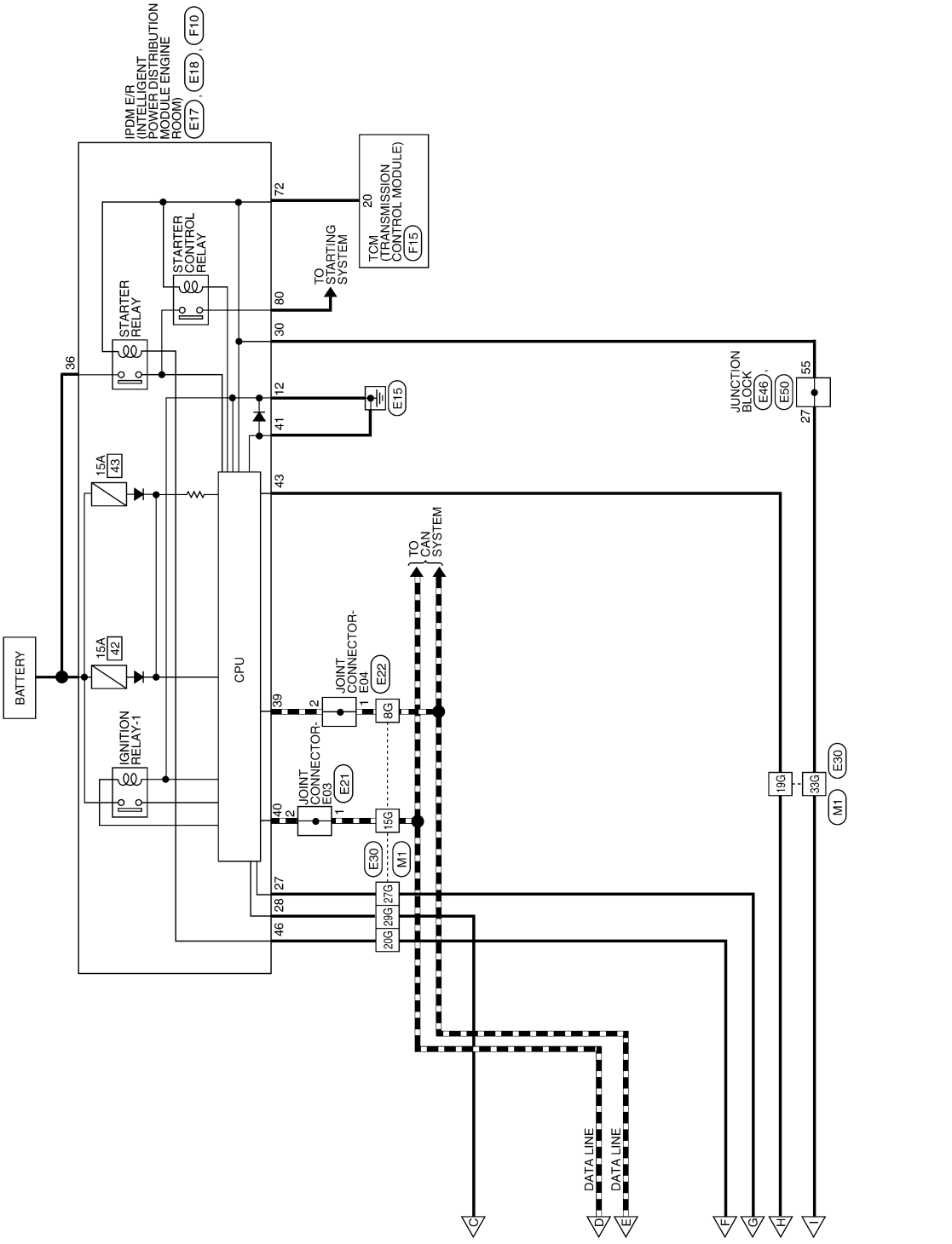
INFOID:0000000010052038



NVIS

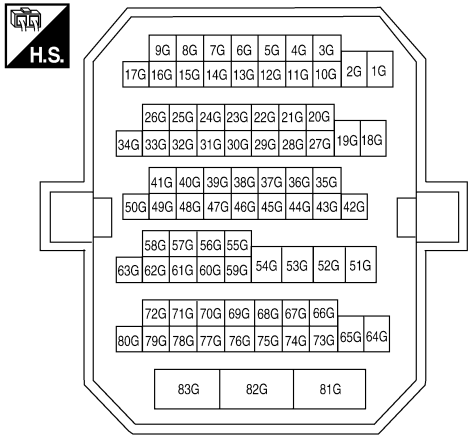
ABKWA1179GB


C
D
E
F
G
H
I
COMBINATION METER (M24)
BUZZER
KEY
SECURITY
UNIFIED METER CONTROL UNIT (WITH INFORMATION DISPLAY)
DATA LINE
DATA LINE
FUSE BLOCK (J/B) (M4), (E6)
10A 6
10A 7
6Q
3Q
2P
8P
9Q
STOP LAMP SWITCH (E38)
BCM (BODY CONTROL MODULE) (M18), (M19), (M21)
CVT SHIFT SELECTOR (PARK POSITION SWITCH) (M78)
(M79)
A
B
ABKWA2205GB


IPDM E/R
(INTELLIGENT
POWER DISTRIBUTION
MODULE ENGINE
ROOM)
E17, E18, F10
TCM
(TRANSMISSION
CONTROL MODULE)
F15
TO
STARTING
SYSTEM
STARTER
CONTROL
RELAY
STARTER
RELAY
JUNCTION
BLOCK
E46, E50
E15
15A
43
15A
42
IGNITION
RELAY-1
BATTERY
CPU
TO
CAN
SYSTEM
JOINT
CONNECTOR-
E04
E22
JOINT
CONNECTOR-
E03
E21
8G
15G
27G
29G
20G
19G
33G
E30
M1
DATA LINE
DATA LINE
C
D
E
F
G
H
I
ABKWA1826GB

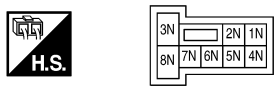
NVIS CONNECTORS

Connector No.	M1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



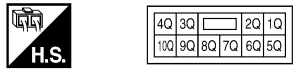
Terminal No.	Color of Wire	Signal Name
8G	P	–
15G	L	–
19G	G/B	–
20G	R	–
27G	BR/W	–
29G	BR	–
33G	R/G	–
82G	W/B	–

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4N	G/Y	–
7N	Y/R	–

Connector No.	M4
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

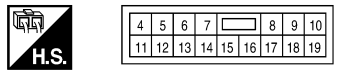


Terminal No.	Color of Wire	Signal Name
3Q	O/L	–
6Q	Y/R	–
9Q	R/W	–

Connector No.	M16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

Terminal No.	Color of Wire	Signal Name
1	W/B	BATT (F/L)

Connector No.	M17
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
11	Y/R	BAT BCM FUSE
13	B	GND1
15	Y/L	ACC LED

ABKIA3835GB

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

H.S.

39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20
59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40

Terminal No.	Color of Wire	Signal Name
24	R/W	BRAKE SW 1
26	O/L	BRAKE SW 2
29	Y	FOB IN SW 1
42	R	S/L LOCK LED
48	R/G	SHIFT N/P/NEUTRAL SW
49	L/O	IMMO LED (SECURITY INDICATOR)

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60
99	98	97	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81	80

Terminal No.	Color of Wire	Signal Name
68	G/O	FOB READER CLOCK
69	O	FOB READER DATA
78	P	CAN-L

Terminal No.	Color of Wire	Signal Name
79	L	CAN-H
80	R/L	FOB SLOT ILLUMINATION
81	LG	IGN ON LED
84	Y/R	AT DEVICE OUT
87	G/B	SHIFT P/ASCD CANCEL SW

Connector No.	M21
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY

H.S.

131	130	129	128	127	126	125	124	123	122	121	120	119	118	117	116	115	114	113	112
151	150	149	148	147	146	145	144	143	142	141	140	139	138	137	136	135	134	133	132

Terminal No.	Color of Wire	Signal Name
127	BR/W	IGN RELAY OUTPUT
132	R	ST RELAY OUTPUT
140	BR	ENG START SW

Connector No.	M24
Connector Name	COMBINATION METER
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	Y/R	BAT
3	B	GND (POWER)
21	L	CAN-H
22	P	CAN-L
23	B	GND (CIRCUIT)
28	L/O	SECURITY

Connector No.	M38
Connector Name	PUSH-BUTTON IGNITION SWITCH
Connector Color	BROWN

H.S.

1		2	3
4	5	6	7	8

Terminal No.	Color of Wire	Signal Name
1	B	–
4	BR	–
5	R	–
6	Y/L	–
7	LG	–
8	G/Y	–

ABKIA3836GB

Connector No.	M40
Connector Name	KEY SLOT
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	G/Y	–
2	G/O	–
3	O	–
5	G/Y	–
6	R/L	–
7	B	–
11	Y	–

Connector No.	M78
Connector Name	CVT SHIFT SELECTOR
Connector Color	WHITE

H.S.

1	3		7	9
2	4	5	6	8	10

Terminal No.	Color of Wire	Signal Name
8	Y/R	–
9	G/B	–

Connector No.	E6
Connector Name	FUSE BLOCK (J/B)
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
2P	LG	–
8P	R	–

Connector No.	E17
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

42	41	40	39
46	45	44	43

Terminal No.	Color of Wire	Signal Name
39	P	CAN-L
40	L	CAN-H
41	B	GND (SIGNAL)
43	Y	DETENT SW
46	BR	START CONT

Connector No.	E18
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

9	10	11	12	13	14
3	4	5	6	7	8

25	26	27	28	29	30	31	32	33	34	37	38
15	16	17	18	19	20	21	22	23	24	35	36

Terminal No.	Color of Wire	Signal Name
12	B	GND (POWER)
27	W	IGN SIGNAL
28	SB	PUSH START SW
30	BR	AT ECU
36	G	F/L IGNSW

ABKIA4889GB

Connector No.	E21
Connector Name	JOINT CONNECTOR-E03
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	L	–
2	L	–

Connector No.	E22
Connector Name	JOINT CONNECTOR-E04
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	P	–
2	P	–

Connector No.	E30
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
8G	P	–
15G	L	–
19G	Y	–
20G	BR	–
27G	W	–
29G	SB	–
33G	BR	–
82G	LG	–

Connector No.	E38
Connector Name	STOP LAMP SWITCH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
3	R	–
4	LG	–

ABKIA2753GB

Connector No.	E46
Connector Name	JUNCTION BLOCK
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
27	BR	–

Connector No.	E50
Connector Name	JUNCTION BLOCK
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
55	BR	–

Connector No.	F10
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
72	R/B	NP SW
80	B	STARTER MOTOR

Connector No.	F15
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Color	BLACK

H.S.

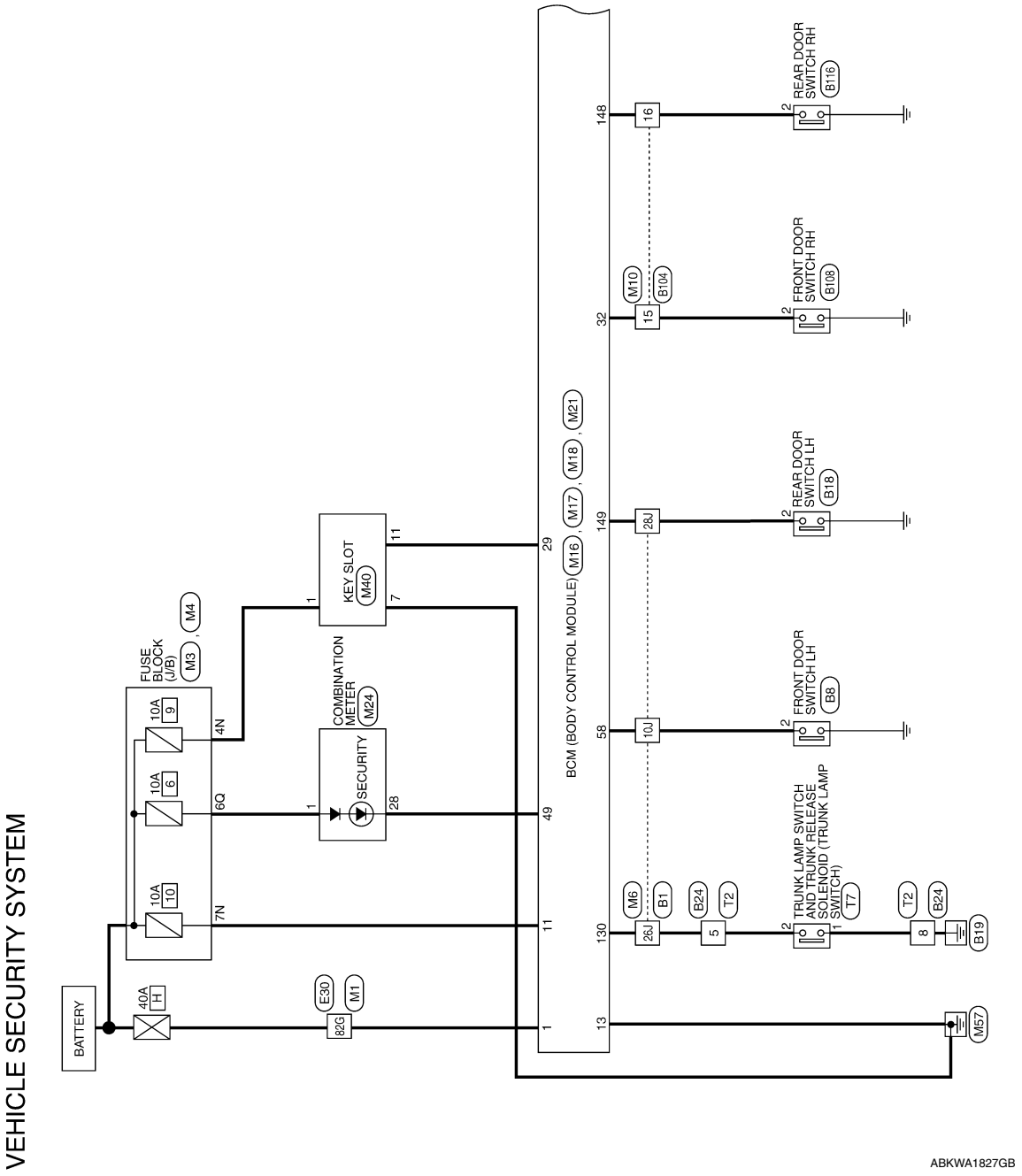
Terminal No.	Color of Wire	Signal Name
20	R/B	ST RLY

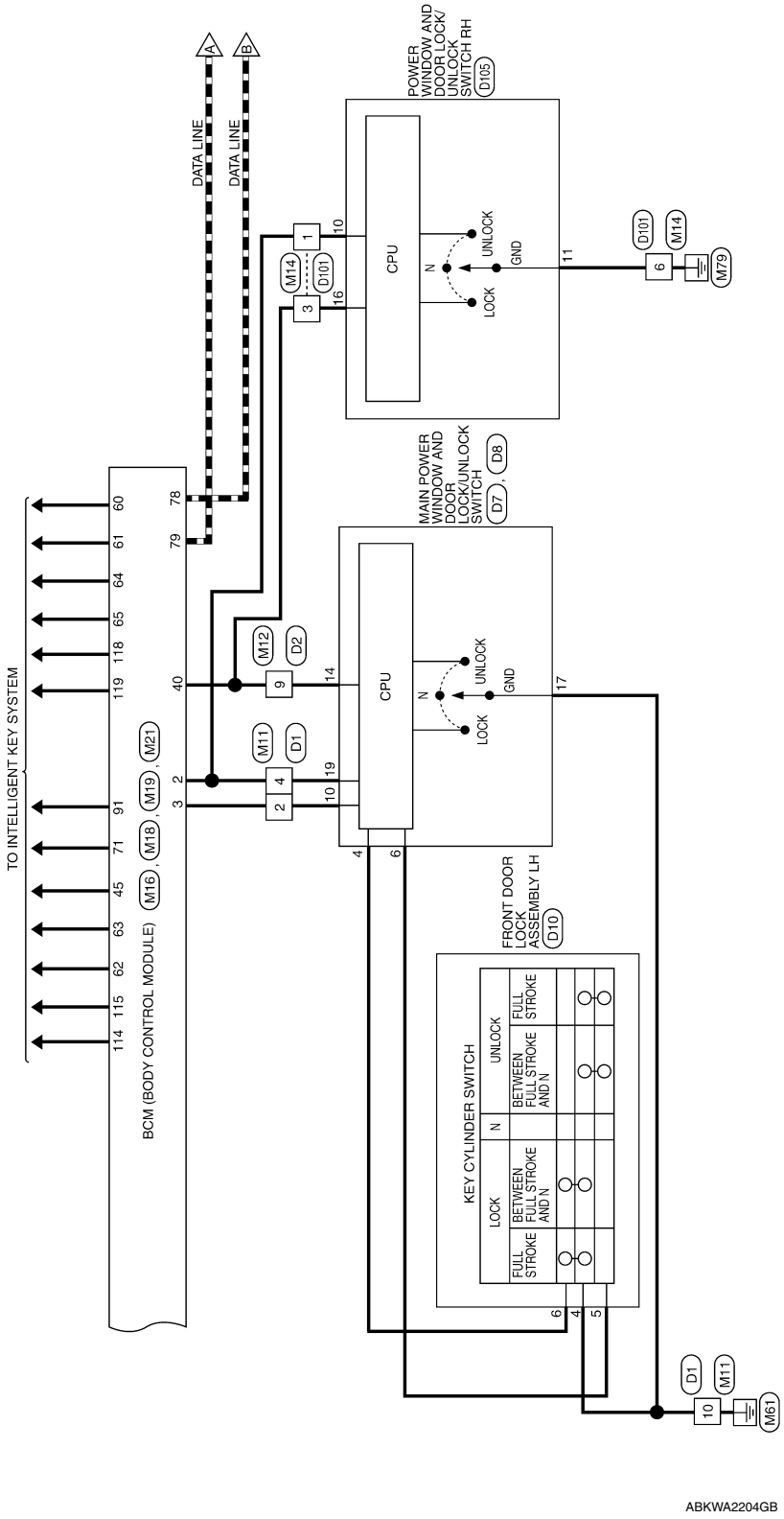
ABKIA2754GB

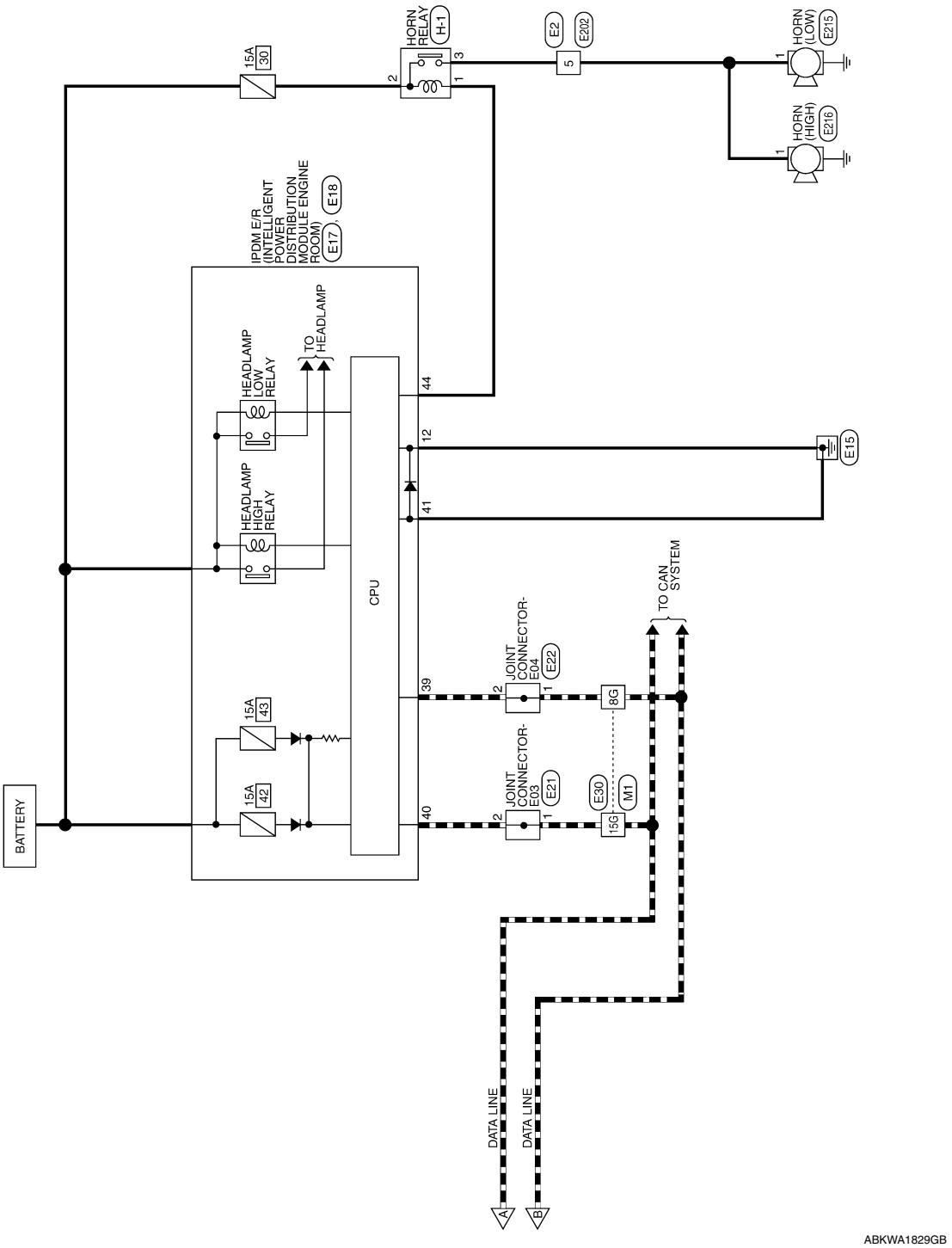
VEHICLE SECURITY SYSTEM

Wiring Diagram

INFOID:0000000010052039




TO INTELLIGENT KEY SYSTEM
BCM (BODY CONTROL MODULE) (M16), (M18), (M19), (M21)
DATA LINE
DATA LINE
POWER WINDOW AND DOOR LOCK/ UNLOCK SWITCH RH (D105)
MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH (D7), (D8)
FRONT DOOR LOCK ASSEMBLY LH (D10)
CPU
UNLOCK
LOCK
GND
KEY CYLINDER SWITCH
LOCK
N
UNLOCK
FULL STROKE
BETWEEN FULL STROKE AND N
ABKWA2204GB


HORN RELAY H-1
15A 30
E2
E202
5
HORN (LOW) E215
HORN (HIGH) E216
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) E17, E18
TO HEADLAMP
HEADLAMP LOW RELAY
HEADLAMP HIGH RELAY
CPU
44
12
41
E15
15A 43
15A 42
BATTERY
39
40
JOINT CONNECTOR-E04 E22
JOINT CONNECTOR-E03 E21
8G
15G
E30
M1
TO CAN SYSTEM
DATA LINE
DATA LINE
A
B
ABKWA1829GB

VEHICLE SECURITY SYSTEM CONNECTORS

Connector No.	M1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

9G	8G	7G	6G	5G	4G	3G	2G	1G
17G	16G	15G	14G	13G	12G	11G	10G	
26G	25G	24G	23G	22G	21G	20G	19G	18G
34G	33G	32G	31G	30G	29G	28G	27G	
41G	40G	39G	38G	37G	36G	35G		
50G	49G	48G	47G	46G	45G	44G	43G	42G
58G	57G	56G	55G					
63G	62G	61G	60G	59G	54G	53G	52G	51G
72G	71G	70G	69G	68G	67G	66G		
80G	79G	78G	77G	76G	75G	74G	73G	65G 64G
			83G		82G		81G	

Terminal No.	Color of Wire	Signal Name
8G	P	–
15G	L	–
82G	W/B	–

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.

3N	2N	1N
8N	7N	6N	5N	4N

Terminal No.	Color of Wire	Signal Name
4N	G/Y	–
7N	Y/R	–

Connector No.	M4
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
6Q	Y/R	–

ABKIA3838GB

Connector No.	M10
Connector Name	WIRE TO WIRE
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
15	R/B	–
16	R/W	–

Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

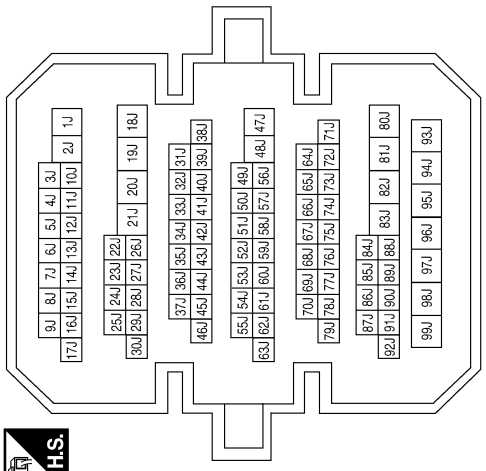
1	2		3	4
5	6	7	8	9	10

Terminal No.	Color of Wire	Signal Name
1	R/Y	–
3	Y/G	–
6	B	–

Terminal No.	Color of Wire	Signal Name
10J	SB	–
26J	W	–
28J	R/B	–

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Connector No.	M11
Connector Name	WIRE TO WIRE
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
2	L/W	–
4	R/Y	–
10	B	–

Connector No.	M12
Connector Name	WIRE TO WIRE
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
9	Y/G	–

ABKIA3840GB

Connector No.	M16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

1	3
2	

Terminal No.	Color of Wire	Signal Name
1	W/B	BATT (F/L)
2	R/Y	P/W POWER SUPPLY PERM
3	L/W	P/W POWER SUPPLY IGN

Connector No.	M17
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
11	Y/R	BAT BCM FUSE
13	B	GND1

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

H.S.

39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20
59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40

Terminal No.	Color of Wire	Signal Name
29	Y	FOB IN SW 1
32	R/B	AS DOOR SW 1
40	Y/G	PW K-LINE
45	P	GND RF2 A/L
49	L/O	IMMO LED (SECURITY INDICATOR)
58	SB	DR DOOR SW

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60
99	98	97	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81	80

Terminal No.	Color of Wire	Signal Name
60	B/R	ROOM ANT 2 B
61	W/R	ROOM ANT 2 A
62	V	AS DOOR ANT B
63	P	AS DOOR ANT A
64	V	DR DOOR ANT B

Connector No.	M21
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY

H.S.

131	130	129	128	127	126	125	124	123	122	121	120	119	118	117	116	115	114	113	112
151	150	149	148	147	146	145	144	143	142	141	140	139	138	137	136	135	134	133	132

Terminal No.	Color of Wire	Signal Name
65	P	DR DOOR ANT A
71	L/O	RF1 TUNER SIGNAL
78	P	CAN-L
79	L	CAN-H
91	L/R	RF POWER SUPPLY 12V

Terminal No.	Color of Wire	Signal Name
114	B	TRUNK ANT 1 B
115	W	TRUNK ANT 1 A
118	L/O	BACK DOOR ANT B
119	BR/W	BACK DOOR ANT A
130	W	TRUNK SW
148	R/W	RR DOOR SW
149	R/B	RL DOOR SW

ABKIA3839GB

Connector No.	M24
Connector Name	COMBINATION METER
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	Y/R	BAT
28	L/O	SECURITY

Connector No.	M40
Connector Name	KEY SLOT
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	G/Y	–
7	B	–
11	Y	–

Connector No.	E2
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3
4	5	6	7	8

Terminal No.	Color of Wire	Signal Name
5	O	–

Connector No.	E17
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

42	41	40	39
46	45	44	43

Terminal No.	Color of Wire	Signal Name
39	P	CAN-L
40	L	CAN-H
41	B	GND (SIGNAL)
44	W	HORN RLY

Connector No.	E18
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

9	10	11	12	13	14
3	4	5	6	7	8

25	26	27	28	29	30	31	32	33	34
15	16	17	18	19	20	21	22	23	24

37	38
35	36

Terminal No.	Color of Wire	Signal Name
12	B	GND (POWER)

Connector No.	E21
Connector Name	JOINT CONNECTOR-E03
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	L	–
2	L	–

ABKIA3841GB

Connector No.	E22
Connector Name	JOINT CONNECTOR-E04
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	P	–
2	P	–

Connector No.	E30
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
8G	P	–
15G	L	–
82G	LG	–

Connector No.	E202
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
5	G	–

Connector No.	E215
Connector Name	HORN (LOW)
Connector Color	BLACK

H.S.

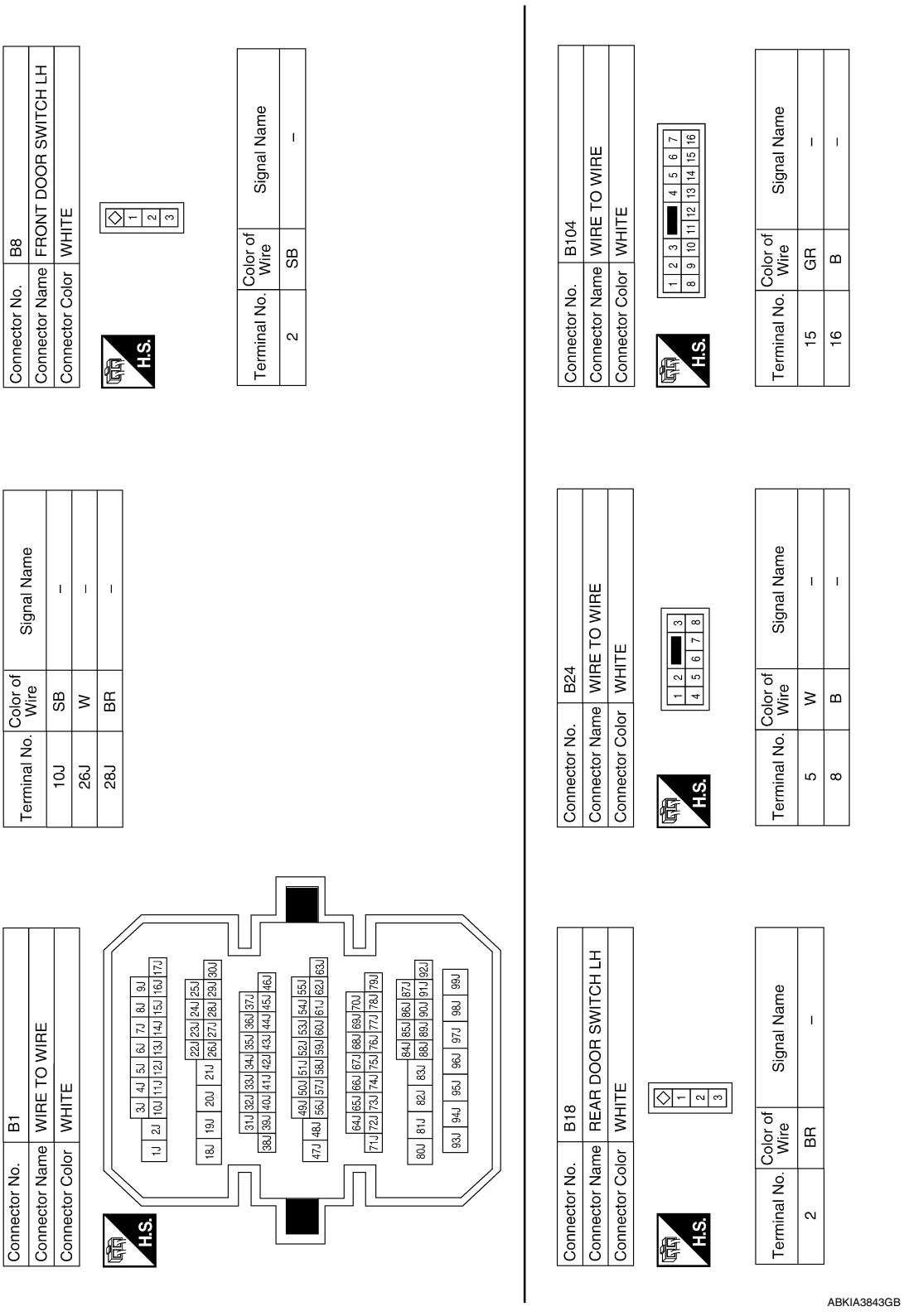
Terminal No.	Color of Wire	Signal Name
1	G	–

Connector No.	E216
Connector Name	HORN (HIGH)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	G	–

ABKIA3842GB


Connector No. B8
Connector Name FRONT DOOR SWITCH LH
Connector Color WHITE
H.S.
Terminal No. Color of Wire Signal Name
2 SB –
Connector No. B104
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
Terminal No. Color of Wire Signal Name
15 GR –
16 B –
Terminal No. Color of Wire Signal Name
10J SB –
26J W –
28J BR –
Connector No. B24
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
Terminal No. Color of Wire Signal Name
5 W –
8 B –
Connector No. B1
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
Connector No. B18
Connector Name REAR DOOR SWITCH LH
Connector Color WHITE
H.S.
Terminal No. Color of Wire Signal Name
2 BR –
ABKIA3843GB

Connector No.	B108
Connector Name	FRONT DOOR SWITCH RH
Connector Color	WHITE

H.S.

1	2
3	

Terminal No.	Color of Wire	Signal Name
2	GR	–

Connector No.	B116
Connector Name	REAR DOOR SWITCH RH
Connector Color	WHITE

H.S.

1
2
3

Terminal No.	Color of Wire	Signal Name
2	B	–

Connector No.	T2
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

3		2	1
8	7	6	5	4

Terminal No.	Color of Wire	Signal Name
5	W	–
8	B	–

Connector No.	T7
Connector Name	TRUNK LAMP SWITCH AND TRUNK RELEASE SOLENOID
Connector Color	WHITE

H.S.

1	2
3	4

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

Connector No.	D1
Connector Name	WIRE TO WIRE
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
2	V	–
4	R	–
10	B	–

Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
9	O	–

ABKIA3844GB

Connector No.	D7
Connector Name	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
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
4	L	LOCK
6	R	UNLOCK
10	V	IGN
14	O	COM

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

H.S.

17	18	19

Terminal No.	Color of Wire	Signal Name
17	B	GND
19	R	BAT

Connector No.	D10
Connector Name	FRONT DOOR LOCK ASSEMBLY LH
Connector Color	GRAY

H.S.

1	2	3	4	5	6

Terminal No.	Color of Wire	Signal Name
4	B	–
5	R	–
6	L	–

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

4	3		2	1
10	9	8	7	6	5

Terminal No.	Color of Wire	Signal Name
1	P	–
3	R	–
6	B	–

Connector No.	D105
Connector Name	POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH
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
10	P	BAT
11	B	GND
16	R	COM

Connector No.	H-1
Connector Name	FUSE AND FUSIBLE LINK BOX (HORN RELAY)
Connector Color	–

T.S.

Terminal No.	Color of Wire	Signal Name
1	W	–
2	SB	–
3	O	–

ABKIA3845GB

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

Wiring Diagram

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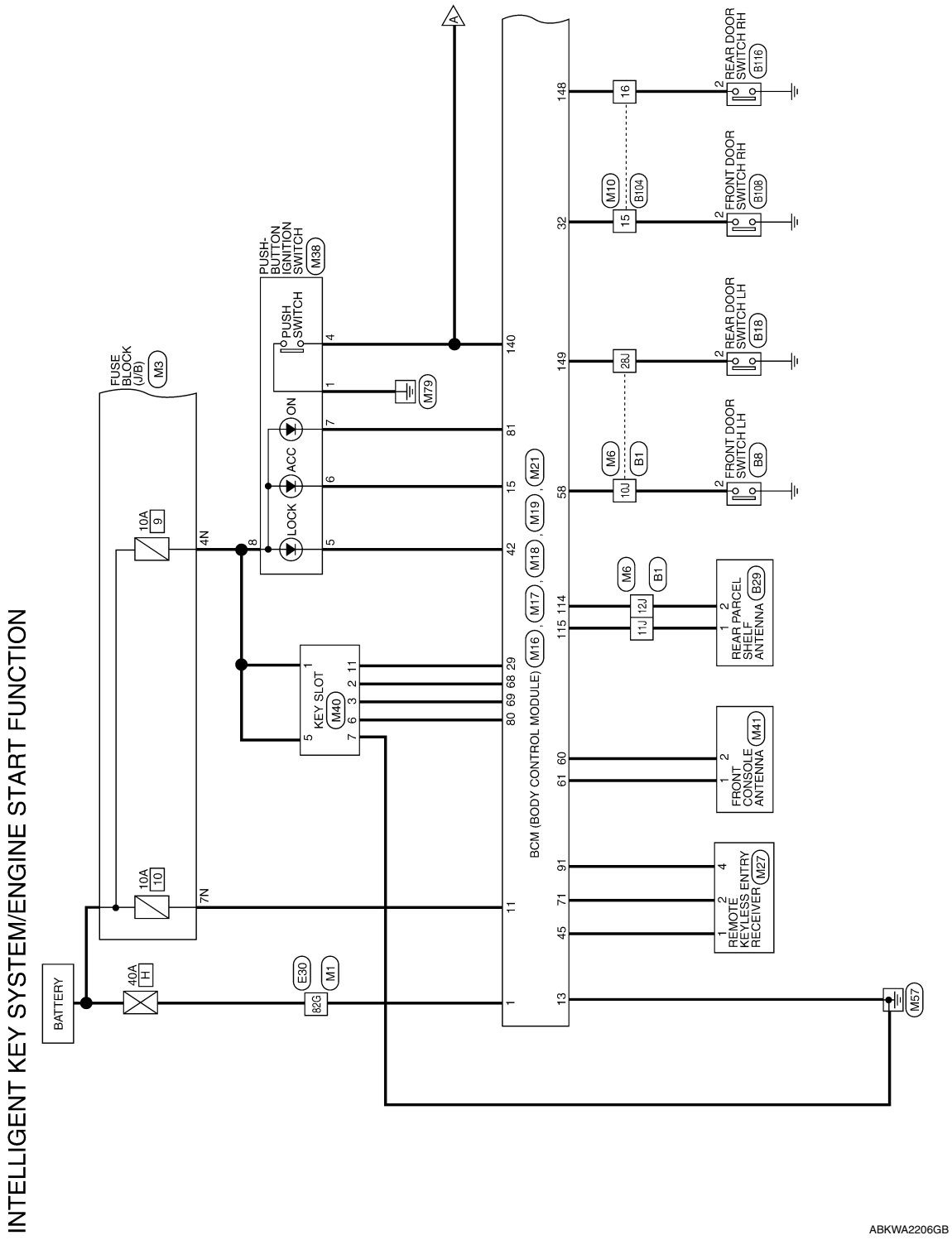
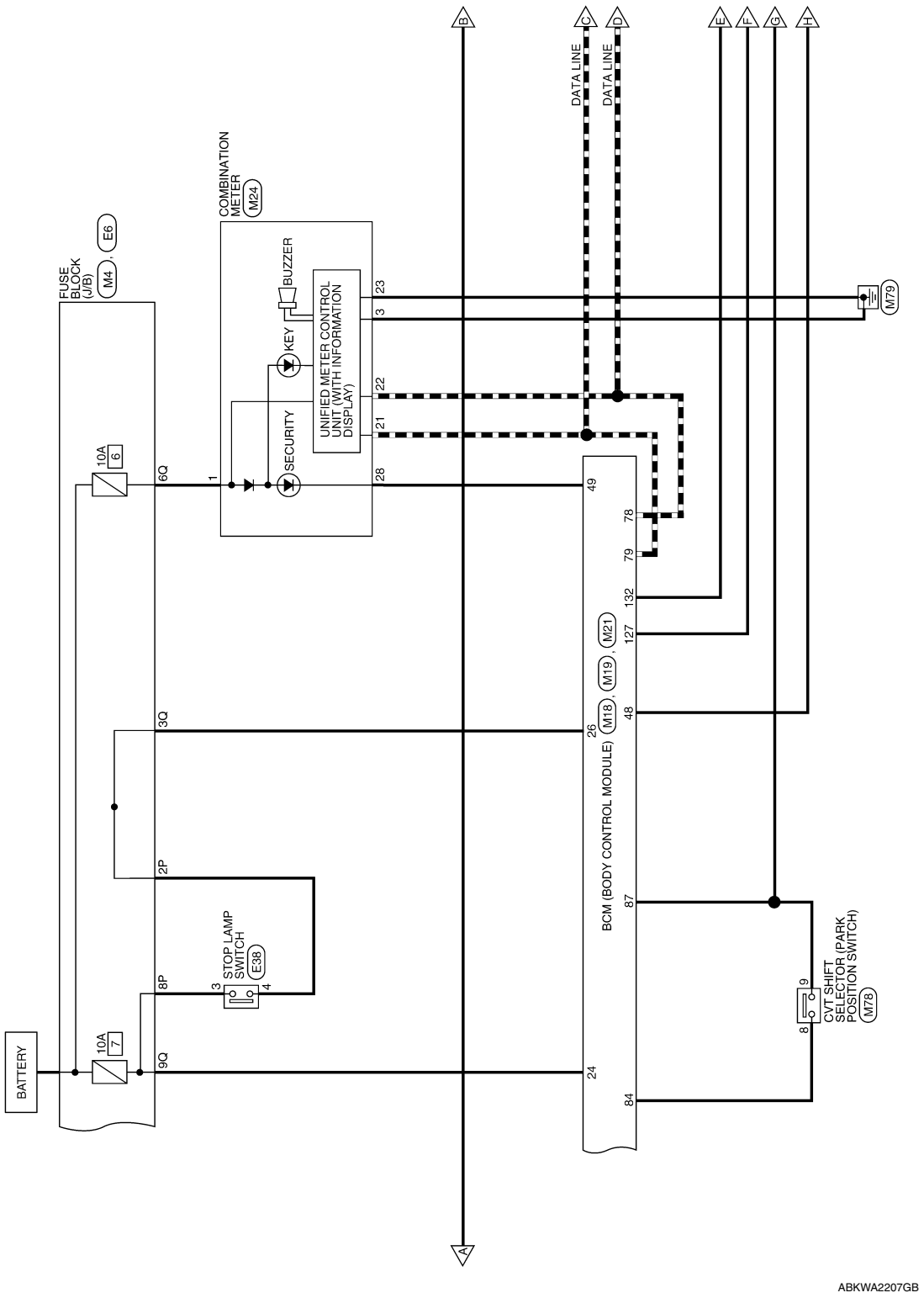
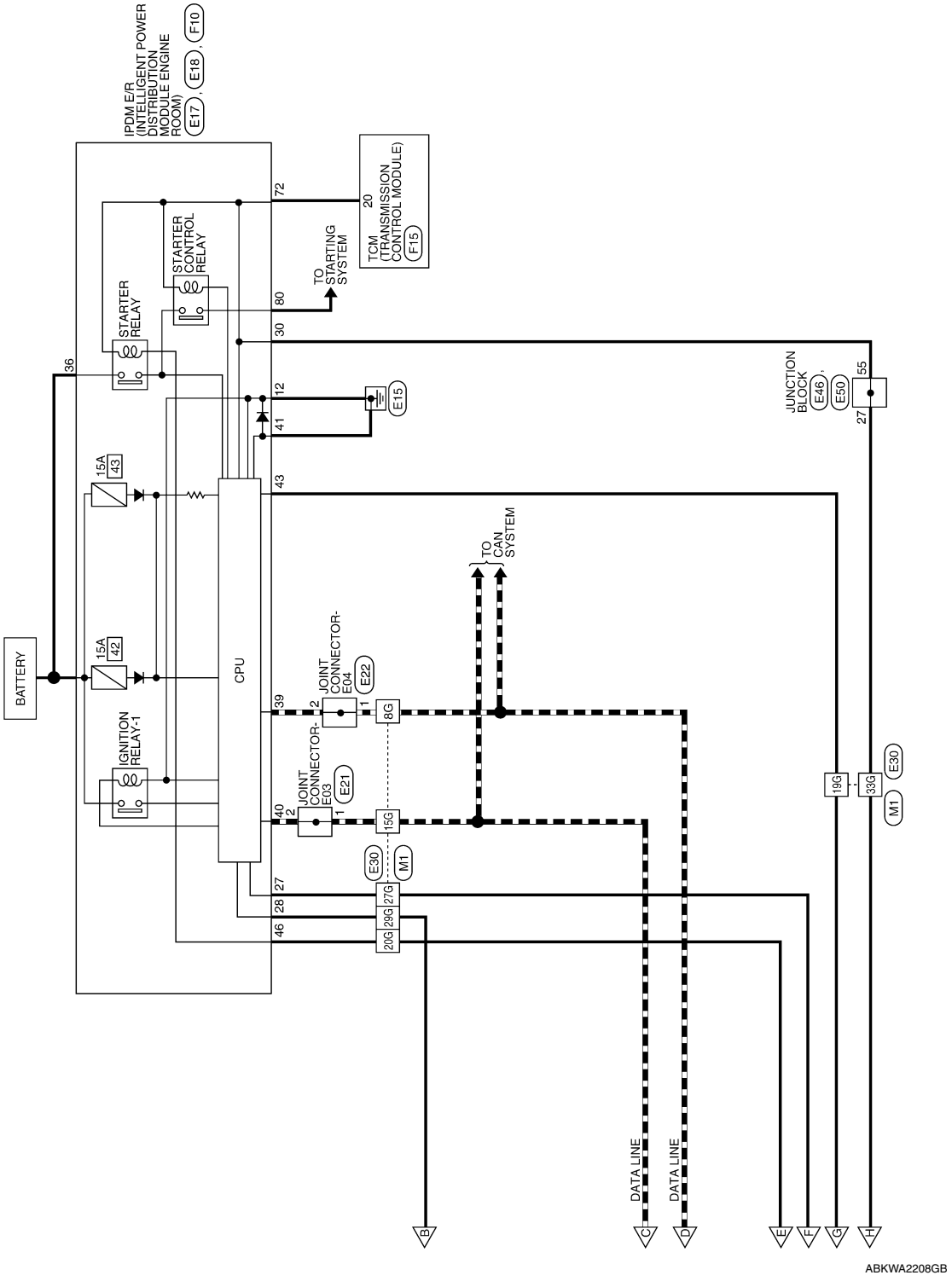


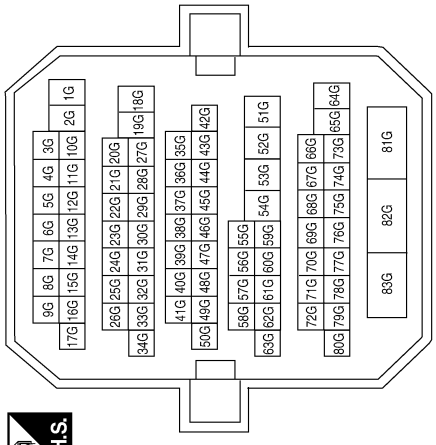

B
C
D
E
F
G
H
DATA LINE
DATA LINE
COMBINATION METER
M24
FUSE BLOCK (J/B)
M4
E6
BUZZER
KEY
SECURITY
UNIFIED METER CONTROL UNIT (WITH INFORMATION DISPLAY)
23
3
22
21
28
1
M79
10A
6
6Q
49
78
79
132
127
M21
M19
M18
48
26
3Q
2P
87
BCM (BODY CONTROL MODULE)
STOP LAMP SWITCH
E38
3
4
8P
9
8
CVT SHIFT SELECTOR (PARK POSITION SWITCH)
M78
BATTERY
10A
7
9Q
24
84
A
ABKWA2207GB


IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) E17, E18, F10
TCM (TRANSMISSION CONTROL MODULE) F15
TO STARTING SYSTEM
STARTER CONTROL RELAY
STARTER RELAY
JUNCTION BLOCK E46, E50
BATTERY
CPU
IGNITION RELAY-1
15A 43
15A 42
JOINT CONNECTOR-E04 E22
JOINT CONNECTOR-E03 E21
TO CAN SYSTEM
E15
E30
M1
DATA LINE
DATA LINE
ABKWA2208GB

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION CONNECTORS

Connector No.	M1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

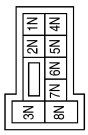
H.S.



Terminal No.	Color of Wire	Signal Name
8G	P	–
15G	L	–
19G	G/B	–
20G	R	–
27G	BR/W	–
29G	BR	–
33G	R/G	–
82G	W/B	–

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

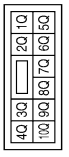
H.S.



Terminal No.	Color of Wire	Signal Name
4N	G/Y	–
7N	Y/R	–

Connector No.	M4
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
3Q	O/L	–
6Q	Y/R	–
9Q	R/W	–

ABKIA3831GB

Connector No.	M10
Connector Name	WIRE TO WIRE
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
15	R/B	–
16	R/W	–

Terminal No.	Color of Wire	Signal Name
10J	SB	–
11J	W	–
12J	B	–
28J	R/B	–

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

								2J	1J
							3J	4J	5J
						10J	11J	12J	13J
					18J	19J	20J	21J	22J
				23J	24J	25J	26J	27J	28J
				29J	30J				
			31J	32J	33J	34J	35J	36J	37J
			38J	39J	40J	41J	42J	43J	44J
									45J
			47J	48J	49J	50J	51J	52J	53J
									54J
									55J
									56J
									57J
									58J
									59J
									60J
									61J
									62J
									63J
			64J	65J	66J	67J	68J	69J	70J
			71J	72J	73J	74J	75J	76J	77J
									78J
									79J
			80J	81J	82J	83J	84J	85J	86J
									87J
									88J
									89J
									90J
									91J
									92J
			93J	94J	95J	96J	97J	98J	99J

Connector No.	M17
Connector Name	BCM (BODY CONTROL MODULE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
11	Y/R	BAT BCM FUSE
13	B	GND1
15	Y/L	ACC LED

Connector No.	M16
Connector Name	BCM (BODY CONTROL MODULE
Connector Color	BLACK

H.S.

1	3
2	

Terminal No.	Color of Wire	Signal Name
1	W/B	BATT (F/L)

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Terminal No.	Color of Wire	Signal Name
78	P	CAN-L
79	L	CAN-H
80	R/L	FOB SLOT ILLUMINATION
81	LG	IGN ON LED
84	Y/R	AT DEVICE OUT
87	G/B	SHIFT P/ASCD CANCEL SW
91	L/R	RF POWER SUPPLY 12V

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60
99	98	97	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81	80

Terminal No.	Color of Wire	Signal Name
60	B/R	ROOM ANT 2 B
61	W/R	ROOM ANT 2 A
68	G/O	FOB READER CLOCK
69	O	FOB READER DATA
71	L/O	RF1 TUNER SIGNAL

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

H.S.

39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20
59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40

Terminal No.	Color of Wire	Signal Name
24	R/W	BRAKE SW 1
26	O/L	BRAKE SW 2
29	Y	FOB IN SW 1
32	R/B	AS DOOR SW 1
42	R	S/L LOCK LED
45	P	GND RF2 A/L
48	R/G	SHIFT N/P/NEUTRAL SW
49	L/O	IMMO LED (SECURITY INDICATOR)
58	SB	DR DOOR SW

Terminal No.	Color of Wire	Signal Name
127	BR/W	IGN RELAY OUTPUT
132	R	ST RELAY OUTPUT
140	BR	ENG START SW
148	R/W	RR DOOR SW
149	R/B	RL DOOR SW

Connector No.	M21
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY

H.S.

131	130	129	128	127	126	125	124	123	122	121	120	119	118	117	116	115	114	113	112
151	150	149	148	147	146	145	144	143	142	141	140	139	138	137	136	135	134	133	132

Terminal No.	Color of Wire	Signal Name
114	B	TRUNK ANT 1 B
115	W	TRUNK ANT 1 A

ABKIA3832GB

Connector No.	M24
Connector Name	COMBINATION METER
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	Y/R	BAT
3	B	GND (POWER)
21	L	CAN-H
22	P	CAN-L
23	B	GND (CIRCUIT)
28	L/O	SECURITY

Connector No.	M27
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Color	BLACK

H.S.

1	2	3	4

Terminal No.	Color of Wire	Signal Name
1	P	–
2	L/O	–
4	L/R	–

Connector No.	M38
Connector Name	PUSH-BUTTON IGNITION SWITCH
Connector Color	BROWN

H.S.

1	2	3
4	5	6	7	8

Terminal No.	Color of Wire	Signal Name
1	B	–
4	BR	–
5	R	–
6	Y/L	–
7	LG	–
8	G/Y	–

Connector No.	M40
Connector Name	KEY SLOT
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	G/Y	–
2	G/O	–
3	O	–
5	G/Y	–
6	R/L	–
7	B	–
11	Y	–

Connector No.	M41
Connector Name	FRONT CONSOLE ANTENNA
Connector Color	GRAY

H.S.

1	2

Terminal No.	Color of Wire	Signal Name
1	W/R	–
2	B/R	–

Connector No.	M78
Connector Name	CVT SHIFT SELECTOR
Connector Color	WHITE

H.S.

1	3	7	9
2	4	5	6	8	10

Terminal No.	Color of Wire	Signal Name
8	Y/R	–
9	G/B	–

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Connector No.	E6
Connector Name	FUSE BLOCK (J/B)
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
2P	LG	–
8P	R	–

Connector No.	E17
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

42	41	40	39
46	45	44	43

Terminal No.	Color of Wire	Signal Name
39	P	CAN-L
40	L	CAN-H
41	B	GND (SIGNAL)
43	Y	DETENT SW
46	BR	START CONT

Connector No.	E18
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

9	10	11	12	13	14
3	4	5	6	7	8

25	26	27	28	29	30	31	32	33	34	37	38
15	16	17	18	19	20	21	22	23	24	35	36

Terminal No.	Color of Wire	Signal Name
12	B	GND (POWER)
27	W	IGN SIGNAL
28	SB	PUSH START SW
30	BR	AT ECU
36	G	F/L IGNSW

Connector No.	E21
Connector Name	JOINT CONNECTOR-E03
Connector Color	WHITE

H.S.

D	4	3	2	1	D

Terminal No.	Color of Wire	Signal Name
1	L	–
2	L	–

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Terminal No.	Color of Wire	Signal Name
8G	P	–
15G	L	–
19G	Y	–
20G	BR	–
27G	W	–
29G	SB	–
33G	BR	–
82G	LG	–

Connector No.	E30
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Connector No.	E50
Connector Name	JUNCTION BLOCK
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
55	BR	–

Connector No.	E22
Connector Name	JOINT CONNECTOR-E04
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	P	–
2	P	–

Connector No.	E46
Connector Name	JUNCTION BLOCK
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
27	BR	–

Connector No.	E38
Connector Name	STOP LAMP SWITCH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
3	R	–
4	LG	–

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Connector No.	F15
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Color	BLACK

Terminal No.	Color of Wire	Signal Name
20	R/B	ST RLY

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

Terminal No.	Color of Wire	Signal Name
2	SB	–

Connector No.	F10
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
72	R/B	NP SW
80	B	STARTER MOTOR

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
10J	SB	–
11J	W	–
12J	B	–
28J	BR	–

ABKIA2748GB

Connector No.	B104
Connector Name	WIRE TO WIRE
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
15	GR	–
16	B	–

Connector No.	B29
Connector Name	REAR PARCEL SHELF ANTENNA
Connector Color	GRAY

H.S.

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

Connector No.	B116
Connector Name	REAR DOOR SWITCH RH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	B	–

Connector No.	B18
Connector Name	REAR DOOR SWITCH LH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	BR	–

Connector No.	B108
Connector Name	FRONT DOOR SWITCH RH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	GR	–

ABKIA2749GB

SYMPTOM DIAGNOSIS

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION SYMPTOMS

Symptom Table

INFOID:0000000010052041

Engine cannot be started with all Intelligent Keys.

CAUTION:

- **Follow Trouble Diagnosis Flowchart referring to "SEC-4, "Work Flow"". Determine malfunctioning condition before performing this diagnosis.**
- **Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis.**
- **Check systems shown in the "Diagnosis/service procedure" column in this order.**

CONDITIONS OF VEHICLE (OPERATING CONDITIONS)

- Engine start function is ON when setting on CONSULT.
- Use Intelligent Key with registered Intelligent Key ID.
- One or more of Intelligent Keys with registered Intelligent Key ID is in the passenger compartment.

Diagnosis/service procedure		Reference page
1. Check power supply and ground circuit	BCM	SEC-80
	IPDM E/R	SEC-81
2. Check push button ignition switch		PCS-65
3. Check Intermittent Incident		GI-41

VEHICLE SECURITY SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000010052042

Procedure			Diagnostic procedure	Refer to page
Symptom				
1	Vehicle security system cannot be set by ····	Door switch	Check door switch	DLK-67
		Trunk	Check trunk room lamp switch	DLK-88
		Door outside key	Check key cylinder switch	DLK-77
		Intelligent Key	Check Intelligent Key.	DLK-113
		—	Check Intermittent Incident	GI-41
	Security indicator does not turn ON.		Check vehicle security indicator	SEC-92
			Check Intermittent Incident	GI-41
2	* Vehicle security system does not sound alarm when ····	Any door is opened.	Check door switch	DLK-67
			Check Intermittent Incident	GI-41
3	Vehicle security alarm does not activate.	Horn alarm	Check horn	SEC-88
			Check Intermittent Incident	GI-41
		Head lamp alarm	Check head lamp alarm	SEC-90
			Check Intermittent Incident	GI-41
4	Vehicle security system cannot be canceled by ····	Door outside key	Check key cylinder switch	SEC-85
			Check Intermittent Incident	GI-41
		Intelligent Key	Check Intelligent Key	DLK-113
			Check Intermittent Incident	GI-41

*: Check that the system is in the armed phase.

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS SYMPTOMS

Symptom Table

INFOID:0000000010052043

Security indicator does not turn ON or flash.

CAUTION:

- **Follow Trouble Diagnosis Flowchart referring to "SEC-4, "Work Flow"". Determine malfunctioning condition before performing this diagnosis.**
- **Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis.**
- **Check systems shown in the "Action" column in this order.**

CONDITIONS OF VEHICLE (OPERATING CONDITIONS)

- Intelligent Key is not inserted into key slot.
- Engine switch is not depressed.

Action	Reference page
1. Check vehicle security indicator	SEC-92
2. Check Intermittent Incident	GI-41

PRECAUTION

PRECAUTIONS

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

INFOID:0000000009465653

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

WARNING:

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

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

WARNING:

- **When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.**

Precaution for Work

INFOID:0000000009725704

- 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.

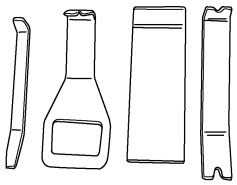
PREPARATION

PREPARATION

Special Service Tool

INFOID:0000000009465655

The actual shapes 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

REMOVAL AND INSTALLATION

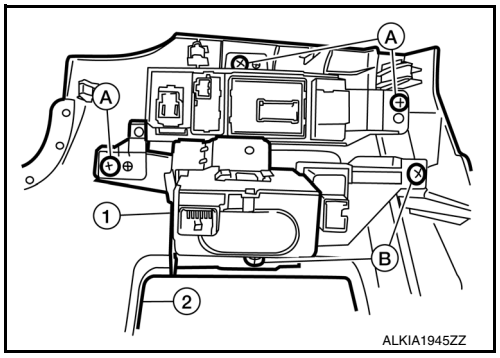
KEY SLOT

Removal and Installation

INFOID:0000000009465656

REMOVAL

1. Remove the instrument lower panel LH. Refer to IP-19, "Removal and Installation".
2. Remove the switch assembly screws (A), remove the key slot screws (B) and then remove key slot (1) from instrument lower panel LH (2).



INSTALLATION

Installation is in the reverse order of removal.

PUSH BUTTON IGNITION SWITCH

Removal and Installation

INFOID:0000000009465657

REMOVAL

1. Remove push-button ignition switch from cluster lid A, using a suitable tool.
2. Disconnect harness connector from push-button ignition switch.

INSTALLATION

Installation is in the reverse order of removal.