SECTION SEC
SECURITY CONTROL SYSTEM

CONTENTS

INTELLIGENT KEY SYSTEM

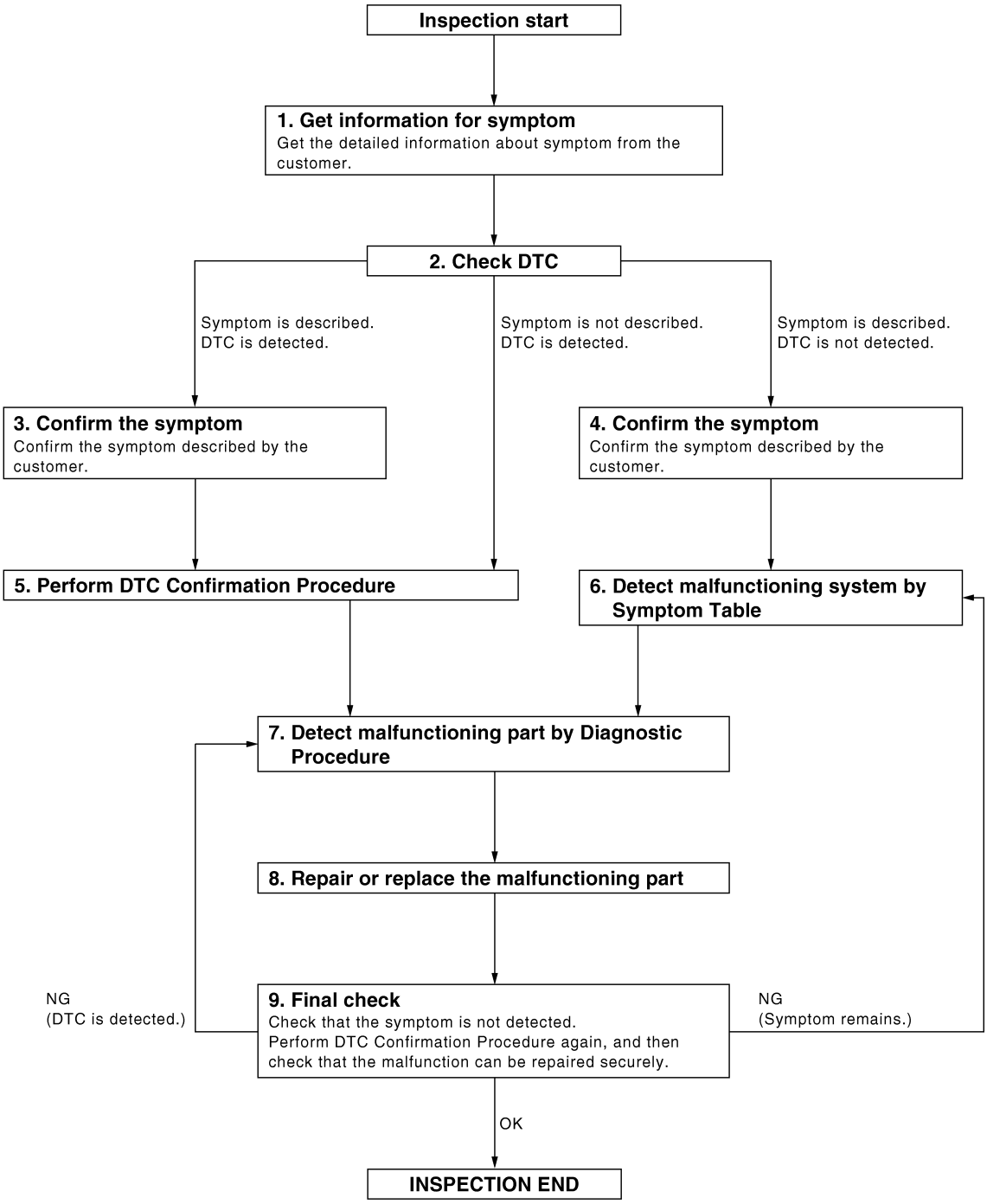
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000001744654

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

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

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-III to the vehicle in “DATA MONITOR” mode and check real time diagnosis results.
Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 5.

4.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.
Connect CONSULT-III to the vehicle in “DATA MONITOR ” mode and check real time diagnosis results.
Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 6.

5.PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again.
At this time, always connect CONSULT-III to the vehicle, and check diagnostic results in real time.
If two or more DTCs are detected, refer to SEC-181, "DTC Inspection Priority Chart", and determine trouble diagnosis order.

NOTE:
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 7.
NO >> Refer to GI-38, "Intermittent Incident".

6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

Detect malfunctioning system according to SEC-215, "Symptom Table" based on the confirmed symptom in step 4, and determine the trouble diagnosis order based on possible causes and symptom.

>> GO TO 7.

7.DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

NOTE:
The Diagnostic Procedure 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 8.
NO >> Check voltage of related BCM terminals using CONSULT-III.

8. REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 9.

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

Does the symptom reappear?

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

INSPECTION AND ADJUSTMENT
ECM RE-COMMUNICATING FUNCTION

ECM RE-COMMUNICATING FUNCTION : Description

INFOID:0000000001699903

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 a virgin ECM which has never been energized on-board.
(In this step, initialization procedure by CONSULT-III is not necessary)
NOTE:
- **When registering new Key IDs or replacing the ECM that is not brand new, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.**
- **If multiple keys are attached to the key holder, separate them before work.**
- **Distinguish keys with unregistered key ID from those with registered ID.**

ECM RE-COMMUNICATING FUNCTION : Special Repair Requirement

INFOID:0000000001699904

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?

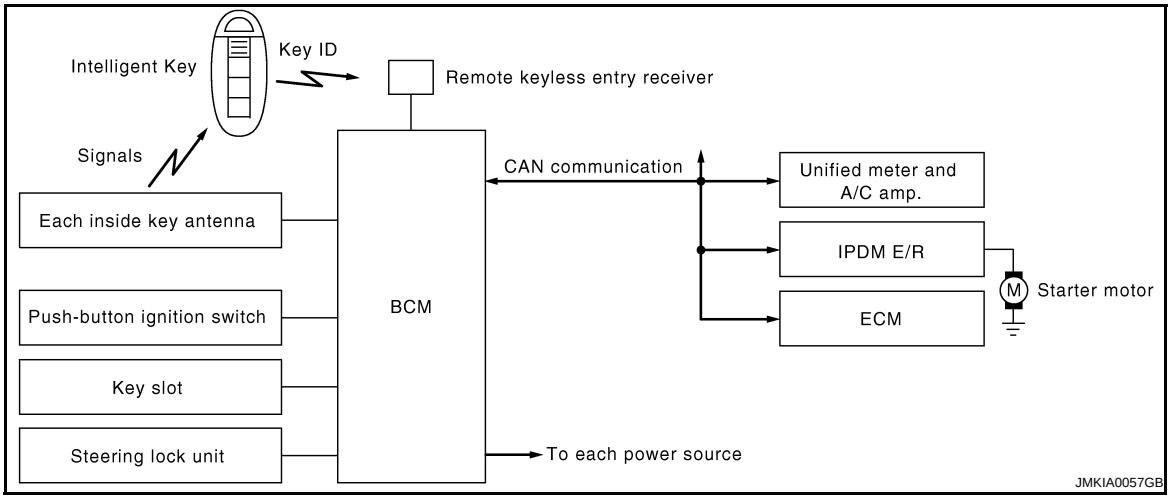
YES >> Procedure is completed.
NO >> Initialize control unit. Refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

FUNCTION DIAGNOSIS

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

System Diagram

INFOID:0000000001699905



System Description

INFOID:0000000001699906

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM function	Actuator
Push-button ignition switch	Push switch	Engine start function	• Steering lock relay • Steering lock unit • Starter relay (IPDM E/R) • Starter control relay (IPDM E/R) • Starter motor • KEY warning lamp
AT device (A/T models)	P range		
PNP switch (A/T models)	N, P range		
Clutch interlock switch (M/T models)	Clutch ON/OFF		
ASCD clutch switch (M/T models with ASCD)	Clutch ON/OFF		
ICC clutch switch (M/T models with ICC)	Clutch ON/OFF		
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 IVIS (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 IVIS (NATS) ID verification. If it is used when the Intelligent Key is carried, perform the Intelligent Key ID verification.
- If the ID is successfully verified, and when push-button ignition switch is pressed, steering lock will be released and initiating 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 can be registered up to 4 keys (Including the standard Intelligent Key) on request from the owner.

NOTE:

- Refer to SEC-9, "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 V36, the transponder [the chip for IVIS (NATS) ID verification] is integrated into the Intelligent Key. (For the conventional models, it is integrated into the mechanical key.) Therefore, the mechanical key cannot perform the ID verification, and thus it cannot start the engine. Instead, the IVIS (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, the BCM signals the inside key antenna and transmits the request signal to the Intelligent Key.
2. The Intelligent Key receives the request signal and transmits the Intelligent Key ID signal to the BCM via the remote keyless entry receiver.
3. The Intelligent Key receives the Intelligent Key ID signal and verifies it with the registered ID.
4. BCM transmits the steering lock unlock signal to steering lock unit and IPDM E/R if the verification results are OK.
5. IPDM E/R turns the steering lock relay ON and supplies power to the steering lock unit.
6. Release of the steering lock.
7. BCM transmits the power supply stop signal to IPDM E/R when it confirms that the steering lock is in the unlock condition.
8. IPDM E/R turns the steering lock relay OFF and stops power supply to the steering lock unit.
9. BCM turns ACC relay ON and transmits the ignition power supply ON signal to IPDM E/R.
10. IPDM E/R turns the ignition relay ON and starts the ignition power supply.
11. BCM confirms that the shift position is P or N. (A/T models)
12. 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.
13. IPDM E/R turns the starter control relay ON when receiving the starter request signal.
14. 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.
15. 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 IVIS (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-17, "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
- A/T selector lever is in the P position

Reset Condition of Battery Saver System

A/T models

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 on P position and the ignition switch is left on ACC position for 1 hour. If any of the following conditions are met the battery saver system is released and the steering will change automatically to lock position from OFF position.

- 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.

M/T models

If any of the conditions above is met the battery saver system is released but the steering will not lock.
In this case, the steering operation OFF to LOCK is prohibited.

STEERING LOCK OPERATION

Steering is locked by steering lock unit when ignition switch is in the OFF position, A/T selector lever is in the P position and any of the following conditions are met.

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

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 and 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,

  A/T models

  - Brake pedal operating condition
  - A/T selector lever position
  - Vehicle speed

  M/T models

  - Clutch pedal operating condition
  - Vehicle speed
- 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 (A/T models) •Clutch pedal (M/T models)	A/T selector lever position (A/T models)	
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	1

Power supply position	Engine start/stop condition		Push-button ignition switch operation frequency
	•Brake pedal (A/T models) •Clutch pedal (M/T models)	A/T selector lever position (A/T models)	
Engine is running → ACC (Engine stop)	—	Any position other than P (*2)	1
Engine stall return operation while driving	—	N position	1

*1: When the A/T selector lever position is N position, the engine start condition is different according to the vehicle speed.

- At vehicle speed of less than 4 km/h (2.5MPH), the engine can start only when the brake pedal is depressed.
- At vehicle speed of 4 km/h (2.5MPH) 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 A/T selector lever position is in any position other than P position and when the vehicle speed is 5 km/h (3.1MPH) 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

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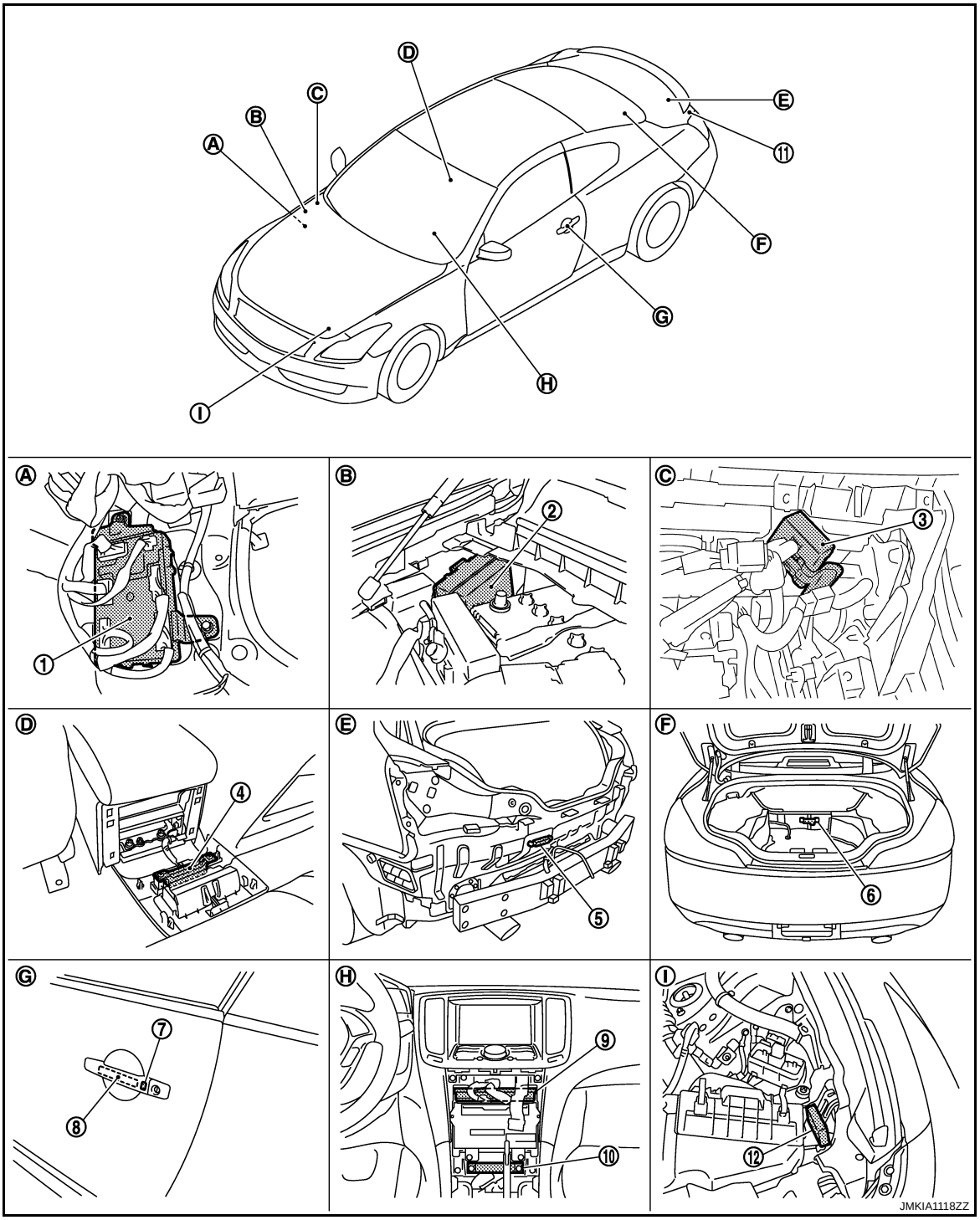
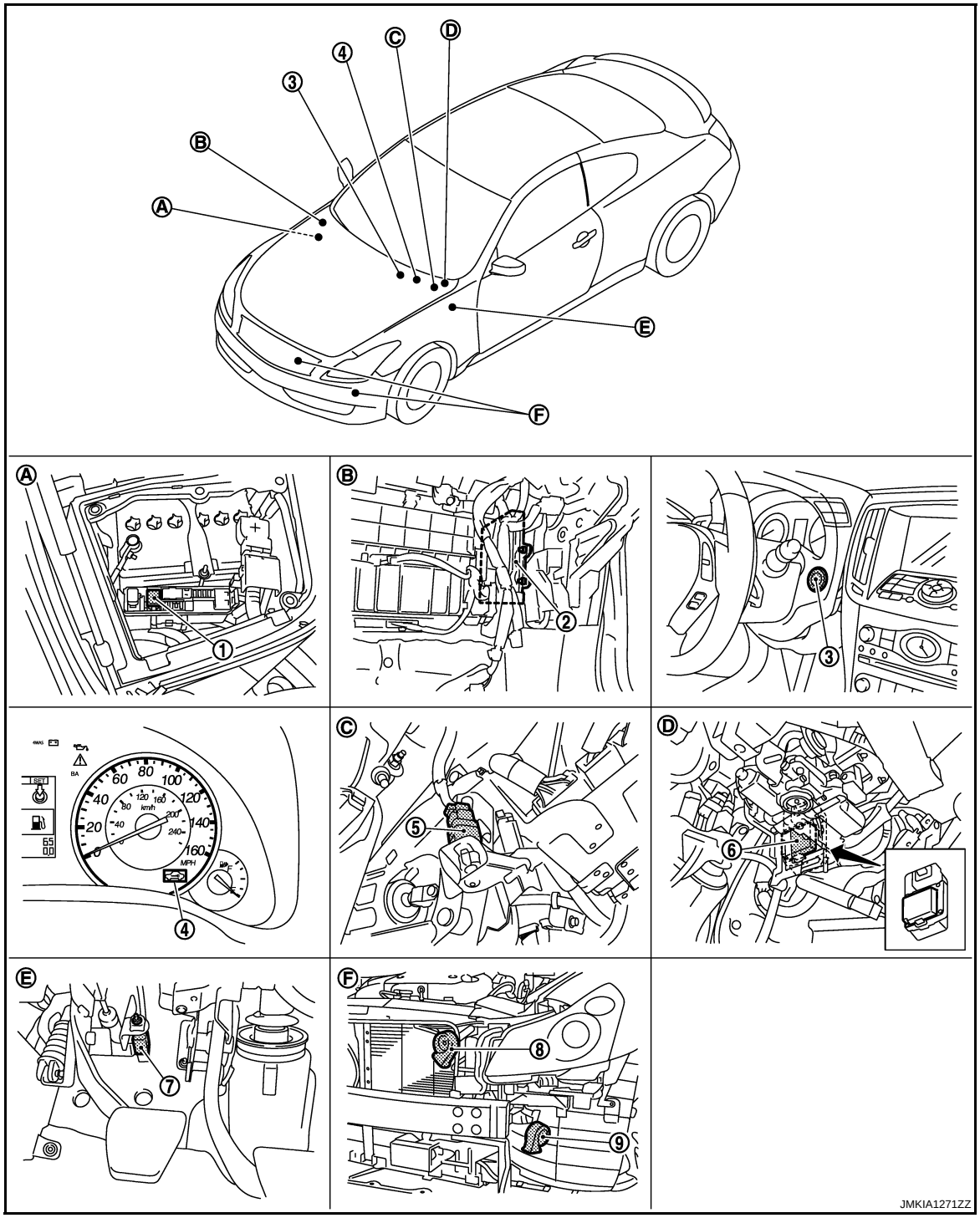


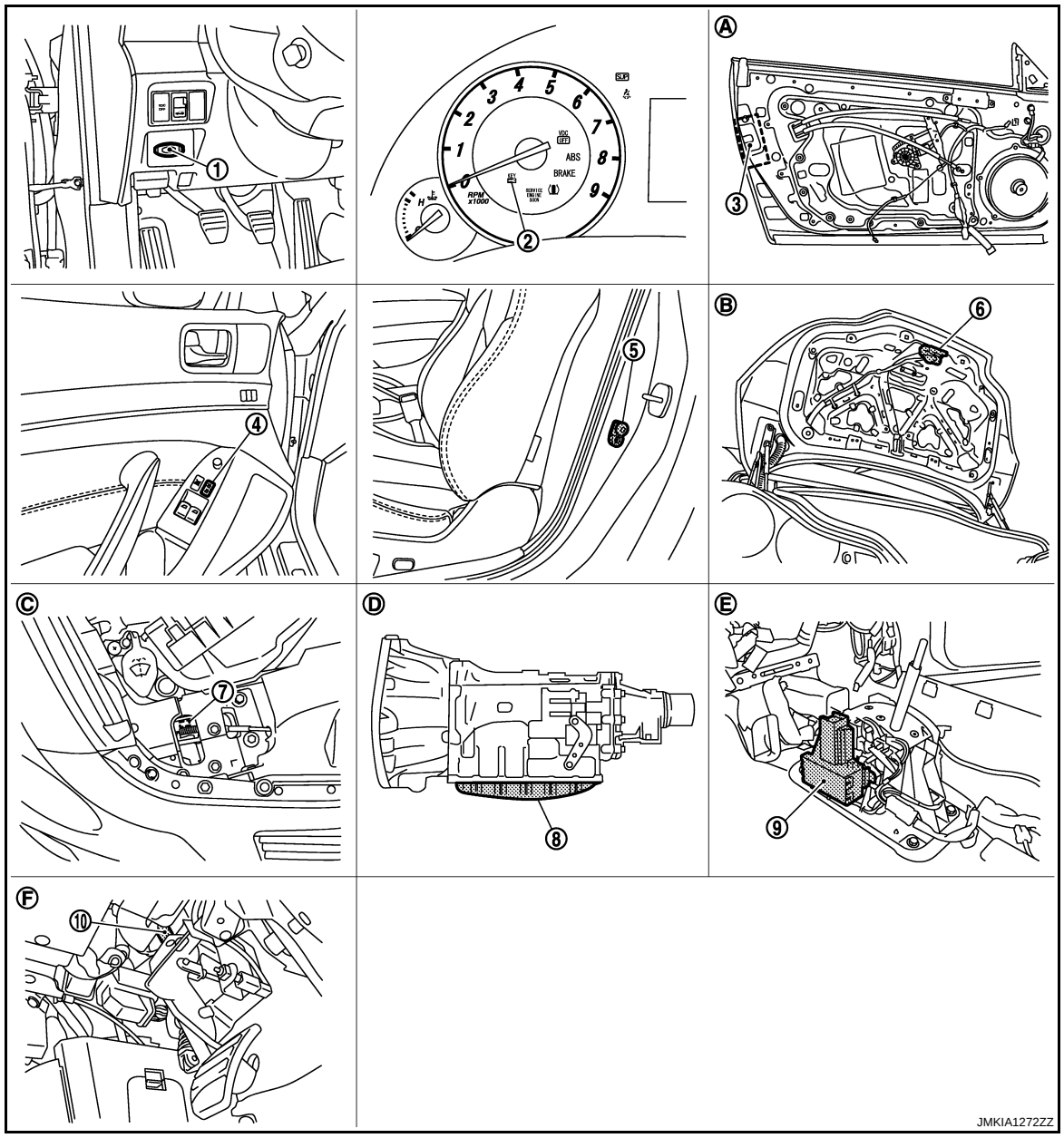
1. BCM M118, M119, M121, M122, M123
2. IPDM E/R E5, E6, E7
3. Remote keyless entry receiver M104
4. Inside key antenna (console) M146
5. Outside key antenna (rear bumper) B63
6. Inside key antenna (trunk room) B49
7. Front outside handle LH (request switch) D13
8. Front outside handle LH (outside key antenna) D14
9. Unified meter and A/C AMP M66, M67
10. Inside key antenna (instrument center) M131
11. Trunk lid request switch B304
12. Intelligent Key warning buzzer (engine room) E57

A. Dash side lower (Passenger side).
B. Engine room dash panel (RH).
C. View with instrument assist lower panel removed.
D. View with console rear finisher removed.
E. View with rear bumper removed.
F. View with trunk rear finisher (upper) removed.
G. View of front door LH.
H. Behind cluster lid C.
I. View with hood seal assembly removed.



1. Horn relay1 E11
2. ECM M107
3. Push-button ignition switch M50
4. Combination meter (Security indicator) M53
5. Stop lamp switch E110
6. Steering lock unit M40
7. Clutch interlock switch E111
8. Horn (high) E61, E62
9. Horn (low) E69, E70

A. View with battery cover removed.
B. View with instrument assist lower panel removed.
C. View with instrument driver lower cover removed.
D. View with instrument driver lower cover removed.
E. View with instrument driver lower cover removed.
F. View with front bumper removed.



1. Key slot M22
2. Combination meter (Key warning lamp) M53
3. Driver side door lock assembly (door key cylinder switch) D15
4. Power window main switch D8
5. Driver side door switch B16
6. Trunk lid lock assembly (trunk room lamp switch) B303
7. Hood switch E30
8. TCM F151
9. A/T device (detention switch) M137
10. ASCD clutch switch (ASCD models) E108
ICC clutch switch (ICC models) E113

A. View with front door finisher removed.
B. View with trunk lid finisher removed.
C. View with hood switch incorporated into hood lock (RH).
D. Inside of A/T (built into A/T).
E. View with center console assembly removed.
F. View with instrument driver lower cover removed.

Component Description

INFOID:0000000001699908

Component	Reference
BCM	SEC-96
Steering lock unit	SEC-85
Push-button ignition switch	SEC-97
Door switch	DLK-66
A/T device (detention switch) (A/T models)	SEC-64
Inside key anttena	DLK-59
Remote keyless entry receiver	DLK-96
Stop lamp switch	SEC-58
Park/neutral position switch (A/T models)	SEC-72
Clutch switch (M/T models)	SEC-112
ASCD clutch switch (M/T models with ASCD)	SEC-124
ICC clutch switch (M/T models with ICC)	SEC-124
Steering lock relay	SEC-76
Starter relay	SEC-79
Starter control relay	SEC-63
Security indicator	SEC-135
Key warning lamp	SEC-134

INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS

System Diagram

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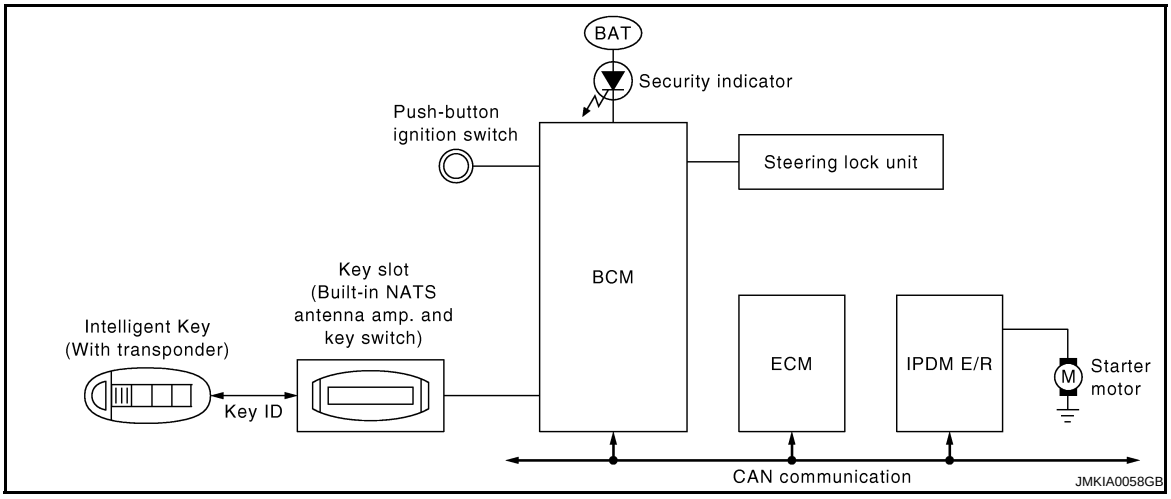

System Description

INFOID:0000000001699910

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM function	Actuator
Push-button ignition switch	Push switch	IVIS (NATS)	• Steering lock relay • Steering lock unit • Starter relay (IPDM E/R) • Starter control relay (IPDM E/R) • Starter motor • KEY warning lamp • Security indicator lamp
AT device (A/T models)	P range		
PNP switch (A/T models)	N, P range		
Clutch interlock switch (M/T models)	Clutch ON/OFF		
ASCD clutch switch (M/T models with ASCD)	Clutch ON/OFF		
ICC clutch switch (M/T models with ICC)	Clutch ON/OFF		
Stop lamp switch	Brake ON/OFF		
Key slot	Key ID		
Each door switch	Door open/close		
ECM	Engine status signal		

SYSTEM DESCRIPTION

- The IVIS (NATS) is an anti-theft system by registering an Intelligent Key ID in to the vehicle and prevents the engine being started by an unregistered Intelligent Key. It has a higher protection against auto thefts that duplicate mechanical key.
- It performs the ID verification when starting the engine in the same way as the Intelligent Key system. But, it performs the IVIS (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 V36 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 IVIS (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, forewarn that the IVIS (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. The registrations procedure for IVIS (NATS) and registration procedure for Intelligent Key when installing the BCM, refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.
- Possible symptom of IVIS (NATS) malfunction is “Engine cannot start”. In V36, the engine can be started with the Intelligent Key system and IVIS (NATS). Identify the possible causes according to “Work Flow”, Refer to SEC-5, "Work Flow".
- If ECM other than Genuine NISSAN is installed, the engine cannot be started. For ECM replacement procedure, refer to SEC-8, "ECM RE-COMMUNICATING FUNCTION : Special Repair Requirement".

PRECAUTIONS FOR KEY REGISTRATION

- The key registration is a procedure that erases the current IVIS (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, performs only one procedure to register simultaneously both ID (IVIS “NATS” ID registration and Intelligent Key ID registration).
  The IVIS (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 IVIS (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 IVIS (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

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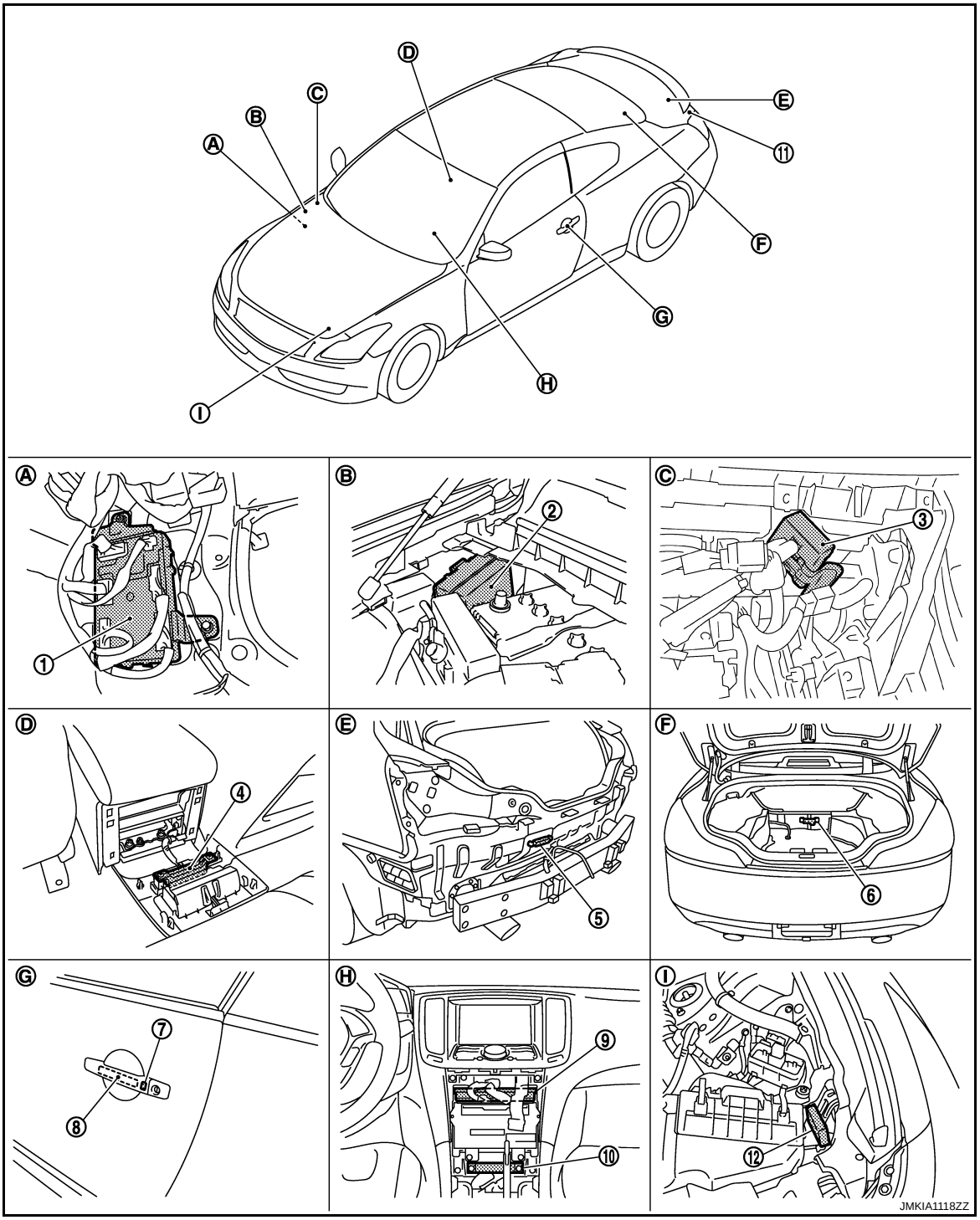

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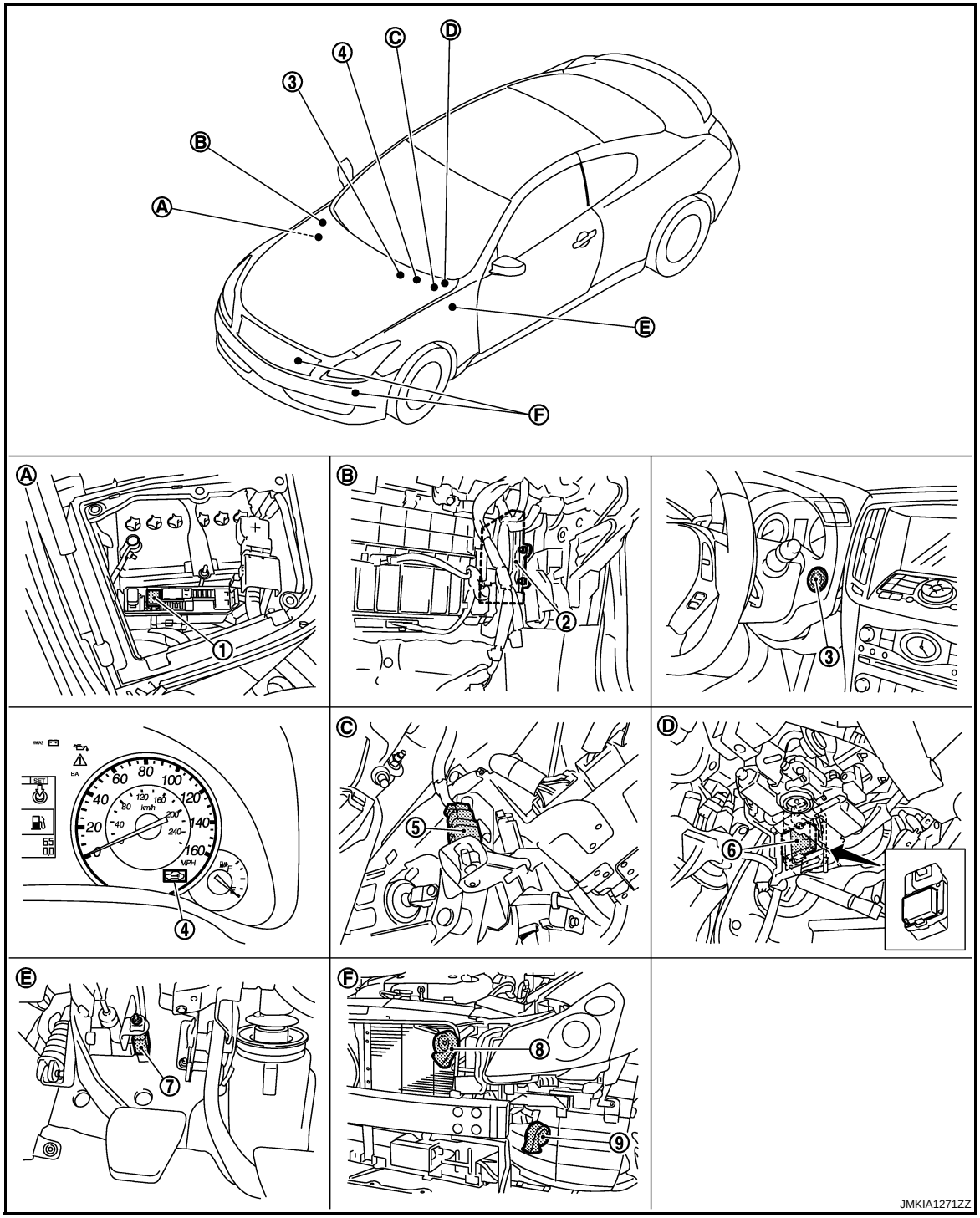

1. Horn relay1 E11
2. ECM M107
3. Push-button ignition switch M50
4. Combination meter (Security indicator) M53
5. Stop lamp switch E110
6. Steering lock unit M40
7. Clutch interlock switch E111
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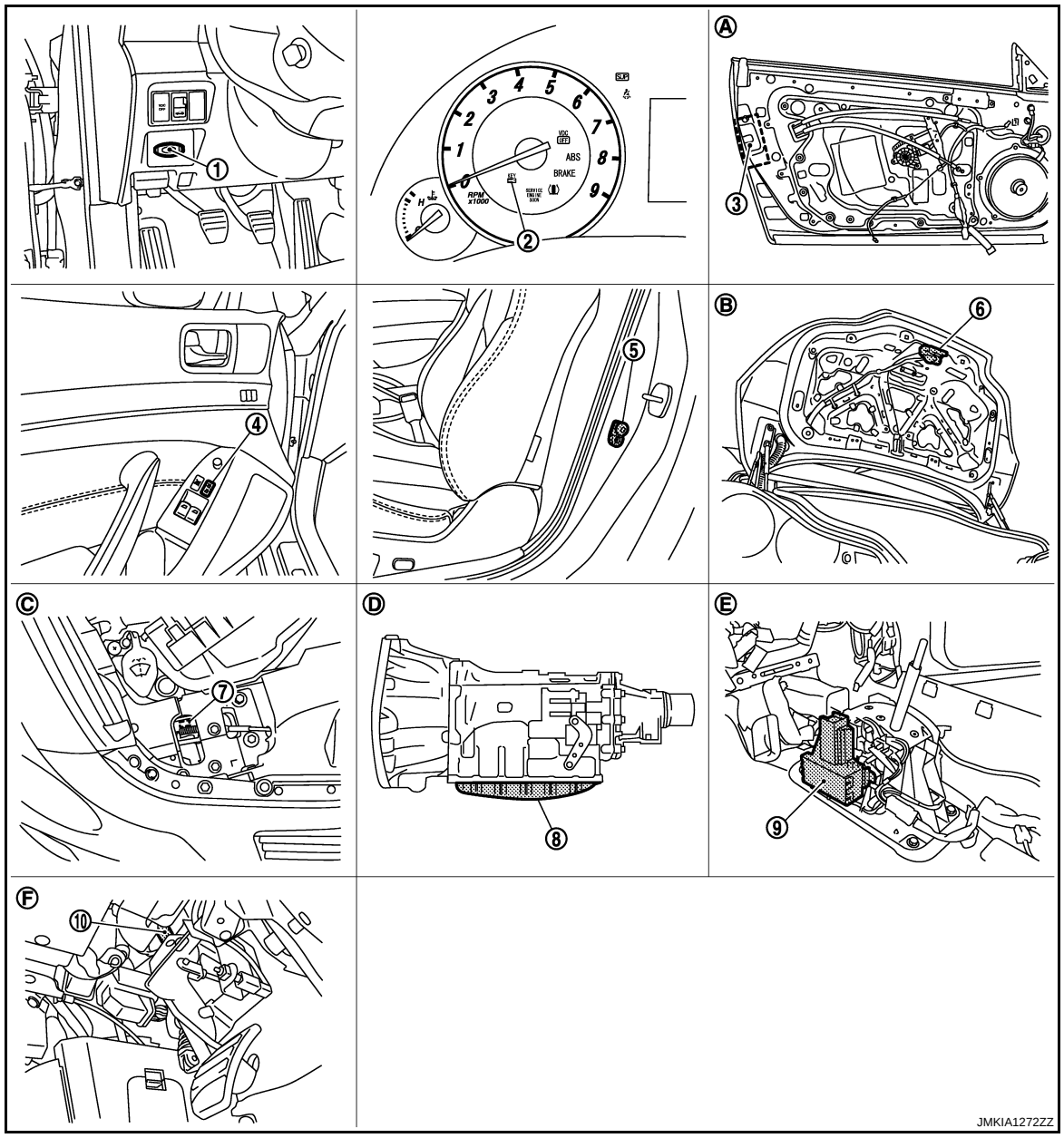
C. View with instrument driver lower cover removed.
D. View with instrument driver lower cover removed.
E. View with instrument driver lower cover removed.
F. View with front bumper removed.



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9. A/T device (detention switch) M137
10. ASCD clutch switch (ASCD models) E108
ICC clutch switch (ICC models) E113

A. View with front door finisher removed.
B. View with trunk lid finisher removed.
C. View with hood switch incorporated into hood lock (RH).
D. Inside of A/T (built into A/T).
E. View with center console assembly removed.
F. View with instrument driver lower cover removed.

Component Description

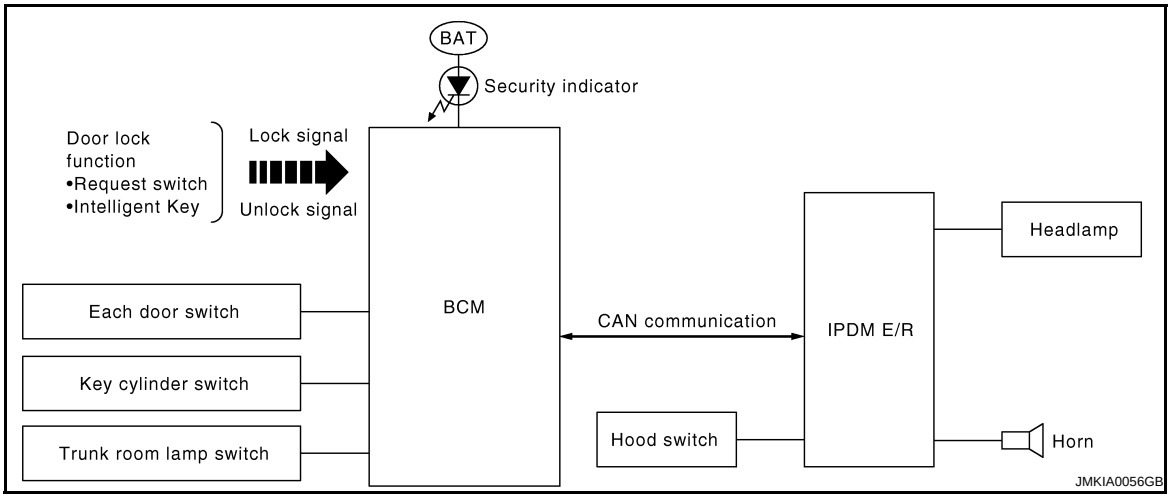
INFOID:0000000001699912

Component	Reference
BCM	SEC-96
Steering lock unit	SEC-85
Push-button ignition switch	SEC-97
Door switch	DLK-66
key slot	SEC-121
A/T device (detention switch) (A/T models)	SEC-64
Inside key antenna	DLK-59
Remote keyless entry receiver	DLK-96
Stop lamp switch	SEC-58
Park/neutral position switch (A/T models)	SEC-64
Clutch switch (M/T models)	SEC-112
ASCD clutch switch (M/T models with ASCD)	SEC-124
ICC clutch switch (M/T models with ICC)	SEC-124
Steering lock relay	SEC-76
Starter relay	SEC-79
Starter control relay	SEC-63
Security indicator	SEC-135
Key warning lamp	SEC-134

VEHICLE SECURITY SYSTEM

System Diagram

INFOID:0000000001699913



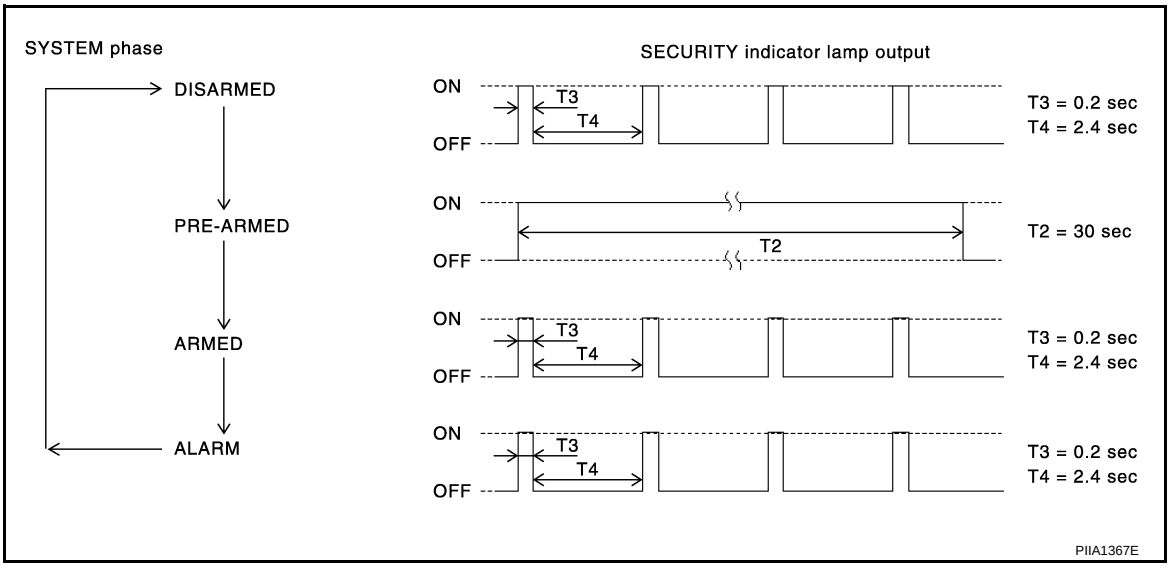
System Description

INFOID:0000000001699914

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM system	Actuator
All door switch	Open or close	Vehicle security system	• IPDM E/R • Head lamp • Horn • Security indicator lamp
Trunk room lamp switch			
Hood switch			
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 hood, 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 hood, trunk and all doors are closed.
2. Hood, 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 “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.

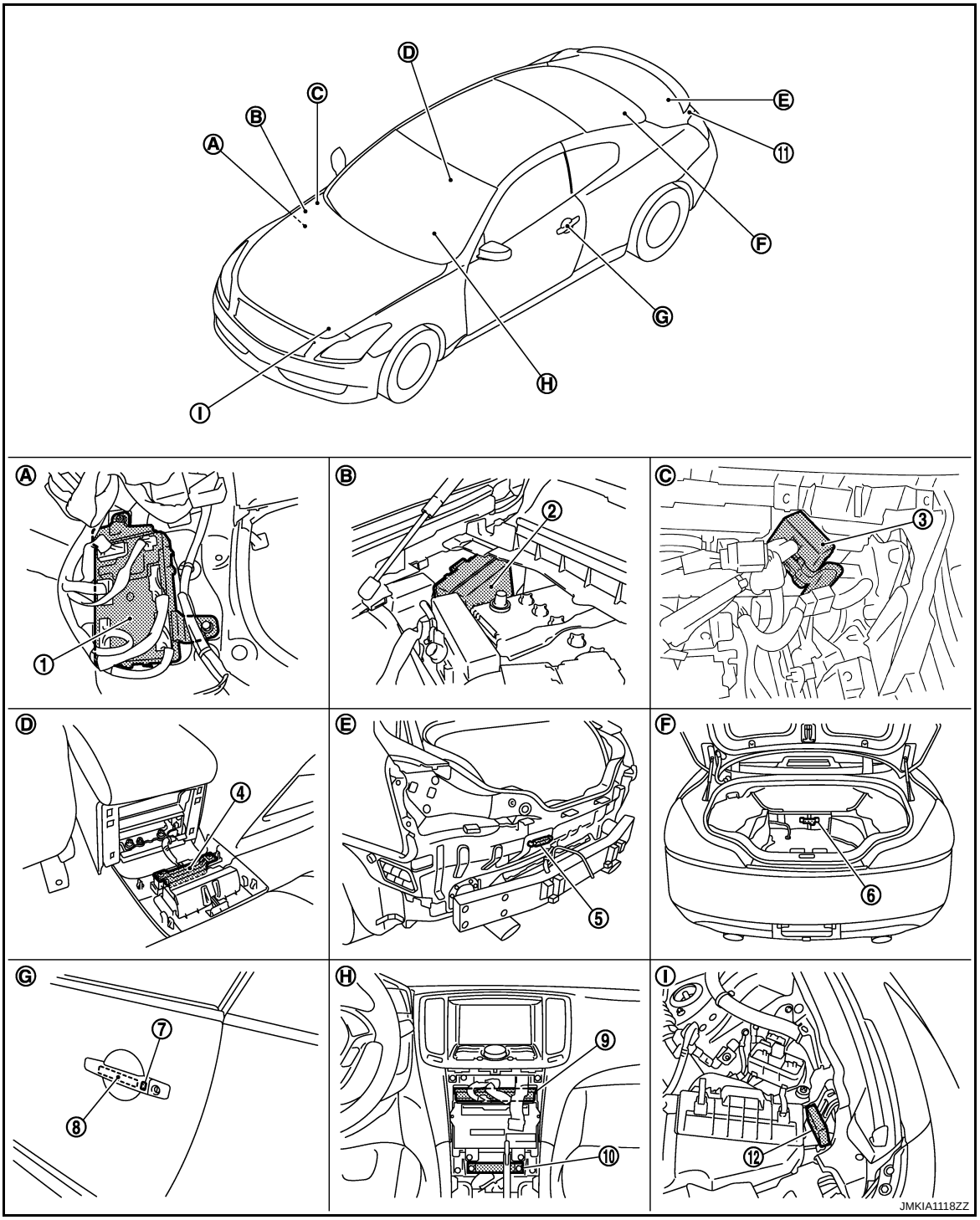
1. Hood, trunk or any door is opened during armed phase.
2. Disconnecting and connecting the battery connector before canceling armed phase.

PANIC ALARM OPERATION

Intelligent Key system may or may not operate vehicle security system (horn and headlamps) as required.
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.

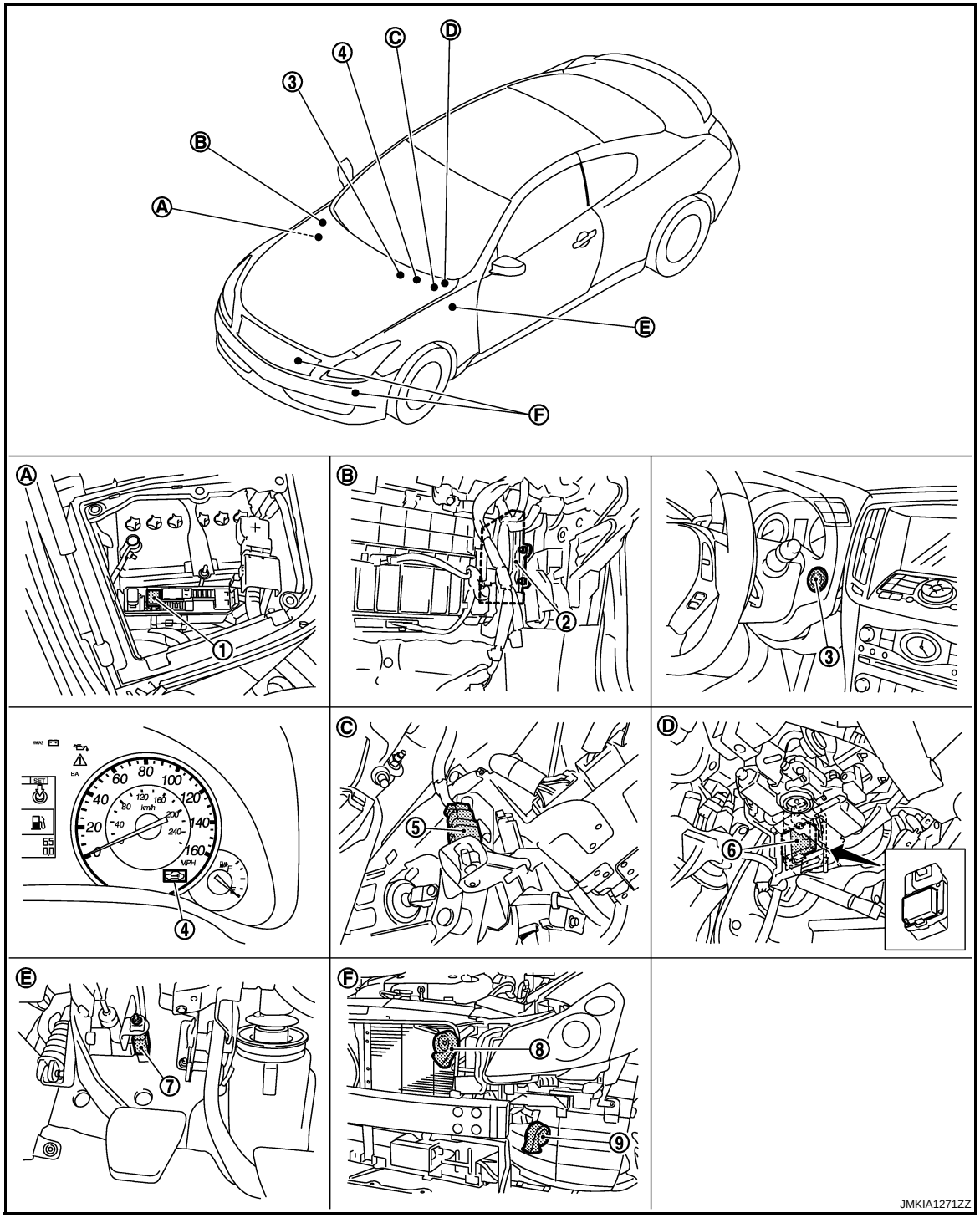
Component Parts Location

INFOID:0000000001699915



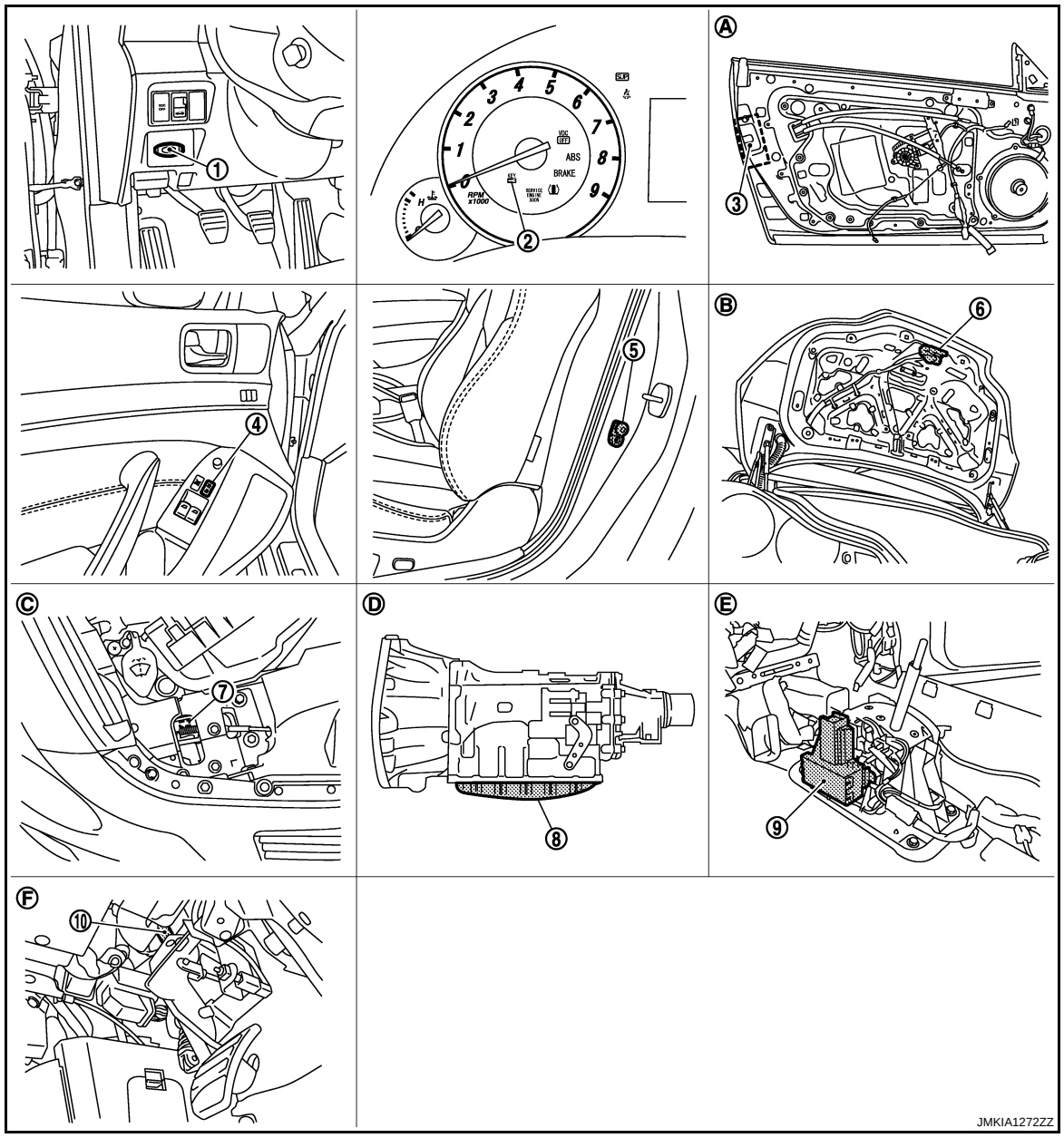
1. BCM M118, M119, M121, M122, M123
2. IPDM E/R E5, E6, E7
3. Remote keyless entry receiver M104
4. Inside key antenna (console) M146
5. Outside key antenna (rear bumper) B63
6. Inside key antenna (trunk room) B49
7. Front outside handle LH (request switch) D13
8. Front outside handle LH (outside key antenna) D14
9. Unified meter and A/C AMP M66, M67
10. Inside key antenna (instrument center) M131
11. Trunk lid request switch B304
12. Intelligent Key warning buzzer (engine room) E57

A. Dash side lower (Passenger side).
B. Engine room dash panel (RH).
C. View with instrument assist lower panel removed.
D. View with console rear finisher removed.
E. View with rear bumper removed.
F. View with trunk rear finisher (upper) removed.
G. View of front door LH.
H. Behind cluster lid C.
I. View with hood seal assembly removed.



1. Horn relay1 E11
2. ECM M107
3. Push-button ignition switch M50
4. Combination meter (Security indicator) M53
5. Stop lamp switch E110
6. Steering lock unit M40
7. Clutch interlock switch E111
8. Horn (high) E61, E62
9. Horn (low) E69, E70

A. View with battery cover removed.
B. View with instrument assist lower panel removed.
C. View with instrument driver lower cover removed.
D. View with instrument driver lower cover removed.
E. View with instrument driver lower cover removed.
F. View with front bumper removed.



1. Key slot M22
2. Combination meter (Key warning lamp) M53
3. Driver side door lock assembly (door key cylinder switch) D15
4. Power window main switch D8
5. Driver side door switch B16
6. Trunk lid lock assembly (trunk room lamp switch) B303
7. Hood switch E30
8. TCM F151
9. A/T device (detention switch) M137
10. ASCD clutch switch (ASCD models) E108
ICC clutch switch (ICC models) E113

A. View with front door finisher removed.
B. View with trunk lid finisher removed.
C. View with hood switch incorporated into hood lock (RH).
D. Inside of A/T (built into A/T).
E. View with center console assembly removed.
F. View with instrument driver lower cover removed.

Component Description

INFOID:0000000001699916

Component	Reference
BCM	SEC-23
Horn relay 1	SEC-131
Horn relay 2	SEC-131
Hood switch	SEC-129
Security indicator	SEC-135
Door switch	DLK-66
Door lock actuator	DLK-87
Trunk lid lock assembly (trunk lid opener actuator)	DLK-89
Door key cylinder switch	SEC-127
Door lock and unlock switch	DLK-68

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

INFOID:0000000001699917

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

Diagnosis mode	Function Description
Work Support	Changes the setting for each system function.
Self Diagnostic Result	Displays the diagnosis results judged by BCM.
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from BCM. Refer to CONSULT-III operation manual.
Data Monitor	The BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Ecu Identification	The BCM part number is displayed.
Configuration	This function is not used even though it is displayed.

SYSTEM APPLICATION
BCM can perform the following functions for each system.
NOTE:
It can perform the diagnosis modes except the following for all sub system selection items.

System	Sub system selection item	Diagnosis mode		
		Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
Air conditioner*	AIR CONDITONER		×	
Intelligent Key system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
BCM	BCM	×		
IVIS - NATS	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	TPMS (AIR PRESSURE MONITOR)	×	×	×

*: This item is displayed, but is not used.

FREEZE FRAME DATA (FFD) AND IGN COUNTER

Freeze Frame Data
The BCM records the following condition at the moment a particular DTC is detected.
- Vehicle Speed
- Odd Trip Meter

• Vehicle Condition (BCM detected condition)

CONSULT screen terms	Description
SLEEP>LOCK	While turning BCM status from low power consumption mode to normal mode (Power supply position is “LOCK”)
SLEEP>OFF	While turning BCM status from low power consumption mode to normal mode (Power supply position is “OFF”.)
LOCK>ACC	While turning power supply position from “LOCK” to “ACC”
ACC>ON	While turning power supply position from “ACC” to “IGN”
RUN>ACC	While turning power supply position from “RUN” to “ACC” (Vehicle is stopping and selector lever is except P position.)
CRANK>RUN	While turning power supply position from “CRANKING” to “RUN” (From cranking up the engine to run it)
RUN>URGENT	While turning power supply position from “RUN“ to “ACC” (Emergency stop operation)
ACC>OFF	While turning power supply position from “ACC” to “OFF”
OFF>LOCK	While turning power supply position from “OFF” to “LOCK”
OFF>ACC	While turning power supply position from “OFF” to “ACC”
ON>CRANK	While turning power supply position from “IGN” to “CRANKING”
OFF>SLEEP	While turning BCM status from normal mode (Power supply position is “OFF”.) to low power consumption mode
LOCK>SLEEP	While turning BCM status from normal mode (Power supply position is “LOCK”.) to low power consumption mode
LOCK	Power supply position is “LOCK” (Ignition switch OFF with steering is locked.)
OFF	Power supply position is “OFF” (Ignition switch OFF with steering is unlocked.)
ACC	Power supply position is “ACC” (Ignition switch ACC)
ON	Power supply position is “IGN” (Ignition switch ON with engine stopped)
ENGINE RUN	Power supply position is “RUN” (Ignition switch ON with engine running)
CRANKING	Power supply position is “CRANKING” (At engine cranking)

IGN Counter

IGN counter indicates the number of times that ignition switch is turned ON after DTC is detected.

- The number is 0 when a malfunction is detected now.
- The number increases like 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON.
- The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.

INTELLIGENT KEY

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

INFOID:0000000001699918

BCM CONSULT-III FUNCTION

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
SELF-DIAG RESULTS	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

Monitor item	Description
REMO CONT ID CONFIR	It can be checked whether Intelligent Key ID code is registered or not in this mode.
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch (driver side, passenger side and trunk) mode can be changed to operate (ON) or not operate (OFF) in this mode.
ENGINE START BY I-KEY	Engine start function mode can be changed to operate (ON) or not operate (OFF) with this mode.
TRUNK/GLASS HATCH OPEN	Buzzer reminder function mode by trunk opener request switch can be changed to operate (ON) or not operate (OFF) with this mode.
PANIC ALARM SET	Panic alarm button pressing time on Intelligent Key remote control button can be selected from the following with this mode. • 0.5 sec. • 1.5 sec. • OFF: Non-operation
TAKE OUT FROM WIN WARN	Take away warning chime (from window) mode can be changed to operate (ON) or not operate (OFF) with this mode.
PW DOWN SET	Unlock button pressing time on Intelligent Key button can be selected from the following with this mode. • 3 sec. • 5 sec. • OFF: Non-operation
TRUNK OPEN DELAY	Trunk button pressing time on Intelligent Key button can be selected from the following with this mode. • 0.5 sec. • 1.5 sec. • OFF: Non-operation
LO- BATT OF KEY FOB WARN	Intelligent Key low battery warning mode can be changed to operate (ON) or not operate (OFF) with this mode.
KEYLESS FUNCTION	Door lock function with Intelligent Key can be changed to operate (ON) or not operate (OFF) with this mode.
ANTI KEY LOCK IN FUNCTI	Key reminder function mode can be changed to operate (ON) or not operate (OFF) with this mode.
HAZARD ANSWER BACK	Hazard reminder function mode can be selected from the following with this mode. • LOCK ONLY: Door lock operation only • UNLOCK ONLY: Door unlock operation only • LOCK AND UNLOCK: Lock/unlock operation • OFF: Non operation
ANS BACK I-KEY LOCK	Buzzer reminder function (lock operation) mode by door request switch (driver side and passenger side) can be selected from the following with this mode. • HORN CHIRP: Sound horn • BUZZER: Sound Intelligent Key warning buzzer • OFF: Non-operation
ANS BACK I-KEY UNLOCK	Buzzer reminder function (unlock operation) mode by door request switch can be changed to operate (ON) or not operate (OFF) with this mode.
SHORT CRANKING OUTPUT	Starter motor can operate during the times below. • 70 msec • 100 msec • 200 msec
INSIDE ANT DIAGNOSIS	This function allows inside key antenna self-diagnosis.
HORN WITH KEYLESS LOCK	Horn reminder function mode by Intelligent Key button can be changed to operate (ON) or not operate (OFF) with this mode.
AUTO LOCK SET	Auto door lock function mode can be changed to operate (ON) or not operate (OFF) with this mode.

SELF-DIAG RESULT

Refer to SEC-183, "DTC Index".

DATA MONITOR

Monitor Item	Condition
VEH SPEED 1	Display the vehicle speed signal received from combination meter by numerical value [Km/h].
VEH SPEED 2	Display the vehicle speed signal received from ABS or VDC or CVT by numerical value [Km/h].
RKE OPE COUN1	When remote keyless entry receiver receives the signal transmitted while operating on Intelligent Key, the numerical value start changing.
RKE OPE COUN2	**NOTE:** This item is displayed, but cannot be monitored.
REQ SW -DR	Indicates [ON/OFF] condition of door request switch (driver side).
REQ SW -AS	Indicates [ON/OFF] condition of door request switch (passenger side).
REQ SW -BD/TR	Indicates [ON/OFF] condition of trunk opener request switch.
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch.
IGN RLY2 -F/B	Indicates [ON/OFF] condition of ignition relay 2.
ACC RLY -F/B	Indicates [ON/OFF] condition of ACC relay.
CLUCH SW	Indicates [ON/OFF] condition of clutch switch.
BRAKE SW 1	Indicates [ON/OFF] condition of brake switch.
DETE/CANCL SW	Indicates [ON/OFF] condition of P position.
SFT PN/N SW	Indicates [ON/OFF] condition of P or N position.
S/L -LOCK	Indicates [ON/OFF] condition of steering lock (LOCK).
S/L -UNLOCK	Indicates [ON/OFF] condition of steering lock (UNLOCK).
S/L RELAY -F/B	Indicates [ON/OFF] condition of ignition switch.
UNLK SEN -DR	Indicates [ON/OFF] condition of driver door UNLOCK status.
PUSH SW -IPDM	Indicates [ON/OFF] condition of push-button ignition switch.
IGN RLY1 -F/B	Indicates [ON/OFF] condition of ignition relay 1.
DETE SW -IPDM	Indicates [ON/OFF] condition of P position.
SFT PN -IPDM	Indicates [ON/OFF] condition of P or N position.
SFT P -MET	Indicates [ON/OFF] condition of P position.
SFT N -MET	Indicates [ON/OFF] condition of N position.
ENGINE STATE	Indicates [STOP/START/CRANK/RUN] condition of engine states.
S/L LOCK-IPDM	Indicates [ON/OFF] condition of steering lock (LOCK).
S/L UNLK-IPDM	Indicates [ON/OFF] condition of steering lock (UNLOCK).
S/L RELAY-REQ	Indicates [ON/OFF] condition of steering lock relay.
DR DOOR STATE	Indicates [LOCK/READY/UNLK] condition of driver side door status.
AS DOOR STATE	Indicates [LOCK/READY/UNLK] condition of passenger side door status.
ID OK FLAG	Indicates [SET/RESET] condition of key ID.
PRMT ENG STRT	Indicates [SET/RESET] condition of engine start possibility.
PRMT RKE STRT	**NOTE:** This item is displayed, but cannot be monitored.
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.
TRNK/HAT MNTR	Indicates [ON/OFF] condition of trunk lid.
RKE-LOCK	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.
RKE-UNLOCK	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.
RKE-TR/BD	Indicates [ON/OFF] condition of TRUNK OPEN signal from Intelligent Key.
RKE-PANIC	Indicates [ON/OFF] condition of PANIC button of Intelligent Key.
RKE-P/W OPEN	Indicates [ON/OFF] condition of P/W DOWN signal from Intelligent Key.
RKE-MODE CHG	Indicates [ON/OFF] condition of MODE CHANGE signal from Intelligent Key.

ACTIVE TEST

Test item	Description
BATTERY SAVER	This test is able to check interior room lamp operation. The interior room lamp will be activated after “ON” on CONSULT-III screen is touched.
PW REMOTO DOWN SET	This test is able to check power window down operation. The power window down will be activated after “ON” on CONSULT-III screen is touched.
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation. Intelligent Key warning buzzer sounds when “ON” on CONSULT-III screen is touched.
INSIDE BUZZER	This test is able to check warning chime in combination meter operation. • Take away warning chime sounds when “TAKE OUT” on CONSULT-III screen is touched. • Key warning chime sounds when “KEY WARN” on CONSULT-III screen is touched. • P position warning chime sounds when “P RNG WARN” on CONSULT-III screen is touched. • ACC warning chime sounds when “ACC WARN” on CONSULT-III screen is touched.
INDICATOR	This test is able to check warning lamp operation. • “KEY” Warning lamp illuminates when “KEY IND ON” on CONSULT-III screen is touched. • “KEY” Warning lamp flashes when “KEY IND FSH” on CONSULT-III screen is touched.
INT LAMP	This test is able to check interior room lamp operation. The interior room lamp will be activated after “ON” on CONSULT-III screen is touched.
LCD	This test is able to check meter display information • Engine start information displays when “BRAKE/P” on CONSULT-III screen is touched. • Engine start information displays when “BRAKE/P/ON” on CONSULT-III screen is touched. • Key ID warning displays when “KEY ID NG” on CONSULT-III screen is touched. • Steering lock information displays when “STLCK RELES” on CONSULT-III screen is touched. • P position warning displays when “P RNG IND” on CONSULT-III screen is touched. • Intelligent Key insert information displays when “INSERT KEY” on CONSULT-III screen is touched. • Intelligent Key low battery warning displays when “KEY BAT LOW” on CONSULT-III screen is touched. • Take away through window warning displays when “TK AWAY WDW” on CONSULT-III screen is touched. • Take away warning display when “TAKE AWAY” on CONSULT-III screen is touched. • OFF position warning display when “IGN OFF WARN” on CONSULT-III screen is touched.
TRUNK/GLASS HATCH	This test is able to check trunk lid opener actuator open operation. This actuator opens when “ON” on CONSULT-III screen is touched.
FLASHER	This test is able to check security hazard lamp operation. The hazard lamps will be activated after “ON” on CONSULT-III screen is touched.
HORN	This test is able to check horn operation. The horn will be activated after “ON” on CONSULT-III screen is touched.
IGN CONT2	This test is able to check security hazard lamp operation. The hazard lamps will be activated after “ON” on CONSULT-III screen is touched.
P RANGE	This test is able to check A/T device power supply A/T device power is supplied when “ON” on CONSULT-III screen is touched.
ENGINE SW ILLUMI	This test is able to check push-ignition switch illumination operation. Push-ignition switch illumination illuminates when “ON” on CONSULT-III screen is touched.
LOCK INDCATOR	This test is able to check LOCK indicator in push-ignition switch operation. LOCK indicator in push-ignition switch illuminates when “ON” on CONSULT-III screen is touched.
ACC INDCATOR	This test is able to check ACC indicator in push-ignition switch operation. LOCK indicator in push-ignition switch illuminates when “ON” on CONSULT-III screen is touched.
IGNITION ON IND	This test is able to check INGITION ON indicator in push-ignition switch operation. LOCK indicator in push-ignition switch illuminates when “ON” on CONSULT-III screen is touched.
KEY SLOT ILLUMI	This test is able to check key slot illumination operation. Key slot illumination flash when “ON” on CONSULT-III screen is touched.

THEFT ALM

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

INFOID:0000000001699919

APPLICATION ITEM

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.

DATA MONITOR

Monitored Item	Description
REQ SW-DR	Indicates [ON/OFF] condition of door request switch (driver side).
REQ SW-AS	Indicates [ON/OFF] condition of door request switch (passenger side).
REQ SW-BD/TR	Indicates [ON/OFF] condition of trunk opener request switch.
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch
UNLK SEN-DR	Indicates [ON/OFF] condition of driver door UNLOCK status.
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch RH.
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
DOOR SW-BK	This is displayed even when it is not equipped.
CDL LOCK SW	Indicates [ON/OFF] condition of lock signal from door lock/unlock switch LH and RH.
CDL UNLOCK SW	Indicates [ON/OFF] condition of unlock signal from door lock/unlock switch LH and RH.
KEY CYL LK-SW	Indicates [ON/OFF] condition of lock signal from front door key cylinder switch.
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from front door key cylinder switch.
KEY CYL SW-TR	This is displayed even when it is not equipped.
TR/BD OPEN SW	Indicates [ON/OFF] condition of trunk lid opener switch.
TRNK/HAT MNTR	Indicates [ON/OFF] condition of trunk room lamp switch.
RKE-LOCK	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.
RKE-UNLOCK	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.
RKE-TR/BD	Indicates [ON/OFF] condition of TRUNK OPEN signal from Intelligent Key.

WORK SUPPORT

Test Item	Description
SECURITY ALARM SET	This mode is able to confirm and change security alarm ON-OFF setting.
THEFT ALM TRG	The switch which triggered vehicle security alarm is recorded. This mode is able to confirm and erase the record of vehicle security alarm. The trigger data can be erased by touching “CLEAR” on CONSULT-III screen.

ACTIVE TEST

Test Item	Description
THEFT IND	This test is able to check security indicator lamp operation. The lamp will be turned on when “ON” on CONSULT-III screen is touched.
VEHICLE SECURITY HORN	This test is able to check vehicle security horn operation. The horns will be activated for 0.5 seconds after “ON” on CONSULT-III screen is touched.

Test Item	Description
HEADLAMP(HI)	This test is able to check vehicle security lamp operation. The headlamps will be activated for 0.5 seconds after “ON” on CONSULT-III screen is touched.
FLASHER	This test is able to check vehicle security hazard lamp operation. The hazard lamps will be activated after “ON” on CONSULT-III screen is touched.

IMMU

IMMU : CONSULT-III Function (BCM - IMMU)

INFOID:0000000001699920

APPLICATION ITEM

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.

DATA MONITOR

Monitor item	Content
CONFRM ID ALL	Indicates [YET] at all time. Switch to [DONE] when a registered Intelligent Key is inserted into the key slot.
CONFIRM ID4	
CONFIRM ID3	
CONFIRM ID2	
CONFIRM ID1	
TP 4	Indicates the number of ID which has been registered.
TP 3	
TP 2	
TP 1	
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch.
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.

ACTIVE TEST

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

COMPONENT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:0000000001726786

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-25, "CAN Communication Signal Chart".

DTC Logic

INFOID:0000000001726787

DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC Detection Condition	Possible cause
U1000	CAN COMM CIRCUIT	When BCM cannot communicate CAN communication signal continuously for 2 seconds or more.	CAN communication system

Diagnosis Procedure

INFOID:0000000001726788

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-16, "Trouble Diagnosis Flow Chart".
NO >> Refer to GI-38, "Intermittent Incident".

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:0000000001726789

DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC Detection Condition	Possible cause
U1010	CONTROL UNIT (CAN)	BCM detected internal CAN communication circuit malfunction.	BCM

Diagnosis Procedure

INFOID:0000000001726790

1.REPLACE BCM

When DTC [U1010] is detected, replace BCM.

>> Replace BCM.

Special Repair Requirement

INFOID:0000000001726791

1.REQUIRED WORK WHEN REPLACING BCM

Initialize control unit. Refer to CONSULT-III operation manual NATS-IVIS/NVIS.

>> Work end.

P1610 LOCK MODE

Description

INFOID:0000000001700118

When the starting operation is carried more than five times consecutively under the following conditions, NATS will shift to the mode which prevents the engine from being started.
- Unregistered Intelligent Key is used.
- BCM or ECM's malfunctioning.

DTC Logic

INFOID:0000000001700119

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1610	LOCK MODE	When the starting operation is carried out five or more times consecutively under the following conditions. • Unregistered Intelligent Key • BCM or ECM's malfunctioning.	—

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-38, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000001700120

1.CHECK ENGINE START FUNCTION

1. Perform the check for DTC except DTC P1610.
2. Use CONSULT-III to erase DTC after fixing.
3. Turn ignition switch OFF.
4. Turn ignition switch ON when registered Intelligent Key insert into key slot and wait for 5 seconds.
5. Return the ignition switch OFF and wait 5 seconds.
6. Repeat steps 4 and 5 twice (total of 3 cycles).
7. Check that engine can start when registered Intelligent Key insert into key slot.

>> INSPECTION END

P1611 ID DISCORD, IMMU-ECM

Description

INFOID:0000000001699933

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:0000000001699934

DTC DETECTION LOGIC

NOTE:

- If DTC B1611 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-36, "DTC Logic".
- If DTC B1611 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-37, "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.

A/T models

- A/T selector lever is in the P or N position
- Do not depress brake pedal

M/T models

- Do not depress clutch pedal

2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-39, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000001726271

1.PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Re-register all Intelligent Keys.
For initialization and registration of Intelligent Key. Refer to “CONSULT-III Operation Manual NATS-IVIS/NVIS”.

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

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

2.REPLACE BCM

1. Replace BCM. Refer to BCS-79, "Removal and Installation"
2. Perform initialization with CONSULT-III.
   For initialization, refer to “CONSULT-III Operation Manual NATS-IVIS/NVIS”.

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

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

3.CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

P1612 CHAIN OF ECM-IMMU

Description

INFOID:0000000001699936

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:0000000001699937

DTC DETECTION LOGIC

NOTE:

- If DTC P1612 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-36, "DTC Logic".
- If DTC P1612 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-37, "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.

A/T models

- A/T selector lever is in the P or N position
- Do not depress brake pedal

M/T models

- Do not depress clutch pedal

2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-41, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000001699938

1.REPLACE BCM

1. Replace BCM. Refer to BCS-79, "Removal and Installation".
2. Perform initialization with CONSULT-III.
   For initialization, refer to “CONSULT-III Operation Manual NATS-IVIS/NVIS”.

Does the engine start?

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

2.REPLACE ECM

1. Replace ECM.
2. Refer to EC-16, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (ECM) : Description".

>> INSPECTION END

P1614 CHANIN OF IMMU-KEY

Description

INFOID:0000000001699927

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

DTC Logic

INFOID:0000000001699928

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1614	CHANIN OF IMMU-KEY	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-III.

Is DTC detected?

YES >> Go to SEC-42, "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-III.

Is DTC detected?

YES >> Go to SEC-42, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000001699929

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 connector.
3. Check voltage between key slot harness connector and ground.

Key slot		Ground	Voltage [V] (approx.)
Connector	Terminal		
M22	2	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace key slot.
NO >> GO TO 3.

3.CHECK KEY SLOT CIRCUIT

1. Disconnect BCM connector M122.
2. Check continuity between key slot harness connector and BCM harness connector.

Key slot		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M22	2	M122	80	Existed

3. Check continuity between key slot harness connector and ground.

Key slot		Ground	Continuity
Connector	Terminal		
M22	2	Ground	Not existed

Is the inspection result normal?

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

4. CHECK PUSH-BUTTON 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 connector.
3. Check voltage between key slot harness connector and ground.

Key slot		Ground	Voltage [V] (approx.)
Connector	Terminal		
M22	3	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace key slot.
NO >> GO TO 6.

6. CHECK KEY SLOT COMMUNICATION SIGNAL CIRCUIT

1. Disconnect BCM connector M122.
2. Check continuity between key slot harness connector and BCM harness connector.

Key slot		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M22	3	M122	81	Existed

3. Check continuity between key slot harness connector and ground.

Key slot		Ground	Continuity
Connector	Terminal		
M22	3	Ground	Not existed

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 connector.
3. Check continuity between key slot harness connector and ground.

Key slot		Ground	Continuity
Connector	Terminal		
M22	7	Ground	Existed

Is the inspection result normal?

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

8.CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

P1615 DIFFRENCE OF KEY

Description

INFOID:0000000001699930

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

DTC Logic

INFOID:0000000001699931

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. Press the push-button ignition switch.
2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-45, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000001699932

1.PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Re-register all Intelligent Keys.
For initialization and registration of Intelligent Key. Refer to “CONSULT-III Operation Manual NATS-IVIS/NVIS”.

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

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

2.REPLACE INTELLIGENT KEY

1. Replace Intelligent Key.
2. Perform initialization with CONSULT-III.
   For initialization and registration of Intelligent Key. Refer to “CONSULT-III Operation Manual NATS-IVIS/NVIS”.

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

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

3.CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

B2190 NATS ANTENNA AMP.

Description

INFOID:0000000001700103

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

DTC Logic

INFOID:0000000001700104

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-III.

Is DTC detected?

YES >> Go to SEC-46, "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-III.

Is DTC detected?

YES >> Go to SEC-46, "Diagnosis Procedure".
NO >> INSPECTION END.

Diagnosis Procedure

INFOID:0000000001700105

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 connector.
3. Check voltage between key slot harness connector and ground.

Key slot		Ground	Voltage [V] (approx.)
Connector	Terminal		
M22	2	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace key slot.
NO >> GO TO 3.

3.CHECK KEY SLOT CIRCUIT

1. Disconnect BCM connector M122.
2. Check continuity between key slot harness connector and BCM harness connector.

Key slot		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M22	2	M122	80	Existed

3. Check continuity between key slot harness connector and ground.

Key slot		Ground	Continuity
Connector	Terminal		
M22	2	Ground	Not existed

Is the inspection result normal?

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

4. CHECK PUSH-BUTTON 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 connector.
3. Check voltage between key slot harness connector and ground.

Key slot		Ground	Voltage [V] (approx.)
Connector	Terminal		
M22	3	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace key slot.
NO >> GO TO 6.

6. CHECK KEY SLOT COMMUNICATION SIGNAL CIRCUIT

1. Disconnect BCM connector M122.
2. Check continuity between key slot harness connector and BCM harness connector.

Key slot		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M22	3	M122	81	Existed

3. Check continuity between key slot harness connector and ground.

Key slot		Ground	Continuity
Connector	Terminal		
M22	3	Ground	Not existed

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 connector.
3. Check continuity between key slot harness connector and ground.

Key slot		Ground	Continuity
Connector	Terminal		
M22	7	Ground	Existed

Is the inspection result normal?

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

8. CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

B2191 DIFFERENCE OF KEY

Description

INFOID:0000000001700106

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

DTC Logic

INFOID:0000000001700107

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. Press the push-button ignition switch
2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-49, "Diagnosis Procedure".
NO >> INSPECTION END.

Diagnosis Procedure

INFOID:0000000001908457

1.PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Re-register all Intelligent Keys.
For initialization and registration of Intelligent Key. Refer to “CONSULT-III Operation Manual NATS-IVIS/NVIS”.

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

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

2.REPLACE INTELLIGENT KEY

1. Replace Intelligent Key.
2. Perform initialization with CONSULT-III.
   For initialization and registration of Intelligent Key. Refer to “CONSULT-III Operation Manual NATS-IVIS/NVIS”.

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

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

3.CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

B2192 ID DISCORD, IMMU-ECM

Description

INFOID:0000000001700109

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:0000000001700110

DTC DETECTION LOGIC

NOTE:

- If DTC B2192 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-36, "DTC Logic".
- If DTC B2192 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-37, "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.

A/T models

- A/T selector lever is in the P or N position
- Do not depress brake pedal

M/T models

- Do not depress clutch pedal

2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000001726272

1.PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Re-register all Intelligent Keys.
For initialization and registration of Intelligent Key. Refer to “CONSULT-III Operation Manual NATS-IVIS/NVIS”.

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

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

2.REPLACE BCM

1. Replace BCM. Refer to BCS-79, "Removal and Installation"
2. Perform initialization with CONSULT-III.
   For initialization, refer to “CONSULT-III Operation Manual NATS-IVIS/NVIS”.

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

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

3.CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

B2193 CHAIN OF ECM-IMMU

Description

INFOID:0000000001700112

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:0000000001700113

DTC DETECTION LOGIC

NOTE:

- If DTC B2193 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-36, "DTC Logic".
- If DTC B2193 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-37, "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.

A/T models

- A/T selector lever is in the P or N position
- Do not depress brake pedal

M/T models

- Do not depress clutch pedal

2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000001700114

1.REPLACE BCM

1. Replace BCM. Refer to BCS-79, "Removal and Installation".
2. Perform initialization with CONSULT-III.
   For initialization, refer to “CONSULT-III Operation Manual NATS-IVIS/NVIS”.

Does the engine start?

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

2.REPLACE ECM

1. Replace ECM.
2. Refer to EC-16, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (ECM) : Description".

>> INSPECTION END

B2195 ANTI-SCANNING

Description

INFOID:0000000001700115

When the ID of the remote control engine starter installed cannot be registered, anti-scanning operates and it may be possible that the engine can not start. In the case, obtain the customer approval to remove the remote control engine starter.

DTC Logic

INFOID:0000000001700116

DTC DETECTION LOGIC

NOTE:

- If DTC B2195 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-36, "DTC Logic".
- If DTC B2195 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-37, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2195	ANTI-SCANNING	The ID of the remote control engine starter installed cannot be registered.	Remote control engine starter

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000001700117

1.REMOVAL OF REMOTE CONTROL ENGINE STARTER

Remove remote control engine starter with the customer approval.

>> GO TO 2.

2.CHECK SELF DIAGNOSTIC RESULT

1. Turn ignition switch ON.
2. Perform “Self diagnostic result” with CONSULT-III.
3. Erase DTC.
4. Start the engine.

Does the engine start?

YES >> INSPECTION END
NO >> BCM is malfunctioning.
- Replace BCM, refer to BCS-79, "Removal and Installation"
- Perform initialization

B2013 ID DISCORD, IMMU-STRG

Description

INFOID:0000000001699939

BCM performs the ID verification with the steering lock unit and releases the steering lock if both BCM and steering lock unit ID are same. BCM starts the communication with the steering lock unit when Intelligent Key is carried into the passenger compartment and the push-button ignition switch is pressed.

DTC Logic

INFOID:0000000001699940

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2013	ID DISCORD, IMMU-STRG	The ID verification results between BCM and steering control unit are NG. The registration is necessary.	• Steering lock unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Lock steering.
2. Press the push-button ignition switch.
3. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000001726273

1.PERFORM INITIALIZATION

Perform initialization with CONSULT-III.
For initialization, refer to “CONSULT-III Operation Manual NATS-IVIS/NVIS”.

Does steering lock operate?

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

2.REPLACE STEERING LOCK UNIT

1. Replace steering lock unit.
2. Perform initialization with CONSULT-III.
   For initialization, refer to “CONSULT-III Operation Manual NATS-IVIS/NVIS”.

Does steering lock operate?

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

3.CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

B2014 CHAIN OF STRG-IMMU

Description

INFOID:0000000001699942

BCM performs the ID verification with the steering lock unit to release the steering. BCM starts the communication with the steering lock unit when Intelligent Key is carried into the passenger compartment and the push-button ignition switch is pressed.

DTC Logic

INFOID:0000000001699943

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2014	CHAIN OF STRG-IMMU	Inactive communication between steering control unit and BCM	• Harness or connectors (steering lock unit circuit is open or shorted) • Steering lock unit • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Lock steering.
2. Press the push-button ignition switch.
3. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000001699944

1.CHECK STEERING LOCK UNIT POWER SUPPLY

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

Steering lock unit		Ground	Ignition switch position	Voltage [V]
Connector	Terminal			
M40	7	Ground	OFF or ACC	Battery voltage
			ON	0

Is the inspection normal?

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

2.CHECK STEERING LOCK UNIT POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector M122.
3. Check continuity between steering lock unit harness connector and BCM harness connector.

Steering lock unit		BCM		Continuity
Connector	Terminal	connector	Terminal	
M40	7	M122	106	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	7	Ground	Not existed

Is the inspection normal?

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

3.CHECK STEERING LOCK UNIT GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between steering lock unit and ground.

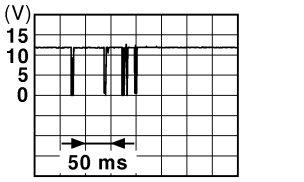
Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	5	Ground	Existed
	6		

Is the inspection normal?

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

4.CHECK STEERING LOCK UNIT COMMUNICATION SIGNAL

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

Steering lock unit		Ground	Steering lock unit condition	Value
Connector	Terminal			
M40	2	Ground	Lock	Battery voltage
			Lock or unlock	 JMKIA0066GB
			For 15 seconds after unlock	Battery voltage
			15 seconds or later after unlock.	0 V

Steering is locked : Opening the door when ignition switch is ON to OFF.
Steering is unlocked : Ignition switch is OFF to ACC.

Is the inspection normal?

YES >> Replace steering lock unit.
NO >> GO TO 5.

5.CHECK STEERING LOCK UNIT COMMUNICATION CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect steering lock unit and BCM connector M122.
3. Check continuity between steering lock unit harness connector and BCM harness connector.

Steering lock unit		BCM		Continuity
Connector	Terminal	connector	Terminal	
M40	2	M122	111	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	2	Ground	Not existed

Is the inspection normal?

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

6. CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END.

B2555 STOP LAMP

Description

INFOID:0000000001699945

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:0000000001699946

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-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000001699947

1.CHECK STOP LAMP SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect BCM connector M123.
3. Check voltage between BCM harness connector and ground.

BCM		Ground	Voltage [V]
Connector	Terminal		
M123	116	Ground	Battery voltage

Is the inspection normal?

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

2.CHECK STOP LAMP SWITCH POWER SUPPLY CIRCUIT

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

Stop lamp switch		Ground	Voltage [V]
Connector	Terminal		
M110	1	Ground	Battery voltage

Is the inspection result normal?

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

3.CHECK STOP LAMP SWITCH CIRCUIT

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

Stop lamp switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E110	2	M123	118	Existed

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

Stop lamp switch		Ground	Continuity
Connector	Terminal		
E110	2	Ground	Not existed

Is the inspection result normal?

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

4.CHECK STOP LAMP SWITCH

Refer to SEC-59, "Component Inspection".

Is the inspection result normal?

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

5.CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END.

Component Inspection

INFOID:0000000001699948

1.CHECK STOP LAMP SWITCH

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

Stop lamp switch			Condition		Continuity
Connector	Terminal				
E110	1	2	Brake pedal	Not depressed	Not existed
				Depressed	Existed

Is the inspection result normal?

YES >> INSPECTION END.
NO >> Replace stop lamp switch.

B2556 PUSH-BUTTON IGNITION SWITCH

Description

INFOID:0000000001699949

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:0000000001699950

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-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000001699951

1.CHECK PUSH-BUTTON IGNITION SWITCH INPUT SIGNAL

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

Push-button ignition switch		Ground	Voltage [V]
Connector	Terminal		
M50	4	Ground	Battery voltage

Is the inspection normal?

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

2.CHECK PUSH-BUTTON IGNITION SWITCH

Refer to SEC-61, "Component Inspection".

Is the inspection normal?

YES >> GO TO 3.
NO >> Replace push-button ignition switch. Refer to SEC-228, "Removal and Installation".

3.CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END.

4.CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT FOR SHORT

1. Disconnect BCM connector M122 and IPDM E/R connector E5.
2. Check continuity between push-button ignition switch harness connector and ground.

Push-button ignition switch		Ground	Continuity
Connector	Terminal		
M50	4	Ground	Not existed

Is the inspection normal?

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

Component Inspection

INFOID:0000000001699952

1. CHECK PUSH-BUTTON IGNITION SWITCH

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

Push-button ignition switch			Condition	Continuity
Connector	Terminal			
M50	1	4	Pressed	Existed
			Not pressed	Not existed

Is the inspection result normal?

YES >> INSPECTION END.
NO >> Replace push-button ignition switch.

B2557 VEHICLE SPEED

Description

INFOID:0000000001699953

BCM receives the 2 vehicle speed signals via CAN communication. 1 signal is transmitted by the “unified meter and A/C amp.” Another signal is transmitted by “ABS actuator and electric unit (control unit)”. BCM compares both signals to detect the vehicle speed.

DTC Logic

INFOID:0000000001699954

DTC DETECTION LOGIC

NOTE:

- If DTC B2557 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-36, "DTC Logic".
- If DTC B2557 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-37, "DTC Logic".

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B2557	VEHICLE SPEED	BCM detects the following difference between the vehicle speed from “unified meter and A/C amp” and the one from “ABS actuator and electric unit” for 10 seconds continuously • One is 10 km/h (6.2 MPH) or more and the other is 4 km/h (2.5 MPH) or less.	• Wheel sensor • Unified meter and A/C amp. • 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 (6.2 MPH) or more and wait for at least 10 seconds.
2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000001699955

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

Check “Self diagnostic result” with CONSULT-III. Refer to BRC-88, "DTC No. Index".

Is the inspection result normal?

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

2.CHECK DTC WITH “UNIFIED METER AND A/C AMP.”

Check “Self diagnostic result” with CONSULT-III. Refer to MWI-100, "DTC Index".

>> INSPECTION END.

B2560 STARTER CONTROL RELAY

Description

INFOID:0000000001699956

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

DTC Logic

INFOID:0000000001699957

DTC DETECTION LOGIC

NOTE:

- If DTC B2560 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-36, "DTC Logic".
- If DTC B2560 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-37, "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.

A/T models

- A/T selector lever is in the P or N position
- Do not depress brake pedal

M/T models

- Do not depress clutch pedal

2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000001699958

1.CHECK DTC WITH IPDM E/R

Check “Self diagnostic result” with CONSULT-III. Refer to PCS-32, "DTC Index".

Is the inspection result normal?

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

2.CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END.

B2601 SHIFT POSITION

Description

INFOID:0000000001699959

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

DTC Logic

INFOID:0000000001699960

DTC DETECTION LOGIC

NOTE:
- If DTC B2601 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-36, "DTC Logic".
- If DTC B2601 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-37, "DTC Logic".
- If DTC B2601 is displayed with DTC B2603, first perform the trouble diagnosis for DTC B2603. Refer to SEC-74, "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 (A/T device circuit is open or shorted.) • A/T device (detention switch)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Go to SEC-64, "Diagnosis Procedure".
NO >> INSPECTION END.

Diagnosis Procedure

INFOID:0000000001699961

1.CHECK A/T DEVICE POWER SUPPLY

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

A/T device (detention switch)		Ground	Voltage [V]
Connector	Terminal		
M137	10	Ground	Battery voltage

Is the inspection result normal?

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

2.CHECK A/T DEVICE POWER SUPPLY CIRCUIT

1. Disconnect BCM connector M122.
2. Check continuity between A/T device (detention switch) harness connector and BCM harness connector.

A/T device (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M137	10	M122	96	Existed

3. Check continuity between A/T device (detention switch) harness connector and ground.

A/T device (detention switch)		Ground	Continuity
Connector	Terminal		
M137	10	Ground	Not existed

Is the inspection result normal?

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

3.CHECK A/T DEVICE CIRCUIT (BCM)

1. Disconnect BCM connector M122 and IPDM E/R connector E6.
2. Check continuity between A/T device (detention switch) harness connector and BCM harness connector.

A/T device (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M137	11	M122	99	Existed

3. Check continuity between A/T device (detention switch) harness connector and ground.

A/T device (detention switch)		Ground	Continuity
Connector	Terminal		
M137	11	Ground	Not existed

Is the inspection result normal?

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

4.CHECK A/T DEVICE CIRCUIT (IPDM E/R)

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

A/T device (detention switch)		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M137	11	E6	43	Existed

2. Check continuity between A/T device (detention switch) harness connector and ground.

A/T device (detention switch)		Ground	Continuity
Connector	Terminal		
M137	11	Ground	Not existed

Is the inspection result normal?

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

5.CHECK A/T DEVICE

Refer to SEC-66, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace A/T device. Refer to TM-227, "Removal and Installation"

6.CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END.

Component Inspection

INFOID:0000000001699962

1.CHECK A/T DEVICE (DETENTION SWITCH)

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

A/T device (detention switch)			Condition		Continuity
Connector	Terminal				
M137	10	11	A/T selector lever	P position	Not existed
				Other than above	Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace A/T device. Refer to TM-227, "Removal and Installation".

B2602 SHIFT POSITION

Description

INFOID:0000000001699963

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

DTC Logic

INFOID:0000000001699964

DTC DETECTION LOGIC

NOTE:
- If DTC B2602 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-36, "DTC Logic".
- If DTC B2602 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-37, "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 4 km/h (2.5 MPH) or more • Ignition switch is in the ON position	• Harness or connectors (A/T device circuit is open or shorted) • A/T device (detention switch) • ABS actuator and electric unit (control unit)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine under the following conditions and wait for at least 10 seconds.
- A/T selector lever is in the P or N position
- Depress the brake pedal.
2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-67, "Diagnosis Procedure".
NO >> INSPECTION END.

Diagnosis Procedure

INFOID:0000000001699965

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

Check “Self diagnostic result” with CONSULT-III. Refer to BRC-88, "DTC No. Index".

Is the inspection result normal?

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

2.CHECK A/T DEVICE POWER SUPPLY

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

A/T device (detention switch)		Ground	Voltage [V]
Connector	Terminal		
M137	10	Ground	Battery voltage

Is the inspection result normal?

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

3.CHECK A/T DEVICE POWER SUPPLY CIRCUIT

1. Disconnect BCM connector M122.
2. Check continuity between A/T device (detention switch) harness connector and BCM harness connector.

A/T device (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M137	10	M122	96	Existed

3. Check continuity between A/T device (detention switch) harness connector and ground.

A/T device (detention switch)		Ground	Continuity
Connector	Terminal		
M137	10	Ground	No existed

Is the inspection result normal?

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

4.CHECK A/T DEVICE CIRCUIT

1. Disconnect BCM connector M122 and IPDM E/R connector E6.
2. Check continuity between A/T device (detention switch) harness connector and BCM harness connector.

A/T device (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M137	11	M122	99	Existed

3. Check continuity between A/T device (detention switch) harness connector and ground.

A/T device (detention switch)		Ground	Continuity
Connector	Terminal		
M137	11	Ground	No existed

Is the inspection result normal?

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

5.CHECK A/T DEVICE

Refer to SEC-66, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Replace A/T device. Refer to TM-227, "Removal and Installation".

6.CHECK INTERMITTETNT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END.

B2603 SHIFT POSITION STATUS

Description

INFOID:0000000001699966

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

DTC Logic

INFOID:0000000001699967

DTC DETECTION LOGIC

NOTE:
- If DTC B2603 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-36, "DTC Logic".
- If DTC B2603 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-37, "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. • Park/neutral position (PNP) switch: approx. 0V • A/T device (detention switch): approx 0V	• Harness or connector (A/T device circuit is open or shorted.) • Harness or connectors [Park/neutral position (PNP) switch circuit is open or shorted.] • A/T device (detention switch) • Park/neutral position (PNP) switch

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine under the following conditions and wait for at least 1 second.
- A/T selector lever is in the P position.
- Do not depress the brake pedal.
2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000001699968

1.CHECK DTC WITH TCM

Check “Self diagnostic result” with CONSULT-III. Refer to TM-186, "DTC Index".

Is the inspection result normal?

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

2.CHECK PNP SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect A/T assembly connector and BCM connector M123.
3. Check continuity between A/T assembly harness connector and BCM harness connector.

A/T assembly		BCM		Continuity
Connector	Terminal	Connector	Terminal	
F151	9	M123	140	Existed

4. Check continuity between A/T assembly harness connector and ground.

A/T assembly		Ground	Continuity
Connector	Terminal		
F151	9	Ground	Not existed

Is the inspection result normal?

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

3. CHECK A/T DEVICE POWER SUPPLY

1. Disconnect A/T device (detention switch) connector.
2. Check voltage between A/T device (detention switch) harness connector and ground.

A/T device (detention switch)		Ground	Voltage [V]
Connector	Terminal		
M137	10	Ground	Battery voltage

Is the inspection result normal?

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

4. CHECK A/T DEVICE POWER SUPPLY CIRCUIT

1. Disconnect BCM connector M122.
2. Check continuity between A/T device (detention switch) harness connector and BCM harness connector.

A/T device (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M137	10	M122	96	Existed

3. Check continuity between A/T device (detention switch) harness connector and ground.

A/T device (detention switch)		Ground	Continuity
Connector	Terminal		
M137	10	Ground	Not existed

Is the inspection result normal?

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

5. CHECK A/T DEVICE CIRCUIT

1. Disconnect BCM connector M122 and IPDM E/R connector E6.
2. Check continuity between A/T device (detention switch) harness connector and BCM harness connector.

A/T device (detention switch)		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M137	11	M122	99	Existed

3. Check continuity between A/T device (detention switch) harness connector and ground.

A/T device (detention switch)		Ground	Continuity
Connector	Terminal		
M137	11	Ground	Not existed

Is the inspection result normal?

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

6. CHECK A/T DEVICE

Refer to SEC-66, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 7.
NO >> Replace A/T device. Refer to TM-227, "Removal and Installation".

7. CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

B2604 PNP SWITCH

Description

INFOID:0000000001699969

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

DTC Logic

INFOID:0000000001699970

DTC DETECTION LOGIC

NOTE:
- If DTC B2604 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-36, "DTC Logic".
- If DTC B2604 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-37, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2604	PNP SWITCH	BCM detects the following status for 500 ms or more when the ignition switch is in the ON position. • N position input signal exists. Shift position signal from TCM does not exist. • N position input signal does not exist. Shift position signal from TCM exists.	• Harness or connectors [Park/neutral position (PNP) switch circuit is open or shorted.] • Park/ neutral position (PNP) switch

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine under the following conditions and wait for at least 1 second.
- A/T selector lever is in the P or N position
- Do not depress the brake pedal
2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-72, "Diagnosis Procedure".
NO >> INSPECTION END.

Diagnosis Procedure

INFOID:0000000001699971

1.CHECK DTC WITH TCM

Check “Self diagnostic result” with CONSULT-III. Refer to TM-186, "DTC Index".

Is the inspection result normal?

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

2.CHECK PNP SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect A/T assembly connector and BCM connector M123.
3. Check continuity between A/T assembly harness connector and BCM harness connector.

A/T assembly		BCM		Continuity
Connector	Terminal	Connector	Terminal	
F51	9	M123	140	Existed

4. Check continuity between A/T assembly harness connector and ground.

A/T assembly		Ground	Continuity
Connector	Terminal		
F51	9	Ground	Not existed

Is the inspection result normal?

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

3. CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END.

B2605 PNP SWITCH

Description

INFOID:0000000001699972

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

DTC Logic

INFOID:0000000001699973

DTC DETECTION LOGIC

NOTE:
- If DTC B2605 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-36, "DTC Logic".
- If DTC B2605 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-37, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2605	PNP 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 [Park/neutral position (PNP) switch circuit is open or shorted.] • Park/neutral position (PNP) 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.
- A/T selector lever is in the P or N position
- Do not depress the brake pedal.
2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-74, "Diagnosis Procedure".
NO >> INSPECTION END.

Diagnosis Procedure

INFOID:0000000001699974

1.CHECK DTC WITH IPDM E/R

Check “Self diagnostic result” with CONSULT-III. Refer to SEC-214, "DTC Index".

Is the inspection result normal?

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

2.CHECK PNP SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect A/T assembly connector and BCM connector M123.
3. Check continuity between A/T assembly connector and BCM harness connector.

A/T assembly		BCM		Continuity
Connector	Terminal	Connector	Terminal	
F51	9	M123	140	Existed

4. Check continuity between A/T assembly harness connector and ground.

A/T assembly		Ground	Continuity
Connector	Terminal		
F51	9	Ground	Not existed

Is the inspection result normal?

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

3. CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END.

B2606 STEERING LOCK RELAY

Description

INFOID:0000000001699975

The steering lock relay ON signal is transmitted to IPDM E/R by BCM via CAN communication.
IPDM E/R turns the steering lock relay ON and transmits the release of the steering to BCM.

DTC Logic

INFOID:0000000001699976

DTC DETECTION LOGIC

NOTE:

- If DTC B2606 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-36, "DTC Logic".
- If DTC B2606 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-37, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2606	STEERING LOCK RELAY	BCM detects that there is a mismatch between the following statuses. • Steering lock unit ON signal transmitted by IPDM E/R • The steering lock unit status feedback	• Steering lock relay (in IPDM E/R)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press the push-button ignition switch under the following conditions.

A/T models

- A/T selector lever is in the P or N position
- Do not depress brake pedal

M/T models

- Do not depress clutch pedal

2. Steering is locked.
3. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000001699977

1.CHECK DTC WITH IPDM E/R

Check “Self diagnostic result” with CONSULT-III. Refer to SEC-214, "DTC Index".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".

2.INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

B2607 STEERING LOCK RELAY

Description

INFOID:0000000001699978

BCM requests to IPDM E/R to supply power to steering lock unit. After receiving the power, the steering lock unit transmits an ON signal to BCM.

DTC Logic

INFOID:0000000001699979

DTC DETECTION LOGIC

NOTE:

- If DTC B2607 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-36, "DTC Logic".
- If DTC B2607 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-37, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2607	STEERING LOCK RELAY	BCM detects that there is a difference between the following statuses. • Steering lock unit ON signal transmitted by IPDM E/R • The steering lock unit status feedback	• Harness or connectors (steering lock unit power supply circuit is open or shorted) • Steering lock relay (in IPDM E/R)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press the push-button ignition switch under the following conditions.

A/T models

- A/T selector lever is in the P or N position
- Do not depress brake pedal

M/T models

- Do not depress clutch pedal
2. Steering lock is locked.
3. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000001699980

1.CHECK DTC WITH IPDM E/R

Check “Self diagnostic result” with CONSULT-III. Refer to SEC-214, "DTC Index".

Is the inspection result normal?

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

2.CHECK STEERING LOCK UNIT POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect steering lock unit harness connector.
3. Check voltage between steering lock unit and ground under the following conditions.

Steering lock unit		Ground	Condition	Voltage (V)
Connector	Terminal			
M40	1	Ground	Press push-button ignition switch when steering lock is in lock condition.	Battery voltage

Is the inspection result normal?

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

3. CHECK STEERING LOCK UNIT POWER SUPPLY CIRCUIT

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

Steering lock unit		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M40	1	E5	11	Existed

4. Check continuity between steering lock unit and ground.

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	1	Ground	Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".
NO >> Repair harness or connector.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END.

B2608 STARTER RELAY

Description

INFOID:0000000001699981

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:0000000001699982

DTC DETECTION LOGIC

NOTE:

- If DTC B2608 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-36, "DTC Logic".
- If DTC B2608 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-37, "DTC Logic".
- If DTC B2608 is displayed with DTC B210D for IPDM E/R, first perform the trouble diagnosis for DTC B210D. Refer to SEC-109, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2608	STARTER RELAY	BCM 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.

A/T models

- A/T selector lever is in the P or N position
- Do not depress brake pedal

M/T models

- Do not depress clutch pedal

2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000001699983

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				
M121	52	Ground	A/T selector lever	N or P position	Battery voltage
				Other than above	0
			Clutch pedal	Not depressed	0
				Depressed	Battery voltage

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 connector M121 and IPDM E/R connector E6.
3. Check continuity between IPDM E/R harness connector and BCM harness connector.

IPDM E/R		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E6	46	M121	52	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E6	46	Ground	Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".
NO >> Repair harness or connector.

3.CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

B2609 STEERING STATUS

Description

INFOID:0000000001699984

There are 2 switches in the steering lock unit (steering lock/unlock switch 1 and 2). BCM compares those 2 switches conditions to judge the present steering status.

DTC Logic

INFOID:0000000001699985

DTC DETECTION LOGIC

NOTE:

- If DTC B2609 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-36, "DTC Logic".
- If DTC B2609 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-37, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2609	STEERING STATUS	BCM detects the malfunction of steering lock unit switches for 1 second.	• Harness or connectors [steering lock unit circuit (BCM side) is open or shorted] • Harness or connectors [steering lock unit circuit (IPDM E/R side) is open or shorted.] • Steering lock unit • IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.

A/T models

- A/T selector lever is in the P or N position
- Do not depress brake pedal

M/T models

- Do not depress clutch pedal

2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-81, "Diagnosis Procedure".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE 2

1. Turn ignition switch ON.
2. Turn ignition switch OFF.
3. Press driver side door switch and wait for at least 1 second.
4. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000001699986

1.INSPECTION START

Check the case in which DTC is detected.

- Case1: It is detected after ignition switch is changed from OFF to ON
- Case2: It is detected after ignition switch is changed from ON to OFF and door switch is pressed

In which case is DTC detected?

Case1 >> GO TO 2.

Case2 >> GO TO 6.

2.CHECK BCM OUTPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect steering lock unit connector and IPDM E/R connector E5.
3. Check voltage between steering lock unit harness connector and ground.

Steering lock unit		Ground	Voltage [V]
Connector	Terminal		
M40	8	Ground	Battery voltage

Is the inspection result normal?

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

3.CHECK STEERING LOCK UNIT CIRCUIT-1

1. Disconnect BCM connector M122.
2. Check continuity between steering lock unit harness connector and BCM harness connector.

Steering lock unit		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M40	8	M122	98	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	8	Ground	Not existed

Is the inspection result normal?

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

4.CHECK IPDM E/R OUTPUT SIGNAL

1. Connect IPDM E/R connector E5.
2. Disconnect BCM connector M122.
3. Check voltage between steering lock unit harness connector and ground.

Steering lock unit		Ground	Voltage [V]
Connector	Terminal		
M40	8	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace steering lock unit.
NO >> GO TO 5.

5.CHECK STEERING LOCK UNIT CIRCUIT-2

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

Steering lock unit		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M40	8	E5	33	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	8	Ground	Not existed

Is the inspection result normal?

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

6.CHECK BCM OUTPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect steering lock unit connector and IPDM E/R harness connector E5.
3. Check voltage between steering lock unit harness connector and ground.

Steering lock unit		Ground	Voltage [V]
Connector	Terminal		
M40	3	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 8.
NO >> GO TO 7.

7.CHECK STEERING LOCK UNIT CIRCUIT-3

1. Disconnect BCM connector M122.
2. Check continuity between steering lock unit harness connector and BCM harness connector.

Steering lock unit		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M40	3	M122	97	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	3	Ground	Not existed

Is the inspection result normal?

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

8.CHECK IPDM E/R OUTPUT SIGNAL

1. Connect IPDM E/R connector E5.
2. Disconnect BCM connector M122.
3. Check voltage between steering lock unit harness connector and ground.

Steering lock unit		Ground	Voltage [V]
Connector	Terminal		
M40	3	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace steering lock unit.
NO >> GO TO 9.

9.CHECK STEERING LOCK UNIT CIRCUIT-4

1. Disconnect IPDM E/R connector E5.
2. Check continuity between steering lock unit harness connector and IPDM E/R harness connector.

Steering lock unit		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M40	3	E5	32	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	3	Ground	Not existed

Is the inspection result normal?

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

10. CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

B260B STEERING LOCK UNIT

Description

INFOID:0000000001699987

The steering lock unit performs the check by itself according to the steering status.

DTC Logic

INFOID:0000000001699988

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260B	STEERING LOCK UNIT	BCM detects malfunctioning of steering lock unit before steering unlocking.	• Steering lock unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press the push-button ignition switch, when steering is locked.
2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000001699989

1.INSPECTION START

1. Turn ignition switch ON.
2. Check “Self diagnostic result” with CONSULT-III.
3. Touch “ERASE”.
4. **Perform DTC Confirmation Procedure.**
   See SEC-85, "DTC Logic".

Is the DTC B260B displayed again?

YES >> Replace steering lock unit.
NO >> INSPECTION END.

B260C STEERING LOCK UNIT

Description

INFOID:0000000001699990

The steering lock unit performs the check by itself according to the steering status.

DTC Logic

INFOID:0000000001699991

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260C	STEERING LOCK UNIT	BCM detects malfunctioning of steering lock unit before steering locking.	• Steering lock unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Turn ignition switch OFF.
3. Press driver side door switch.
4. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-86, "Diagnosis Procedure".
NO >> INSPECTION END.

Diagnosis Procedure

INFOID:0000000001699992

1.INSPECTION START

1. Turn ignition switch ON.
2. Check “Self diagnostic result” with CONSULT-III.
3. Touch “ERASE”.
4. **Perform DTC Confirmation Procedure.**
   See SEC-86, "DTC Logic".

Is the DTC B260C displayed again?

YES >> Replace steering lock unit.
NO >> INSPECTION END.

B260D STEERING LOCK UNIT

Description

INFOID:0000000001699993

The steering lock unit performs the check by itself according to the steering lock status (before lock, after lock and unlock).

DTC Logic

INFOID:0000000001699994

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260D	STEERING LOCK UNIT	BCM detects malfunctioning of steering lock unit after steering locking.	• Steering lock unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Turn ignition switch OFF.
3. Press driver side door switch.
4. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-87, "Diagnosis Procedure".
NO >> INSPECTION END.

Diagnosis Procedure

INFOID:0000000001699995

1.INSPECTION START

1. Turn ignition switch ON.
2. Check “Self diagnostic result” with CONSULT-III.
3. Touch “ERASE”.
4. **Perform DTC Confirmation Procedure.**
   See SEC-87, "DTC Logic".

Is the DTC B260D displayed again?

YES >> Replace steering lock unit.
NO >> INSPECTION END.

B260F ENGINE STATUS

Description

INFOID:0000000001699996

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

DTC Logic

INFOID:0000000001699997

DTC DETECTION LOGIC

NOTE:

- If DTC B260F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-36, "DTC Logic".
- If DTC B260F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-37, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260F	INTERRUPTION OF ENGINE STATUS SIGNAL	BCM is 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.

A/T models

- A/T selector lever is in the P or N position
- Do not depress brake pedal

M/T models

- Do not depress clutch pedal

2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000001699998

1.INSPECTION START

1. Turn ignition switch ON.
2. Check “Self diagnostic result” with CONSULT-III.
3. Touch “ERASE”.
4. **Perform DTC Confirmation Procedure.**
   See SEC-88, "DTC Logic".

Is the DTC B260F displayed again?

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

2.REPLACE ECM

1. Replace ECM.
2. Refer to EC-16, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (ECM) : Description".

>> INSPECTION END

3.CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

B26E1 NO RECEPTION OF ENGINE STATUS SIGNAL

Description

INFOID:0000000001699999

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

DTC Logic

INFOID:0000000001700000

DTC DETECTION LOGIC

NOTE:

- If DTC B26E1 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-36, "DTC Logic".
- If DTC B26E1 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-37, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260F	NO RECEPTION OF ENGINE STATUS SIGNAL	BCM does not receive 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.

A/T models

- A/T selector lever is in the P or N position
- Do not depress brake pedal

M/T models

- Do not depress clutch pedal

2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000001700001

1.INSPECTION START

1. Turn ignition switch ON.
2. Check “Self diagnostic result” with CONSULT-III.
3. Touch “ERASE”.
4. **Perform DTC Confirmation Procedure.**
   See SEC-89, "DTC Logic".

Is the DTC B26E1 displayed again?

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

2.REPLACE ECM

1. Replace ECM.
2. Refer to EC-16, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (ECM) : Description".

>> INSPECTION END

3.CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

B2612 STEERING STATUS

Description

INFOID:0000000001700002

There are 2 switches in the steering unit. IPDM E/R compares those 2 switches conditions to judge the present steering status and transmit the result to BCM via CAN communication.

DTC Logic

INFOID:0000000001700003

DTC DETECTION LOGIC

NOTE:

- If DTC B2612 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-36, "DTC Logic".
- If DTC B2612 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-37, "DTC Logic".

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B2612	STEERING STATUS	BCM detects the mismatch between the following status for 1 second • Steering lock or unlock • Feedback of steering lock status from IPDM E/R (CAN)	• Harness or connectors [steering lock unit circuit (BCM side) is open or shorted] • Harness or connectors [steering lock unit circuit (IPDM E/R side) is open or shorted.] • Steering lock unit • IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.

A/T models

- A/T selector lever is in the P or N position
- Do not depress brake pedal

M/T models

- Do not depress clutch pedal

2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-90, "Diagnosis Procedure".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE 2

1. Turn ignition switch ON.
2. Turn ignition switch OFF.
3. Press door switch.
4. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-90, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000001705132

1.INSPECTION START

Check the case in which DTC is detected.

- Case1: It is detected after ignition switch is changed from OFF to ON
- Case2: It is detected after ignition switch is changed from ON to OFF and door switch is pressed

In which case is DTC detected?

Case1 >> GO TO 2.

Case2 >> GO TO 6.

2.CHECK BCM OUTPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect steering lock unit connector and IPDM E/R connector E5.
3. Check voltage between steering lock unit harness connector and ground.

Steering lock unit		Ground	Voltage [V]
Connector	Terminal		
M40	8	Ground	Battery voltage

Is the inspection result normal?

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

3.CHECK STEERING LOCK UNIT CIRCUIT-1

1. Disconnect BCM connector M122.
2. Check continuity between steering lock unit harness connector and BCM harness connector.

Steering lock unit		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M40	8	M122	98	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	8	Ground	Not existed

Is the inspection result normal?

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

4.CHECK IPDM E/R OUTPUT SIGNAL

1. Connect IPDM E/R connector E5.
2. Disconnect BCM connector M122.
3. Check voltage between steering lock unit harness connector and ground.

Steering lock unit		Ground	Voltage [V]
Connector	Terminal		
M40	8	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace steering lock unit.
NO >> GO TO 5.

5.CHECK STEERING LOCK UNIT CIRCUIT-2

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

Steering lock unit		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M40	8	E5	33	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	8	Ground	Not existed

Is the inspection result normal?

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

6.CHECK BCM OUTPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect steering lock unit connector and IPDM E/R harness connector E5.
3. Check voltage between steering lock unit harness connector and ground.

Steering lock unit		Ground	Voltage [V]
Connector	Terminal		
M40	3	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 8.
NO >> GO TO 7.

7.CHECK STEERING LOCK UNIT CIRCUIT-3

1. Disconnect BCM connector M122.
2. Check continuity between steering lock unit harness connector and BCM harness connector.

Steering lock unit		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M40	3	M122	97	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	3	Ground	Not existed

Is the inspection result normal?

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

8.CHECK IPDM E/R OUTPUT SIGNAL

1. Connect IPDM E/R connector E5.
2. Disconnect BCM connector M122.
3. Check voltage between steering lock unit harness connector and ground.

Steering lock unit		Ground	Voltage [V]
Connector	Terminal		
M40	3	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace steering lock unit.
NO >> GO TO 9.

9.CHECK STEERING LOCK UNIT CIRCUIT-4

1. Disconnect IPDM E/R connector E5.
2. Check continuity between steering lock unit harness connector and IPDM E/R harness connector.

Steering lock unit		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M40	3	E5	32	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	3	Ground	Not existed

Is the inspection result normal?

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

10. CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

B2617 STARTER RELAY CIRCUIT

Description

INFOID:0000000001700005

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:0000000001700006

DTC DETECTION LOGIC

NOTE:

- If DTC B2617 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-36, "DTC Logic".
- If DTC B2617 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-37, "DTC Logic".
- If DTC B2617 is displayed with DTC B2611, first perform the trouble diagnosis for DTC B2611. Refer to PCS-54, "DTC Logic".
- If DTC B2617 is displayed with DTC B210E for IPDM E/R, first perform the trouble diagnosis for DTC B210E. Refer to SEC-110, "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	• 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.

A/T models

- A/T selector lever is in the P or N position
- Do not depress brake pedal

M/T models

- Do not depress clutch pedal

2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000001700007

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				
M121	52	Ground	A/T selector lever	N or P position	Battery voltage
				Other than above	0
			Clutch pedal	Not depressed	0
				Depressed	Battery voltage

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 connector M121 and IPDM E/R connector E6.
3. Check continuity between IPDM E/R harness connector and BCM harness connector.

IPDM E/R		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E6	46	M121	52	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E6	46	Ground	Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".
NO >> Repair harness or connector.

3.CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

B2619 BCM

Description

INFOID:0000000001700008

BCM requests IPDM E/R to supply power to steering lock unit. After receiving the power, the steering lock unit transmits an ON signal to BCM.

DTC Logic

INFOID:0000000001700009

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2619	BCM	BCM detects a mismatch between the power supplied to the steering lock unit and the feedback for one second or more.	• BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.

A/T models
- A/T selector lever is in the P or N position
- Do not depress brake pedal

M/T models
- Do not depress clutch pedal

2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-96, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000001700010

1.INSPECTION START

1. Turn ignition switch ON.
2. Check “Self diagnostic result” with CONSULT-III.
3. Touch “ERASE”.
4. **Perform DTC Confirmation Procedure.**
   See SEC-96, "DTC Logic".

Is the DTC B2619 displayed again?

YES >> Replace BCM. Refer to BCS-79, "Removal and Installation".
NO >> INSPECTION END

B261A PUSH-BUTTON IGNITION SWITCH

Description

INFOID:0000000001700011

BCM transmits the change in the power supply position with the push-button ignition switch to IPDM E/R via the CAN communication. IPDM E/R transmits the power supply position status via CAN communication to BCM.

DTC Logic

INFOID:0000000001700012

DTC DETECTION LOGIC

NOTE:

- If DTC B261A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-36, "DTC Logic".
- If DTC B261A is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-37, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B261A	PUSH-BUTTON IGNITION SWITCH	BCM detects the mismatch between the following for 1 second or more • Power supply position with push-button ignition switch • Power supply position from IPDM E/R (CAN)	• Harness or connectors (Push-button ignition switch circuit is open or shorted) - Between BCM and push-button ignition switch - Between IPDM E/R and push-button ignition switch

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

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

A/T models
- A/T selector lever is in the P or N position
- Do not depress brake pedal

M/T models
- Do not depress clutch pedal

2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> GO to SEC-97, "Diagnosis Procedure"
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE 2

1. Insert Intelligent Key into the key slot.
2. Press the push-button ignition switch under the following conditions and wait for at least 1 second.

A/T models
- A/T selector lever is in the P or N position
- Do not depress brake pedal

M/T models
- Do not depress clutch pedal

3. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000001700013

1.INSPECTION START

Check the case in which DTC is detected.
- Case1: It is detected when push-button ignition switch is pressed for 1 second
- 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 PUSH-BUTTON IGNITION SWITCH OUTPUT SIGNAL 1

1. Turn ignition switch OFF.
2. Disconnect push-button ignition switch connector and IPDM E/R connector E5.
3. Check voltage between push-button ignition switch harness connector and ground.

Push-button ignition switch		Ground	Voltage (V)
Connector	Terminal		
M50	4	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 6.
NO >> GO TO 3.

3.CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT

1. Disconnect BCM connector M122.
2. Check continuity between push-button ignition switch harness connector and BCM harness connector.

Push-button ignition switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M50	4	M122	89	Existed

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

Push-button ignition switch		Ground	Continuity
Connector	Terminal		
M50	4	Ground	Not existed

Is the inspection result normal?

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

4.CHECK PUSH-BUTTON IGNITION SWITCH OUTPUT SIGNAL 2

1. Turn ignition switch OFF.
2. Disconnect push-button ignition switch connector and BCM connector M122.
3. Check voltage between push-button ignition switch harness connector and ground.

Push-button ignition switch		Ground	Voltage (V)
Connector	Terminal		
M50	4	Ground	Battery voltage

Is the inspection result normal?

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

5.CHECK PUSH-BUTTON IGNITION SWITCH

1. Disconnect IPDM E/R connector E5.
2. Check continuity between push-button ignition switch harness connector and IPDM E/R harness connector.

Push-button ignition switch		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M50	4	E5	28	Existed

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

Push-button ignition switch		Ground	Continuity
Connector	Terminal		
M50	4	Ground	Not existed

Is the inspection result normal?

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

6. CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

B261E VEHICLE TYPE

Description

INFOID:0000000001700014

There are two types of vehicle.
- HEV
- Conventional

DTC Logic

INFOID:0000000001700015

DTC DETECTION LOGIC

NOTE:
- If DTC B261E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-36, "DTC Logic".
- If DTC B261E is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-37, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B261E	VEHICLE TYPE	Difference of BCM configration	• BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000001700016

1.INSPECTION START

1. Turn ignition switch ON.
2. Check “Self diagnostic result” with CONSULT-III.
3. Touch “ERASE”.
4. **Perform DTC Confirmation Procedure.**
   See SEC-100, "DTC Logic".

Is the 1st trip DTC B261E displayed again?

YES >> Replace BCM. Refer to BCS-79, "Removal and Installation".
NO >> INSPECTION END

B2108 STEERING LOCK RELAY

Description

INFOID:0000000001700017

The steering lock relay ON signal is transmitted to IPDM E/R by BCM via CAN communication.
IPDM E/R turns the steering lock relay ON and transmits the release of the steering to BCM.

DTC Logic

INFOID:0000000001700018

DTC DETECTION LOGIC

NOTE:
If DTC B2108 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to PCS-16, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2108	STRG LCK RELAY ON	IPDM E/R detects that the relay is stuck at ON position for about 1 second even if the IPDM E/R receives steering lock relay ON/OFF signal from BCM.	• IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.

A/T models
- A/T selector lever is in the P or N position
- Do not depress brake pedal

M/T models
- Do not depress clutch pedal

2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000001700019

1.CHECK STEERING LOCK RELAY

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

IPDM E/R (+)		(–)	Condition	Voltage (V)
Connector	Terminal			
E5	11	Ground	Ignition switch ACC or ON	0

Is the inspection normal?

YES >> GO TO 2.
NO >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".

2.CHECK INTEMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

B2109 STEERING LOCK RELAY

Description

INFOID:0000000001700020

The steering lock relay ON signal is transmitted to IPDM E/R by BCM via CAN communication.
IPDM E/R turns the steering lock relay ON and transmits the release of the steering to BCM.

DTC Logic

INFOID:0000000001700021

DTC DETECTION LOGIC

NOTE:

- If DTC B2109 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to PCS-16, "DTC Logic".
- When IPDM E/R power supply voltage is low (Approx. 7 - 8 V for about 1 second), the DTC B2109 may be detected.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2109	STRG LCK RELAY OFF	IPDM E/R detects that the relay is stuck at OFF position for about 1 second even if the IPDM E/R receives steering lock relay ON/OFF signal from BCM.	• Harness or connector (power supply circuit) • IPDM E/R • Battery

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.

A/T models

- A/T selector lever is in the P or N position
- Do not depress brake pedal

M/T models

- Do not depress clutch pedal

2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000001700022

1. CHECK POWER SUPPLY CIRCUIT

Check IPDM E/R power supply circuit. Refer to SEC-119, "IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) : Diagnosis Procedure".

Is the circuit normal?

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

2. CHECK FUSE

1. Turn ignition switch OFF.
2. Check 10A fuse (No. 48, located in IPDM E/R).

Is the inspection normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".
NO >> Check the following.
- Harness for open or short between IPDM E/R and battery
- Fuse

B210A STEERING LOCK CONDITION SWITCH

Description

INFOID:0000000001700023

There are 2 switches in the steering unit. IPDM E/R compares those 2 switches conditions to judge the present steering status and transmit the result to BCM via CAN communication.

DTC Logic

INFOID:0000000001700024

DTC DETECTION LOGIC

NOTE:
If DTC B210A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to PCS-16, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210A	STRG LCK STATE SW	BCM detects the mismatch between the following for 1 second • Steering lock or unlock • Feedback of steering lock status from IPDM E/R (CAN)	• Harness or connectors [steering lock unit circuit (BCM side) is open or shorted] • Harness or connectors [steering lock unit circuit (IPDM E/R side) is open or shorted.] • Steering lock unit • IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.

A/T models
- A/T selector lever is in the P or N position
- Do not depress brake pedal

M/T models
- Do not depress clutch pedal

2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-103, "Diagnosis Procedure".
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE 2

1. Turn ignition switch ON.
2. Turn ignition switch OFF.
3. Press driver side door switch and wait for at least 1 second.
4. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000001700025

1.INSPECTION START

Check the case in which DTC is detected.
- Case1: It is detected after ignition switch is changed from OFF to ON
- Case2: It is detected after ignition switch is changed from ON to OFF and door switch is pressed

In which case is DTC detected?

Case1 >> GO TO 2.
Case2 >> GO TO 6.

2.CHECK BCM OUTPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect steering lock unit connector and IPDM E/R connector E5.
3. Check voltage between steering lock unit harness connector and ground.

Steering lock unit		Ground	Voltage [V]
Connector	Terminal		
M40	8	Ground	Battery voltage

Is the inspection result normal?

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

3.CHECK STEERING LOCK UNIT CIRCUIT-1

1. Disconnect BCM connector M122.
2. Check continuity between steering lock unit harness connector and BCM harness connector.

Steering lock unit		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M40	8	M122	98	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	8	Ground	Not existed

Is the inspection result normal?

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

4.CHECK IPDM E/R OUTPUT SIGNAL

1. Connect IPDM E/R connector E5.
2. Disconnect BCM connector M122.
3. Check voltage between steering lock unit harness connector and ground.

Steering lock unit		Ground	Voltage [V]
Connector	Terminal		
M40	8	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace steering lock unit.
NO >> GO TO 5.

5.CHECK STEERING LOCK UNIT CIRCUIT-2

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

Steering lock unit		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M40	8	E5	33	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	8	Ground	Not existed

Is the inspection result normal?

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

6. CHECK BCM OUTPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect steering lock unit connector and IPDM E/R harness connector E5.
3. Check voltage between steering lock unit harness connector and ground.

Steering lock unit		Ground	Voltage [V]
Connector	Terminal		
M40	3	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 8.
NO >> GO TO 7.

7. CHECK STEERING LOCK UNIT CIRCUIT-3

1. Disconnect BCM connector M122.
2. Check continuity between steering lock unit harness connector and BCM harness connector.

Steering lock unit		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M40	3	M122	97	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	3	Ground	Not existed

Is the inspection result normal?

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

8. CHECK IPDM E/R OUTPUT SIGNAL

1. Connect IPDM E/R connector E5.
2. Disconnect BCM connector M122.
3. Check voltage between steering lock unit harness connector and ground.

Steering lock unit		Ground	Voltage [V]
Connector	Terminal		
M40	3	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace steering lock unit.
NO >> GO TO 9.

9. CHECK STEERING LOCK UNIT CIRCUIT-4

1. Disconnect IPDM E/R connector E5.
2. Check continuity between steering lock unit harness connector and IPDM E/R harness connector.

Steering lock unit		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M40	3	E5	32	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	3	Ground	Not existed

Is the inspection result normal?

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

10. CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

B210B STARTER CONTROL RELAY

Description

INFOID:0000000001700026

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

DTC Logic

INFOID:0000000001700027

DTC DETECTION LOGIC

NOTE:
If DTC B210B is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to PCS-16, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210B	START CONT RLY ON	IPDM E/R detects that the relay is stuck at ON position even if the followings condition are met for about 1 second. • Starter control relay ON/OFF signal from BCM • Clutch interlock or park neutral position (PNP) switch input signal	• 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.

A/T models
- A/T selector lever is in the P or N position
- Do not depress brake pedal

M/T models
- Do not depress clutch pedal

2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000001700028

1. INSPECTION START

1. Turn ignition switch ON.
2. Check “Self diagnostic result” for IPDM E/R with CONSULT-III.
3. Touch “ERASE”.
4. **Perform DTC Confirmation Procedure.**
   See SEC-214, "DTC Index".

Is the DTC B210B displayed again?

YES >> Replace IPDM E/R. Refer PCS-34, "Removal and Installation".
NO >> INSPECTION END

B210C STARTER CONTROL RELAY

Description

INFOID:0000000001700029

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

DTC Logic

INFOID:0000000001700030

DTC DETECTION LOGIC

NOTE:

- If DTC B210C is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to PCS-16, "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	IPDM E/R detects that the relay is stuck at OFF position even if the followings condition are met for about 1 second. • Starter control relay ON/OFF signal from BCM • Clutch interlock or park neutral position (PNP) switch input signal	• IPDM E/R • 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.

A/T models

- A/T selector lever is in the P or N position
- Do not depress brake pedal

M/T models

- Do not depress clutch pedal

2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-108, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000001700031

1. INSPECTION START

1. Turn ignition switch ON.
2. Check “Self diagnostic result” for IPDM E/R with CONSULT-III.
3. Touch “ERASE”.
4. **Perform DTC Confirmation Procedure.**
   See SEC-214, "DTC Index".

Is the DTC B210C displayed again?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".
NO >> INSPECTION END

B210D STARTER RELAY

Description

INFOID:0000000001700032

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:0000000001700033

DTC DETECTION LOGIC

NOTE:

- If DTC B210D is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to PCS-16, "DTC Logic".
- If DTC B210D is displayed with DTC B2617, first perform the trouble diagnosis for DTC B2617. Refer to SEC-94, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210D	STARTER RELAY ON	IPDM E/R detects that the relay is stuck at ON position even if the followings condition are met for about 1 second. • Starter control relay ON/OFF signal from BCM • Clutch interlock or park neutral position (PNP) switch input	• IPDM E/R

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Ignition switch ON under the following conditions and wait for at least 1 second.

A/T models

- A/T selector lever is in the P or N position
- Do not depress brake pedal

M/T models

- Do not depress clutch pedal

2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000001871765

1. INSPECTION START

1. Turn ignition switch ON.
2. Check “Self diagnostic result” for IPDM E/R with CONSULT-III.
3. Touch “ERASE”.
4. **Perform DTC Confirmation Procedure.**
   See SEC-109, "DTC Logic".

Is the DTC B210D displayed again?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".
NO >> INSPECTION END

B210E STARTER RELAY

Description

INFOID:0000000001700035

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:0000000001700036

DTC DETECTION LOGIC

NOTE:

- If DTC B210E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to PCS-16, "DTC Logic".
- If DTC B210E is displayed with DTC B2110 for IPDM E/R, first perform the trouble diagnosis for DTC B2110. Refer to PCS-16, "DTC Logic".
- If DTC B210E is displayed with DTC B2617 for BCM, first perform the trouble diagnosis for DTC B2617. Refer to PCS-16, "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	IPDM E/R detects that the relay is stuck at OFF position even if the followings condition are met for about 1 second. • Starter control relay ON/OFF signal from BCM • Clutch interlock or park neutral position (PNP) switch input	• IPDM E/R • 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.

A/T models

- A/T selector lever is in the P or N position
- Do not depress brake pedal

M/T models

- Do not depress clutch pedal

2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-110, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000001700037

1.INSPECTION START

Check which type of transmission the vehicle is equipped with.

Which type of transmission

A/T >> GO TO 2.
M/T >> GO TO 3.

2.CHECK STARTER RELAY OUTPUT SIGNAL / A/T MODELS

1. Turn ignition switch OFF.
2. Disconnect BCM connector M121.
3. Check voltage between BCM harness connector and ground.

BCM connector		Ground	Condition			Voltage (V)
Connector	Terminal		Ignition switch	Brake pedal	A/T selector lever	
M121	52	Ground	ON	Depressed	P or N	Battery voltage
					Other than above	0

Is the inspection result normal?

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

3. CHECK STARTER RELAY OUTPUT SIGNAL / M/T MODELS

1. Turn ignition switch OFF.
2. Disconnect BCM connector M121.
3. Check voltage between BCM harness connector and ground.

BCM connector		Ground	Condition		Voltage (V)
Connector	Terminal		Ignition switch	Clutch pedal	
M121	52	Ground	OFF	Not depressed	0
				Depressed	Battery voltage

Is the inspection result normal?

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

4. CHECK STARTER RELAY OUTPUT SIGNAL CIRCUIT

1. Disconnect IPDM E/R connector E6.
2. Check continuity between BCM harness connector and IPDM E/R harness connector.

BCM		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
M121	52	E6	46	Existed

3. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M121	52	Ground	Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".
NO >> Repair harness connector.

5. CHECK STARTER RELAY POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector E5.
3. Check voltage between IPDM E/R harness connector and ground.

IPDM E/R		Ground	Voltage (V)
Connector	Terminal		
E5	36	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".
NO >> Check harness for open or short between IPDM E/R and battery.

B210F PNP/CLUTCH INTERLOCK SWITCH

Description

INFOID:0000000001700038

IPDM E/R confirms the shift position with the following signals.
- Park/neutral position (PNP) switch (A/T models)
- Clutch inter lock switch (M/T models)
- Shift position signal from BCM (CAN)

DTC Logic

INFOID:0000000001700039

DTC DETECTION LOGIC

NOTE:
If DTC B210F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to PCS-16, "DTC Logic"

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210F	INTER LOCK/PNP SW ON	IPDM E/R detects a mismatch between the signals below for 1 second or more. • Clutch interlock input signal (M/T models) • PNP switch input signal (A/T models) • Shift position signal from BCM (CAN)	• Harness or connectors [Park/neutral position (PNP) switch circuit is open or shorted (A/T models)] or (Clutch interlock switch circuit is open or shorted.) • Clutch interlock switch (M/T models) • Park/neutral position (PNP) switch (A/T models)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions and wait for at least 1 second.

A/T models
- A/T selector lever is in the P or N position
- Do not depress brake pedal

M/T models
- Do not depress clutch pedal

2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:0000000001700040

1.INSPECTION START

Check which type of transmission the vehicle is equipped with.

Which type of transmission

A/T >> GO TO 2.
M/T >> GO TO 5.

2.CHECK DTC WITH BCM

Check “Self diagnostic result” with CONSULT-III. Refer to SEC-183, "DTC Index".

Is the inspection result normal?

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

3.CHECK PNP SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector E5.

3. Turn ignition switch ON.
4. Check voltage between IPDM E/R harness connector and ground under following condition.

IPDM E/R		Ground	Condition		Voltage (V)
Connector	Terminal				
E5	30	Ground	A/T selector lever	P or N	Battery voltage
				Other than above	0

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".
NO >> GO TO 4.

4. CHECK PNP SWITCH CIRCUIT

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

IPDM E/R		A/T assembly		Continuity
Connector	Terminal	Connector	Terminal	
E5	30	F51	9	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E5	30	Ground	Not existed

Is the inspection result normal?

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

5. CHECK CLUTCH INTERLOCK SWITCH INPUT SIGNAL (BCM)

1. Turn ignition switch OFF.
2. Disconnect BCM connector M123.
3. Check voltage between BCM harness connector and ground.

BCM		Ground	Condition		Voltage (V)
Connector	Terminal				
M123	114	Ground	Clutch pedal	Not depressed	0
				Depressed	Battery voltage

Is the inspection result normal?

YES >> GO TO 6.
NO >> GO TO 10.

6. CHECK CLUTCH INTERLOCK SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector E5.
3. Check voltage between IPDM E/R harness connector and ground.

IPDM E/R		Ground	Condition		Voltage (V)
Connector	Terminal				
E5	30	Ground	Clutch pedal	Not depressed	0
				Depressed	Battery voltage

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".
NO >> GO TO 7.

7. CHECK CLUTCH INTERLOCK SWITCH POWER SUPPLY

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

Clutch interlock switch		Ground	Voltage (V)
Connector	Terminal		
E111	1	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 8.
NO >> Check harness for open or short between clutch interlock switch and fuse.

8. CHECK CLUTCH INTERLOCK SWITCH CIRCUIT

1. Check continuity between IPDM E/R harness connector and clutch interlock switch harness connector.

IPDM E/R		Clutch interlock switch		Continuity
Connector	Terminal	Connector	Terminal	
E5	30	E111	2	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E5	30	Ground	Not existed

Is the inspection result normal?

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

9. CHECK CLUTCH INTERLOCK SWITCH

Refer to SEC-115, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 11.
NO >> Replace clutch interlock switch.

10. CHECK CLUTCH INTERLOCK SWITCH INPUT SIGNAL CIRCUIT

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

BCM		Clutch interlock switch		Continuity
Connector	Terminal	Connector	Terminal	
M123	114	E111	2	Existed

3. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M123	114	Ground	Not existed

Is the inspection result normal?

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

11. CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000001700041

1. CHECK CLUTCH INTERLOCK SWITCH

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

Clutch interlock switch			Condition		Continuity
Connector	Terminal				
E111	1	2	Clutch pedal	Not depressed	Not existed
				Depressed	Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace clutch interlock switch.

B2110 PNP/CLUTCH INTERLOCK SWITCH

Description

INFOID:0000000001700042

IPDM E/R confirms the shift position with the following signals.
- Park/neutral position (PNP) switch (A/T models)
- Clutch inter lock switch (M/T models)
- Shift position signal from BCM (CAN)

DTC Logic

INFOID:0000000001700043

DTC DETECTION LOGIC

NOTE:
If DTC B2110 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to PCS-16, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2110	INTER LOCK/PNP SW	IPDM E/R detects mismatch between the signals below for 1 second or more. • Clutch interlock input signal (M/T models) • PNP switch input signal (A/T models) • Shift position signal from BCM (CAN)	• Harness or connectors [Park/neutral position (PNP) switch circuit is open or shorted (A/T models)] or (Clutch interlock switch circuit is open or shorted.) • Clutch inter lock switch (M/T models) • Park/neutral position (PNP) switch (A/T models) • IPDM E/R • BCM

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.

A/T models
- A/T selector lever is in the P or N position
- Do not depress brake pedal

M/T models
- Do not depress clutch pedal

2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Go to SEC-116, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000001706090

1.INSPECTION START

Check which type of transmission the vehicle is equipped with.

Which type of transmission is equipped?

A/T >> GO TO 2.
M/T >> GO TO 5.

2.CHECK DTC WITH TCM

Check “Self diagnostic result” with CONSULT-III. Refer to TM-186, "DTC Index".

Is the inspection result normal?

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

3.CHECK PNP SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector E5.
3. Turn ignition switch ON.
4. Check voltage between IPDM E/R harness connector and ground under following condition.

IPDM E/R		Ground	Condition		Voltage (V)
Connector	Terminal				
E5	30	Ground	A/T selector lever	P or N	Battery voltage
				Other than above	0

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".
NO >> GO TO 4.

4. CHECK PNP SWITCH CIRCUIT

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

IPDM E/R		A/T assembly		Continuity
Connector	Terminal	Connector	Terminal	
E5	30	F51	9	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E5	30	Ground	Not existed

Is the inspection result normal?

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

5. CHECK CLUTCH INTERLOCK SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector E5.
3. Check voltage between IPDM E/R harness connector and ground.

IPDM E/R		Ground	Condition		Voltage (V)
Connector	Terminal				
E5	30	Ground	Clutch pedal	Not depressed	0
				Depressed	Battery voltage

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".
NO >> GO TO 6.

6. CHECK CLUTCH INTERLOCK SWITCH POWER SUPPLY

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

Clutch interlock switch		Ground	Voltage (V)
Connector	Terminal		
E111	1	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 7.
NO >> Check harness for open or short between clutch interlock switch and fuse.

7.CHECK CLUTCH INTERLOCK SWITCH CIRCUIT

1. Check continuity between IPDM E/R harness connector and clutch interlock switch harness connector.

IPDM E/R		Clutch interlock switch		Continuity
Connector	Terminal	Connector	Terminal	
E5	30	E111	2	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E5	30	Ground	Not existed

Is the inspection result normal?

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

8.CHECK CLUTCH INTERLOCK SWITCH

Refer to SEC-118, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 9.
NO >> Replace clutch interlock switch.

9.CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000001700045

1.CHECK CLUTCH INTERLOCK SWITCH

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

Clutch interlock switch			Condition		Continuity
Connector	Terminal				
E111	1	2	Clutch pedal	Not depressed	Not existed
				Depressed	Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace clutch interlock switch.

POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM : Diagnosis Procedure

INFOID:0000000001700046

1.CHECK FUSE AND FUSIBLE LINK

Check that the following fuse and fusible link are not blown.

Signal name	Fuse and fusible link No.
Battery power supply	K
	10

Is the fuse fusing?

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

2.CHECK POWER SUPPLY CIRCUIT

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

Terminals			Voltage (Approx.)
(+)		(–)	
BCM		Ground	
Connector	Terminal		
M118	1		Battery voltage
M119	11		

Is the measurement value normal?

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

3.CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M119	13		Existed

Does continuity exist?

YES >> INSPECTION END
NO >> Repair harness or connector.

BCM : Special Repair Requirement

INFOID:0000000001700047

1.REQUIRED WORK WHEN REPLACING BCM

Initialize control unit. Refer to CONSULT-III operation manual NATS-IVIS/NVIS.

>> Work end.

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

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

agnosis Procedure

INFOID:0000000001700048

1.CHECK FUSES AND FUSIBLE LINK

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

Terminal No.	Signal name	Fuses and fusible link No.
1	Battery power supply	C
—		50
		51

Is the fuse fusing?

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

2.CHECK POWER SUPPLY CIRCUIT

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

Terminals			Voltage (Approx.)
(+)		(–)	
IPDM E/R			
Connector	Terminal	Ground	
E4	1		Battery voltage
	2		

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		
E5	12		Existed
E6	41		

Does continuity exist?

YES >> INSPECTION END
NO >> Repair harness or connector.

KEY SLOT

Description

INFOID:0000000001840550

When the Intelligent Key battery is discharged, it performs the IVIS (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.

Component Function Check

INFOID:0000000001840551

1.CHECK FUNCTION

1. Remove Intelligent Key battery from Intelligent Key.
2. Chenge power supply position when Intelligent Key insert into key slot and then press push-button ignition switch.

Is the inspection result normal?

YES >> Key slot function is OK.
NO >> Go to SEC-121, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000001700049

1.CHECK KEY SLOT POWER SUPPLY CIRCUIT

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

Key slot		Ground	Voltage (V) (Approx.)
Connector	Terminal		
M22	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 and ground.

Key slot		Ground	Continuity
Connector	Terminal		
M22	7	Ground	Existed

Is the inspection result normal?

YES >> Replace key slot.
NO >> Repair or replace key slot ground circuit.

KEY SLOT ILLUMINATION

Description

INFOID:0000000001700050

Blinks when Intelligent Key insertion is required.

Component Function Check

INFOID:0000000001700051

1.CHECK FUNCTION

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-122, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000001700052

1.CHECK KEY SLOT ILLUMINATION OUTPUT SIGNAL

Check voltage between key slot harness connector and ground.

Key slot		(–)	Condition	Key slot illumination	Voltage (V) (Approx.)
(+)					
Connector	Terminal				
M22	6	Ground	Insert Intelligent Key into key slot	OFF	Battery voltage
			Remove Intelligent Key from key slot	ON	0

Is the inspection result normal?

YES >> GO TO 5.
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 key slot harness connector and ground.

Key slot		(–)	Voltage (V) (Approx.)
(+)			
Connector	Terminal		
M22	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 and ground.

Key slot		Ground	Continuity
Connector	Terminal		
M22	7		Existed

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 connector M122.
3. Check continuity between BCM harness connector and key slot harness connector.

BCM		Key slot		Continuity
Connector	Terminal	Key slot connector	Terminal	
M122	92	M22	6	Existed

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M122	92		Not existed

Is the inspection result normal?

YES >> Replace key slot. Refer to SEC-227, "Removal and Installation".
NO >> Repair or replace harness between BCM and key slot.

5. CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END.

CLUTCH PEDAL POSITION SWITCH

Description

INFOID:0000000001908951

BCM confirms the shift position with the following 3 signals.
- Clutch interlock switch
- ASCD clutch switch or ICC clutch switch
- Clutch interlock switch signal from IPDM E/R (CAN)

Component Function Check

INFOID:0000000001908953

1.CHECK FUNCTION

1. Clutch pedal is depressed.
2. Start the engine.

Does the engine start ?

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

Diagnosis Procedure

INFOID:0000000001908948

1.INSPECTION START

Check which type of system the vehicle is equipped with.

Which type of system?

ASCD >> GO TO 2.
ICC >> GO TO 3.

2.CHECK ASCD CLUTCH SWITCH POWER SUPPLY

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

(+)		(-)	Voltage [V]
ASCD clutch switch			
Connector	Terminal		
E108	1	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.
NO >> Check the following
- 10A fuse [No.3, located in fuse block (J/B)]
- Harness for open or short between ASCD clutch switch and fuse.

3.CHECK ASCD CLUTCH SWITCH INPUT SIGNAL

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

(+)		(-)	Condition		Voltage (V) (Approx.)
BCM					
Connector	Terminal				
M122	99	Ground	Clutch pedal	Not depressed	Battery voltage
				Depressed	0

Is the inspection result normal?

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

4.CHECK ASCD CLUTCH SWITCH CIRCUIT

1. Disconnect BCM connector M122 and ASCD clutch switch connector.
2. Check continuity between ASCD clutch switch harness connector and BCM harness connector.

ASCD clutch switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E108	2	M122	99	Existed

3. Check continuity between ASCD clutch switch harness connector and ground.

ASCD clutch switch		Ground	Continuity
Connector	Terminal		
E108	2		Not existed

Is the inspection result normal?

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

5.CHECK ASCD CLUTCH SWITCH

Refer to SEC-126, "Component Inspection (ASCD Clutch Switch)".

Is the inspection result normal?

YES >> GO TO 10.
NO >> Replace ASCD clutch switch.

6.CHECK ICC CLUTCH SWITCH POWER SUPPLY

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

(+)		(–)	Voltage (V)
ICC clutch switch			
Connector	Terminal		
E113	1	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 7.
NO >> Check the following.
- 10A fuse [No.3, located in the fuse block (J/B)]
- Harness for open or short between ICC clutch switch and fuse

7.CHECK ICC CLUTCH SWITCH INPUT SIGNAL

1. Disconnect ICC clutch switch connector.
2. Check continuity between BCM harness connector and ground.

(+)		(–)	Condition		Voltage (V) (Approx.)
BCM					
Connector	Terminal				
M122	99	Ground	Clutch pedal	Not depressed	Battery voltage
				Depressed	0

Is the inspection result normal?

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

8.CHECK CIRCUIT

1. Disconnect BCM connector M122 and ICC clutch switch connector.
2. Check continuity between ICC clutch switch harness connector and IPDM E/R harness connector.

ICC clutch switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
E113	2	M122	99	Existed

3. Check continuity between ICC clutch switch harness connector and ground.

ICC clutch switch		Ground	Continuity
Connector	Terminal		
E113	2		Not existed

Is the inspection result normal?

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

9.CHECK ICC CLUTCH SWITCH

Refer to SEC-126, "Component Inspection (ICC Clutch Switch)".

Is the inspection result normal?

YES >> GO TO 10.
NO >> Replace ICC clutch switch.

10.CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

Component Inspection (ASCD Clutch Switch)

INFOID:0000000001908949

1.CHECK ASCD CLUTCH SWITCH

1. Turn ignition switch OFF.
2. Disconnect ASCD clutch switch connector.
3. Check continuity between ASCD clutch switch terminals as follows.

ASCD clutch switch			Condition		Continuity
Connector	Terminal				
E108	1	2	Clutch pedal	Not depressed	Existed
				Depressed	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace ASCD clutch switch.

Component Inspection (ICC Clutch Switch)

INFOID:0000000001908950

1.CHECK ICC CLUTCH SWITCH

1. Turn ignition switch OFF.
2. Disconnect ICC clutch switch connector.
3. Check continuity between ICC clutch switch terminals as follows.

ICC clutch switch			Condition		Continuity
Connector	Terminal				
E113	1	2	Clutch pedal	Not depressed	Existed
				Depressed	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace ICC clutch switch.

KEY CYLINDER SWITCH

Description

INFOID:0000000001700053

Power window main switch detects condition of the door key cylinder switch and transmits to BCM as the LOCK or UNLOCK signals.

Component Function Check

INFOID:0000000001700054

1.CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

Check (“KEY CYL LK-SW”, “KEY CYL UN-SW”) in “DATA MONITOR” mode for “POWER DOOR LOCK SYSTEM” with CONSULT-III. Refer to DLK-51, "DOOR LOCK : CONSULT-III 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-127, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000001700055

1.CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

1. Turn ignition switch ON.
2. Check voltage between power window main switch harness connector and ground.

Terminals			Key position	Voltage (V) (Approx.)
(+)		(–)		
Power window main switch connector	Terminal			
D8	6	Ground	Lock	0
			Neutral / Unlock	5
	7		Unlock	0
			Neutral / Lock	5

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-92, "Removal and Installation".
NO >> GO TO 2.

2.CHECK DOOR KEY CYLINDER SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect power window main switch connector and driver side door lock assembly (door key cylinder switch) connector.
3. Check continuity between power window main switch connector and driver side door lock assembly (door key cylinder switch) connector.

Power window main switch connector	Terminal	Driver side door lock assembly (door key cylinder switch) connector	Terminal	Continuity
D8	6	D15	6	Existed
	7		5	

4. Check continuity between power window main switch connector and ground.

Power window main switch connector	Terminal	Ground	Continuity
D8	6		Not existed
	7		

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 driver side door lock assembly connector and ground.

Driver side door lock assembly connector	Terminal	Ground	Continuity
D15	4		Existed

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-128, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-38, "Intermittent Incident".
NO >> Replace driver side door lock assembly (door key cylinder switch). Refer to DLK-230, "DOOR LOCK : Removal and Installation".

Component Inspection

INFOID:0000000001700056

COMPONENT INSPECTION

1.CHECK DOOR KEY CYLINDER SWITCH

Check driver side door lock assembly (door key cylinder switch).

Driver side door lock assembly (door key cylinder switch) Terminal		Key position	Continuity
5	4	Unlock	Existed
		Neutral / Lock	Not existed
6		Lock	Existed
		Neutral / Unlock	Not existed

Is the inspection result normal?

YES >> Key cylinder switch is OK.
NO >> Replace driver side door lock assembly (door key cylinder switch). Refer to DLK-230, "DOOR LOCK : Removal and Installation".

HOOD SWITCH

Description

INFOID:0000000001700057

Hood switch is built into hood lock (RH) and connected to IPDM E/R which detects the open/close condition of hood.

Component Function Check

INFOID:0000000001700058

1.CHECK FUNCTION

1. Select “HOOD SW” in “Data Monitor” mode with CONSULT-III.
2. Check the hood switch signal under the following condition.

Test item	Condition		Status
HOOD SW	Hood	Open	ON
		Close	OFF

Is the indication normal?

YES >> Hood switch is OK.
NO >> Go to SEC-129, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000001700059

1.CHECK HOOD SWITCH SIGNAL

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

IPDM E/R		Ground	Condition		Voltage (V) (Approx.)
Connector	Terminal				
E9	104	Ground	Hood	Open	0
				Close	Battery voltage

Is the inspection result normal?

YES >> GO TO 5.
NO >> GO TO 2.

2.CHECK HOOD SWITCH CIRCUIT

1. Disconnect IPDM E/R connector E9 and hood switch connector.
2. Check continuity between IPDM E/R harness connector and hood switch harness connector.

IPDM E/R		Hood switch		Continuity
Connector	Terminal	Connector	Terminal	
E9	104	E30	2	Existed

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E9	104	Ground	Not existed

Is the inspection result normal?

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

3.CHECK IPDM E/R OUTPUT

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

IPDM E/R		Ground	Voltage (V) (Approx.)
Connector	Terminal		
E9	104	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".

4.CHECK HOOD SWITCH

Refer to SEC-130, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace hood switch.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000001700060

1.CHECK HOOD SWITCH

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

Hood switch		Condition		Continuity
Terminal				
1	2	Hood switch	Press	Not existed
			Release	Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace hood switch.

HORN

Description

INFOID:0000000001700061

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

Component Function Check

INFOID:0000000001700062

1.CHECK FUNCTION

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

Test item		Description	
HORN	ON	Horn relay 1 and 2	ON (for 20 ms)

Is the operation normal?

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

Diagnosis Procedure

INFOID:0000000001700063

1.CHECK HORN FUNCTION

Check horn function with horn switch

Do the horns sound?

YES >> GO TO 2.
NO >> Go to HRN-2, "Wiring Diagram - HORN -".

2.CHECK HORN RELAY POWER SUPPLY

1. Turn ignition switch ON.
2. Perform “ACTIVE TEST” (“HORN”) with CONSULT-Ill.
3. Check voltage between horn relay 1 and 2 harness connector and ground.

Horn relay1/2		Ground	Condition		Voltage (V) (Approx.)
Connector	Terminal				
E11	1	Ground	HORN	Activated	0
				Deactivated	Battery voltage
E18	3			Activated	0
				Deactivated	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 connector E6 and horn relay 1 and 2 connector.
3. Check continuity between IPDM E/R harness connector and horn relay 1 and 2 harness connector.

IPDM E/R		Horn relay 1 and 2		Continuity
Connector	Terminal	Connector	Terminal	
E6	44	E11	1	Existed
	45	E18	3	

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

IPDM E/R		Ground	Continuity
Connector	Terminal		

E6	44	Ground	Not existed
	45		

Is the inspection result normal?

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

4. CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

HEADLAMP

Description

INFOID:0000000001700064

Headlamp lighting when vehicle security system is alarm phase.

Component Function Check

INFOID:0000000001700065

1.CHECK HEADLAMP OPERATION

Check if headlamp operate by lighting switch.

Does headlamp come on when turning switch “ON”?

YES >> Headlamp circuit is OK.
NO >> Go to SEC-133, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000001700066

1.CHECK HEADLAMP OPERATION

Refer to EXL-174, "Symptom Table".

Is the inspection result normal?

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

2.CHECK INTER MITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END.

WARNING LAMP

Description

INFOID:0000000001700067

- 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:0000000001700068

1.CHECK FUNCTION

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

Test item		Description	
INDICATOR	ON	Warning lamp	ON
	OFF		OFF

Is the inspection result normal?

YES >> INSPECTION END
NO >> Go to SEC-134, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000001700069

1.CHECK DTC WITH “UNIFIED METER AND A/C AMP.”

Perform self diagnosis for unified meter and A/C amp. Refer to MWI-37, "CONSULT-III Function (METER/M&A)".

Is the inspection result is normal?

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

2.CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

VEHICLE SECURITY INDICATOR

Description

INFOID:0000000001700070

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

Component Function Check

INFOID:0000000001700071

1.CHECK FUNCTION

1. Perform “THEFT IND” in the “ACTIVE TEST” mode with CONSULT-III.
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 >> Go to SEC-135, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000001700072

1.CHECK DTC WITH “UNIFIED METER AND A/C AMP.”

Perform “Self Diagnostic Result” for unified meter and A/C amp. Refer to MWI-37, "CONSULT-III Function (METER/M&A)".

Is the inspection result is normal?

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

2.CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:0000000001911534

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

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
RR FOG SW	**NOTE:** The item is indicated, but not monitored.	Off
DOOR SW-DR	Driver door closed	Off
	Driver door opened	On
DOOR SW-AS	Passenger door closed	Off
	Passenger door opened	On
DOOR SW-RR	**NOTE:** The item is indicated, but not monitored.	Off
DOOR SW-RL	**NOTE:** The item is indicated, but not monitored.	Off

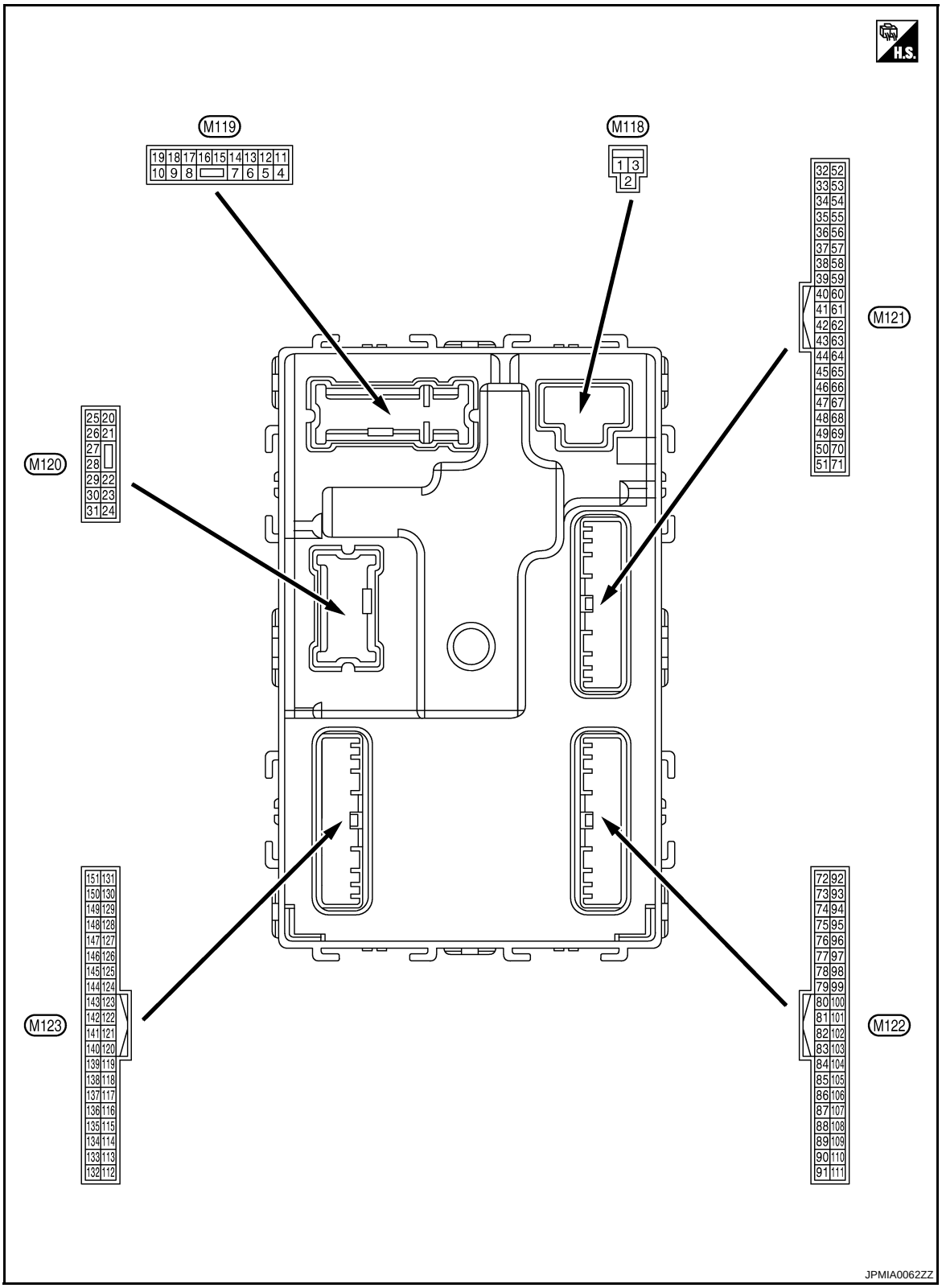
Monitor Item	Condition	Value/Status
DOOR SW-BK	**NOTE:** The item is indicated, but not monitored.	Off
CDL LOCK SW	Other than power door lock switch LOCK	Off
	Power door lock switch LOCK	On
CDL UNLOCK SW	Other than power door lock switch UNLOCK	Off
	Power door lock switch UNLOCK	On
KEY CYL LK-SW	Other 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
KEY CYL SW-TR	**NOTE:** The item is indicated, but not monitored.	Off
HAZARD SW	Hazard switch is not pressed	Off
	Hazard switch is pressed	On
REAR DEF SW	**NOTE:** The item is indicated, but not monitored.	Off
H/L WASH SW	**NOTE:** The item is indicated, but not monitored.	Off
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	LOCK button of Intelligent Key is not pressed	Off
	LOCK button of Intelligent Key is pressed	On
RKE-UNLOCK	UNLOCK button of Intelligent Key is not pressed	Off
	UNLOCK button of Intelligent Key is pressed	On
RKE-TR/BD	TRUNK OPEN button of Intelligent Key is not pressed	Off
	TRUNK OPEN button of Intelligent Key is pressed	On
RKE-PANIC	PANIC button of Intelligent Key is not pressed	Off
	PANIC button of Intelligent Key is pressed	On
RKE-P/W OPEN	UNLOCK button of Intelligent Key is not pressed	Off
	UNLOCK button of Intelligent Key is pressed and held	On
RKE-MODE CHG	LOCK/UNLOCK button of Intelligent Key is not pressed and held simultaneously	Off
	LOCK/UNLOCK button of Intelligent Key is pressed and held simultaneously	On
OPTICAL SENSOR	Bright outside of the vehicle	Close to 5 V
	Dark outside of the vehicle	Close to 0 V
REQ SW-DR	Driver door request switch is not pressed	Off
	Driver door request switch is pressed	On
REQ SW-AS	Passenger door request switch is not pressed	Off
	Passenger door request switch is pressed	On
REQ SW-BD/TR	Trunk request switch is not pressed	Off
	Trunk request switch is pressed	On

Monitor Item	Condition	Value/Status
PUSH SW	Push-button ignition switch (push switch) is not pressed	Off
	Push-button ignition switch (push switch) is pressed	On
IGN RLY2 -F/B	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On
ACC RLY -F/B	Ignition switch in OFF position	Off
	Ignition switch in ACC or ON position	On
CLUCH SW	The clutch pedal is not depressed	Off
	The clutch pedal is depressed	On
BRAKE SW 1	The brake pedal is not depressed	On
	The brake pedal is depressed	Off
DETE/CANCL SW	Selector lever in P position	Off
	Selector lever in any position other than P	On
SFT PN/N SW	Selector lever in any position other than P and N	Off
	Selector lever in P or N position	On
S/L -LOCK	Steering is locked	Off
	Steering is unlocked	On
S/L -UNLOCK	Steering is unlocked	Off
	Steering is locked	On
S/L RELAY-F/B	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On
UNLK SEN-DR	Driver door is unlocked	Off
	Driver door is locked	On
PUSH SW -IPDM	Push-button ignition switch (push-switch) is not pressed	Off
	Push-button ignition switch (push-switch) is pressed	On
IGN RLY1 -F/B	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On
DETE SW -IPDM	Selector lever in P position	Off
	Selector lever in any position other than P	On
SFT PN -IPDM	Selector lever in any position other than P and N	Off
	Selector lever in P or N position	On
SFT P -MET	Selector lever in any position other than P	Off
	Selector lever in P position	On
SFT N -MET	Selector lever in any position other than N	Off
	Selector lever in N position	On
ENGINE STATE	Engine stopped	Stop
	While the engine stalls	Stall
	At engine cranking	Crank
	Engine running	Run
S/L LOCK-IPDM	Steering is locked	Off
	Steering is unlocked	On
S/L UNLK-IPDM	Steering is unlocked	Off
	Steering is locked	On
S/L RELAY-REQ	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On

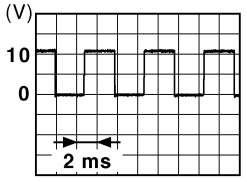
Monitor Item	Condition	Value/Status
VEH SPEED 1	While driving	Equivalent to speedometer reading
VEH SPEED 2	While driving	Equivalent to speedometer reading
DR DOOR STATE	Driver door is locked	LOCK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door is unlocked	UNLK
AR DOOR STATE	Passenger door is locked	LOCK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door is unlocked	UNLK
ID OK FLAG	Ignition switch in ACC or ON position	Reset
	Ignition switch in OFF position	Set
PRMT ENG STRT	The engine start is prohibited	Reset
	The engine start is permitted	Set
PRMT RKE STRT	**NOTE:** The item is indicated, but not monitored.	Reset
KEY SW -SLOT	Intelligent Key is not inserted into key slot	Off
	Intelligent Key is inserted into key slot	On
RKE OPE COUN1	During the operation of Intelligent Key	Operation frequency of Intelligent Key
RKE OPE COUN2	**NOTE:** The item is indicated, but not monitored.	—
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 Intelligent Key is not registered to BCM	Yet
	The ID of fourth Intelligent Key is registered to BCM	DONE
TP 3	The ID of third Intelligent Key is not registered to BCM	Yet
	The ID of third Intelligent Key is registered to BCM	DONE
TP 2	The ID of second Intelligent Key is not registered to BCM	Yet
	The ID of second Intelligent Key is registered to BCM	DONE
TP 1	The ID of first Intelligent Key is not registered to BCM	Yet
	The ID of first Intelligent Key is registered to BCM	DONE

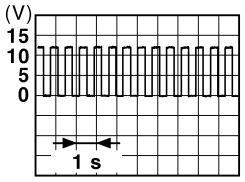
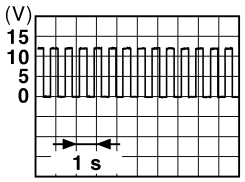
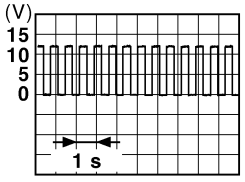
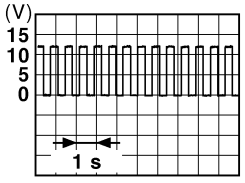
Monitor Item	Condition	Value/Status
AIR PRESS FL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch 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	ID of front LH tire transmitter is registered	Green
	ID of front LH tire transmitter is not registered	Red
ID REGST FR1	ID of front RH tire transmitter is registered	Green
	ID of front RH tire transmitter is not registered	Red
ID REGST RR1	ID of rear RH tire transmitter is registered	Green
	ID of rear RH tire transmitter is not registered	Red
ID REGST RL1	ID of rear LH tire transmitter is registered	Green
	ID of rear LH tire transmitter is not registered	Red
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

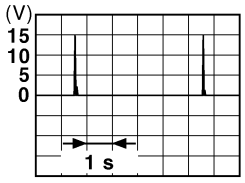
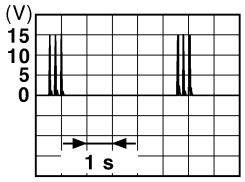
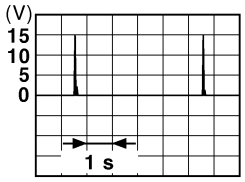
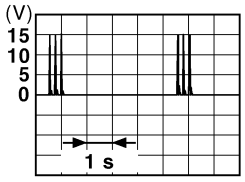
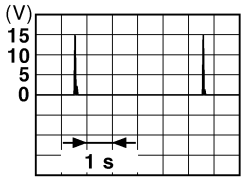
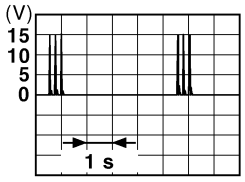
TERMINAL LAYOUT

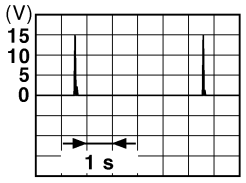
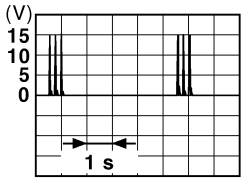
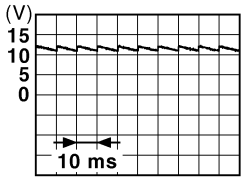
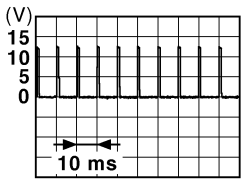


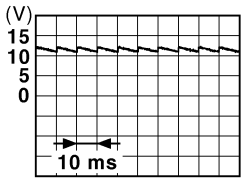
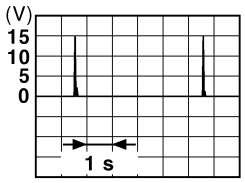
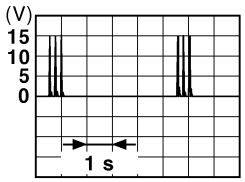
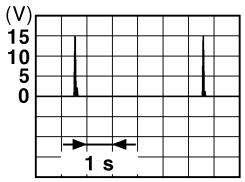
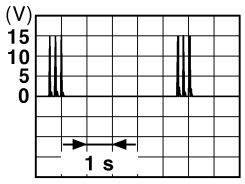
PHYSICAL VALUES

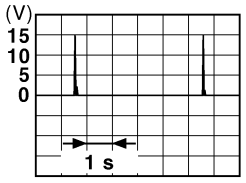
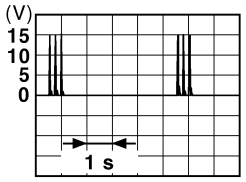
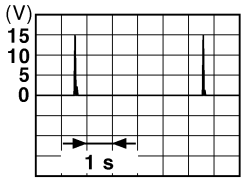
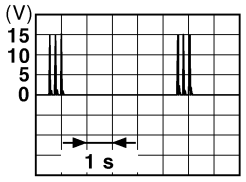
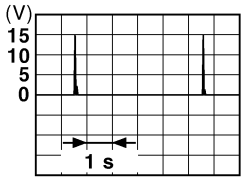
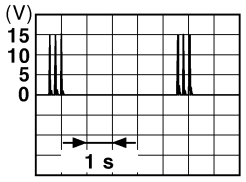
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
1 (W)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (Y)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF		Battery voltage
3 (Y)	Ground	P/W power supply (RAP)	Output	Ignition switch ON		Battery voltage
4 (LG)	Ground	Interior room lamp power supply	Output	After passing the interior room lamp battery saver operation time		0 V
				Any other time after passing the interior room lamp battery saver operation time		Battery voltage
5 (P)	Ground	Passenger door UNLOCK	Output	Passenger door	UNLOCK (Actuator is activated)	Battery voltage
					Other than UNLOCK (Actuator is not activated)	0 V
7 (Y)	Ground	Step lamp	Output	Step lamp	ON	0 V
					OFF	Battery voltage
8 (V)	Ground	All doors, fuel lid LOCK	Output	All doors, fuel lid	LOCK (Actuator is activated)	Battery voltage
					Other than LOCK (Actuator is not activated)	0 V
9 (G)	Ground	Driver door, fuel lid UNLOCK	Output	Driver door, fuel lid	UNLOCK (Actuator is activated)	Battery voltage
					Other than UNLOCK (Actuator is not activated)	0 V
11 (R)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
13 (B)	Ground	Ground	—	Ignition switch ON		0 V
14 (W)	Ground	Push-button ignition switch illumination ground	Output	Tail lamp	OFF	0 V
					ON	**NOTE:** When the illumination brightening/dimming level is in the neutral position  JSNIA0010GB
15 (O)	Ground	ACC indicator lamp	Output	Ignition switch	OFF	Battery voltage
					ACC or ON	0 V

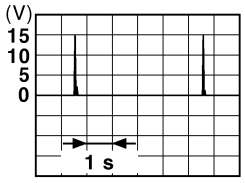
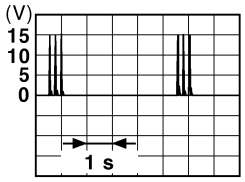
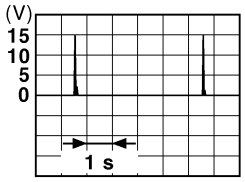
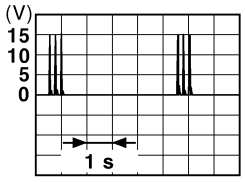
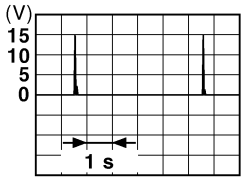
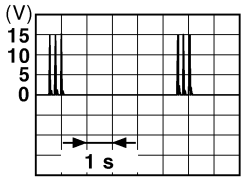
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
17 (V)	Ground	Turn signal (front RH)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	 PKID0926E 6.5 V
18 (G)	Ground	Turn signal (front LH)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 PKID0926E 6.5 V
19 (V)	Ground	Room lamp timer control	Output	Interior room lamp	OFF	Battery voltage
					ON	0 V
20 (V)	Ground	Turn signal (rear RH)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	 PKID0926E 6.5 V
23 (G)	Ground	Trunk lid opening.	Output	Trunk lid	Open (Trunk lid opener actuator is activated)	Battery voltage
					Close (Trunk lid opener actuator is not activated)	0 V
25 (G)	Ground	Turn signal (rear LH)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 PKID0926E 6.5 V
30 (R)	Ground	Trunk room lamp	Output	Trunk room lamp	ON	0 V
					OFF	Battery voltage

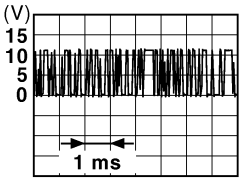
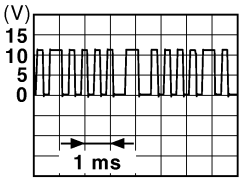
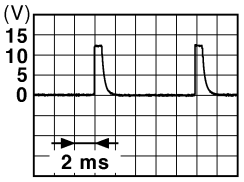
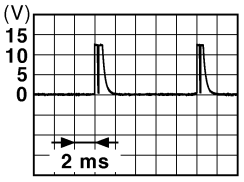
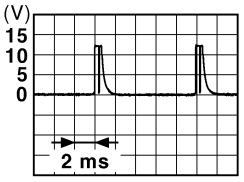
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
34 (SB)	Ground	Trunk room antenna 1 (-)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
35 (V)	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
38 (B)	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

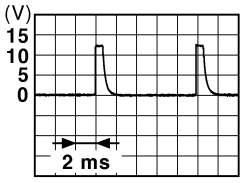
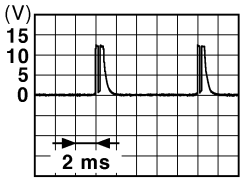
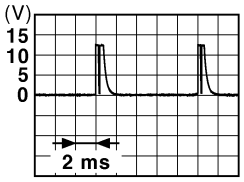
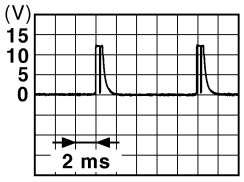
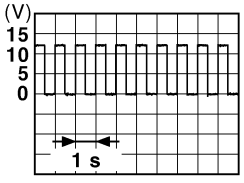
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
39 (W)	Ground	Rear bumper antenna (+)	Output	When the trunk lid request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
47 (Y)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	Battery voltage
					ON	0 V
50 (R)	Ground	Trunk room lamp switch	Input	Trunk room lamp switch	OFF (Trunk is closed)	 JPMIA0011GB 11.8 V
					ON (Trunk is open)	0 V
52 (SB)	Ground	Starter relay control	Output	Ignition switch OFF (M/T models)	When the clutch pedal is depressed	Battery voltage
					When the clutch pedal is not depressed	0 V
				Ignition switch ON (A/T models)	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	0 V
61 (SB)	Ground	Trunk request switch	Input	Trunk request switch	ON (Pressed)	0 V
					OFF (Not pressed)	 JPMIA0016GB 1.0 V
64 (L)	Ground	Request switch buzzer	Output	Request switch buzzer	Sounding	0 V
					Not sounding	Battery voltage

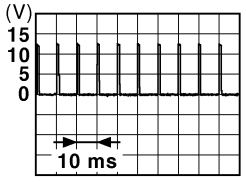
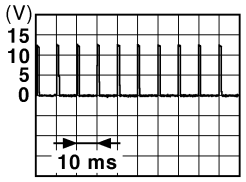
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
67 (GR)	Ground	Trunk lid opener switch	Input	Trunk lid opener switch	Pressed	0 V
					Not pressed	 JPMIA0011GB 11.8 V
72 (R)	Ground	Room antenna 2 (-) (center console)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
73 (G)	Ground	Room antenna 2 (+) (center console)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB

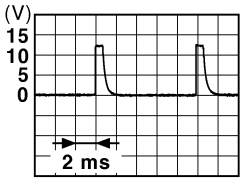
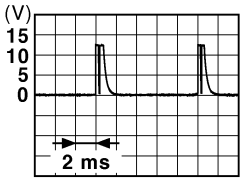
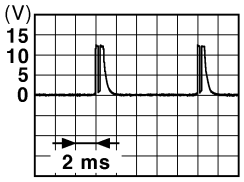
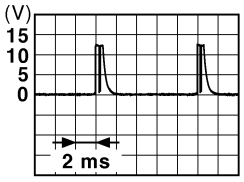
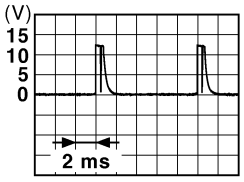
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
74 (SB)	Ground	Passenger door antenna (-)	Output	When the passenger door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
75 (BR)	Ground	Passenger door antenna (+)	Output	When the passenger door 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
76 (V)	Ground	Driver door antenna (-)	Output	When the driver door 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

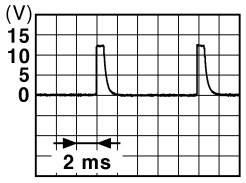
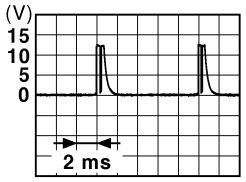
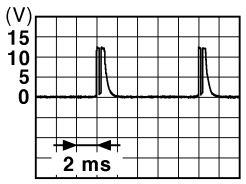
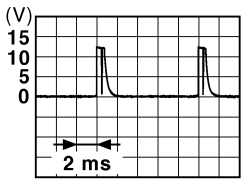
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
77 (LG)	Ground	Driver door antenna (+)	Output	When the driver door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
78 (Y)	Ground	Room antenna (-) (instrument panel)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
79 (BR)	Ground	Room antenna (+) (instrument panel)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB

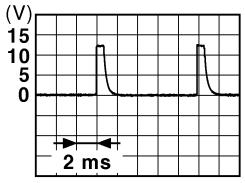
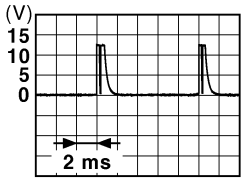
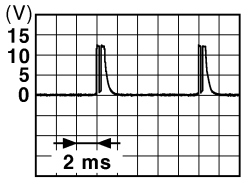
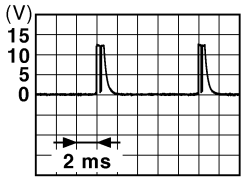
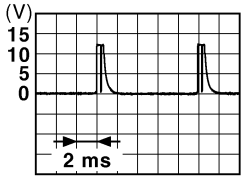
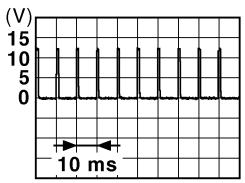
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
80 (GR)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
81 (W)	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.
82 (R)	Ground	Ignition relay [fuse block (J/B)] control	Output	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage
83 (Y)	Ground	Remote keyless entry receiver signal	Input/ Output	During waiting		 JMKIA0064GB
				When operating either button on Intelligent Key		 JMKIA0065GB
87 (BR)	Ground	Combination switch INPUT 5	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 JPMIA0041GB 1.4 V
					Front fog lamp switch ON (Wiper intermittent dial 4)	 JPMIA0037GB 1.3 V
					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 1.3 V

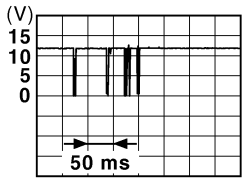
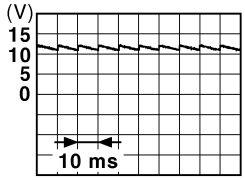
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
88 (O)	Ground	Combination switch INPUT 3	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 JPMIA0041GB 1.4 V
					Lighting switch HI (Wiper intermittent dial 4)	 JPMIA0036GB 1.3 V
					Lighting switch 2ND (Wiper intermittent dial 4)	 JPMIA0037GB 1.3 V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	 JPMIA0040GB 1.3 V
89 (BR)	Ground	Push-button ignition switch (push switch)	Input	Push-button ignition switch (push switch)	Pressed	0 V
					Not pressed	Battery voltage
90 (P)	Ground	CAN - L	Input/ Output	—		—
91 (L)	Ground	CAN - H	Input/ Output	—		—
92 (LG)	Ground	Key slot illumination	Output	Key slot illumination	OFF	0 V
					Blinking	 JPMIA0015GB 6.5 V
					ON	Battery voltage

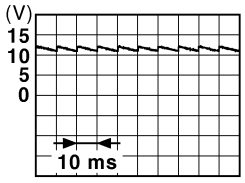
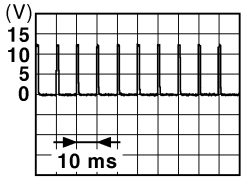
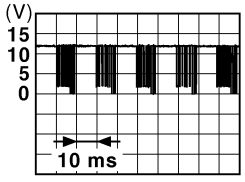
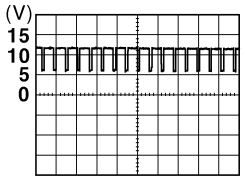
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
93 (V)	Ground	ON indicator lamp	Output	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage
95 (O)	Ground	ACC relay control	Output	Ignition switch	OFF	0 V
					ACC or ON	Battery voltage
96 (Y)	Ground	A/T device (detention switch) power supply	Output	—		Battery voltage
97 (L)	Ground	Steering lock condition No. 1	Input	Steering lock	LOCK status	0 V
					UNLOCK status	Battery voltage
98 (P)	Ground	Steering lock condition No. 2	Input	Steering lock	LOCK status	Battery voltage
					UNLOCK status	0 V
99 (R)	Ground	Selector lever P position switch (Except M/T models)	Input	Selector lever	P position	0 V
					Any position other than P	Battery voltage
		ASCD clutch switch (M/T models with ICC)		ASCD clutch switch	OFF (Clutch pedal is depressed)	0 V
					ON (Clutch pedal is not depressed)	Battery voltage
		ICC clutch switch (M/T models without ICC)		ICC clutch switch	OFF (Clutch pedal is depressed)	0 V
					ON (Clutch pedal is not depressed)	Battery voltage
100 (Y)	Ground	Passenger door request switch	Input	Passenger door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	 JPMIA0016GB 1.0 V
101 (P)	Ground	Driver door request switch	Input	Driver door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	 JPMIA0016GB 1.0 V
102 (O)	Ground	Blower fan motor relay control	Output	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage
103 (LG)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OFF		Battery voltage
106 (W)	Ground	Steering wheel lock unit power supply	Output	Ignition switch	OFF or ACC	Battery voltage
					ON	0 V

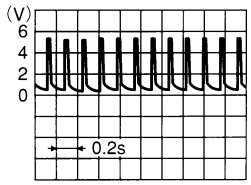
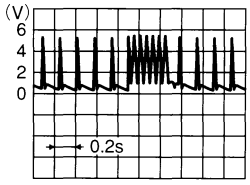
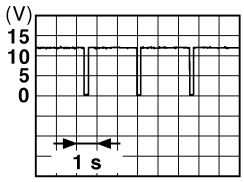
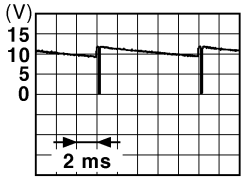
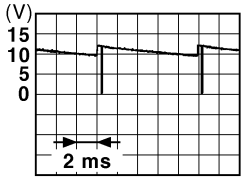
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
107 (LG)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	 JPMIA0041GB 1.4 V
					Turn signal switch LH	 JPMIA0037GB 1.3 V
					Turn signal switch RH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

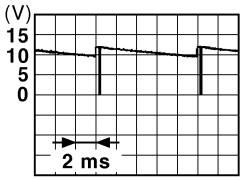
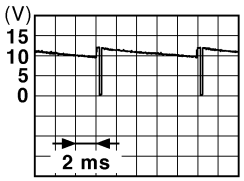
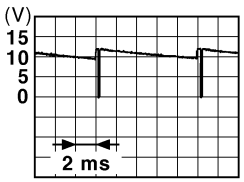
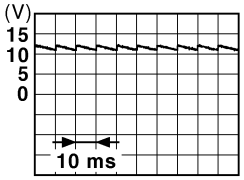
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
108 (R)	Ground	Combination switch INPUT 4	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 JPMIA0041GB 1.4 V
					Lighting switch AUTO (Wiper intermittent dial 4)	 JPMIA0038GB 1.3 V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

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
109 (W)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	 JPMIA0041GB 1.4 V
					Lighting switch PASS	 JPMIA0037GB 1.3 V
					Lighting switch 2ND	 JPMIA0036GB 1.3 V
					Front wiper switch INT	 JPMIA0038GB 1.3 V
					Front wiper switch HI	 JPMIA0040GB 1.3 V
110 (G)	Ground	Hazard switch	Input	Hazard switch	Pressed	0 V
					Not pressed	 JPMIA0012GB 1.1 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
111 (Y)	Ground	Steering lock unit communication	Input/ Output	Steering lock	LOCK status	Battery voltage
					LOCK or UNLOCK	 JMKIA0066GB
					For 15 seconds after UNLOCK	Battery voltage
					15 seconds or later after UNLOCK	0 V
113 (P)	Ground	Optical sensor signal	Input	Ignition switch ON	When bright outside of the vehicle	Close to 5 V
					When dark outside of the vehicle	Close to 0 V
114 (R)	Ground	Clutch interlock switch	Input	Clutch interlock switch	OFF (Clutch pedal is not depressed)	0 V
					ON (Clutch pedal is depressed)	Battery voltage
116 (SB)	Ground	Stop lamp switch 1	Input	—		Battery voltage
118 (BR)	Ground	Stop lamp switch 2	Input	Stop lamp switch	OFF (Brake pedal is not depressed)	0 V
					ON (Brake pedal is depressed)	Battery voltage
				ICC brake hold relay (With ICC)	OFF	0 V
					ON	Battery voltage
119 (SB)	Ground	Front door lock assembly driver side (unlock sensor)	Input	Driver door	LOCK status	 JPMIA0011GB 11.8 V
					UNLOCK status	0 V
121 (SB)	Ground	Key slot switch	Input	When Intelligent Key is inserted into key slot		Battery voltage
				When Intelligent Key is not inserted into key slot		0 V
122 (P)	Ground	ACC feedback signal	Input	Ignition switch	OFF	0 V
					ACC or ON	Battery voltage
123 (W)	Ground	IGN feedback signal	Input	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
		Signal name	Input/ Output			
+	–					
124 (LG)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closes)	 JPMIA0011GB 11.8 V
					ON (When passenger door opens)	0 V
129 (O)	Ground	Trunk lid opener cancel switch	Input	Trunk lid opener cancel switch	CANCEL	 JPMIA0012GB 1.1 V
					ON	0 V
132 (V)	Ground	Power window switch communication	Input/ Output	Ignition switch ON		 JPMIA0013GB 10.2 V
				Ignition switch OFF or ACC		0 V
133 (L)	Ground	Push-button ignition switch illumination	Output	Push-button ignition switch illumination	ON (When tail lamps OFF)	5.5 V
					ON (When tail lamps ON)	**NOTE:** The pulse width of this wave is varied by the illumination brightening/dimming level.  JPMIA0159GB
					OFF	0 V
134 (LG)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	ON	0 V
					OFF	Battery voltage
137 (O)	Ground	Receiver and sensor ground	Input	Ignition switch ON		0 V
138 (V)	Ground	Receiver and sensor power supply output	Output	Ignition switch	OFF	0 V
					ACC or ON	5.0 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
139 (L)	Ground	Tire pressure receiver signal	Input/ Output	Ignition switch ON	Standby state	 OCC3881D
					When receiving the signal from the transmitter	 OCC3880D
140 (GR)	Ground	Selector lever P/N position signal	Input	Selector lever	P or N position	12.0 V
					Except P and N positions	0 V
141 (R)	Ground	Security indicator signal	Output	Security indicator	ON	0 V
					Blinking	 JPMIA0014GB 11.3 V
					OFF	Battery voltage
142 (BR)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF	0 V
					Lighting switch 1ST	 JPMIA0031GB 10.7 V
					Lighting switch HI	
					Lighting switch 2ND	
					Turn signal switch RH	
143 (V)	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	0 V
					Front wiper switch HI (Wiper intermittent dial 4)	 JPMIA0032GB 10.7 V
					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			
144 (G)	Ground	Combination switch OUTPUT 2	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	0 V
					Front washer switch ON (Wiper intermittent dial 4)	 JPMIA0033GB 10.7 V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	
145 (L)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF	0 V
					Front wiper switch INT	 JPMIA0034GB 10.7 V
					Front wiper switch LO	
					Lighting switch AUTO	
146 (SB)	Ground	Combination switch OUTPUT 4	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF	0 V
					Front fog lamp switch ON	 JPMIA0035GB 10.7 V
					Lighting switch 2ND	
					Lighting switch PASS	
					Turn signal switch LH	
149 (W)	Ground	Tire pressure warning check switch	Input	—		5 V
150 (R)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closes)	 JPMIA0011GB 11.8 V
					ON (When driver door opens)	0 V
151 (G)	Ground	Rear window defogger relay	Output	Rear window defogger	Active	0 V
					Not activated	Battery voltage

Wiring Diagram - INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION -

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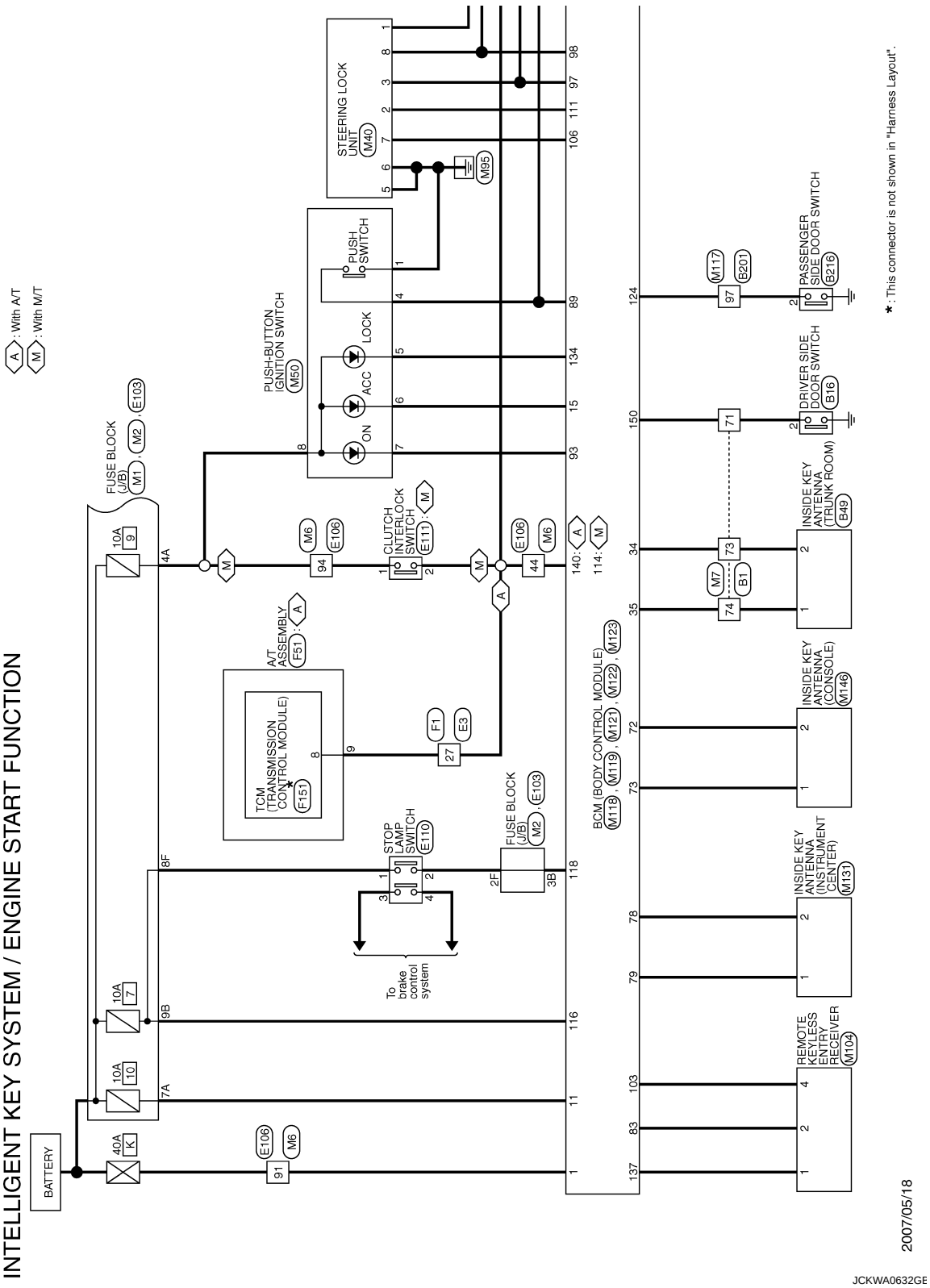
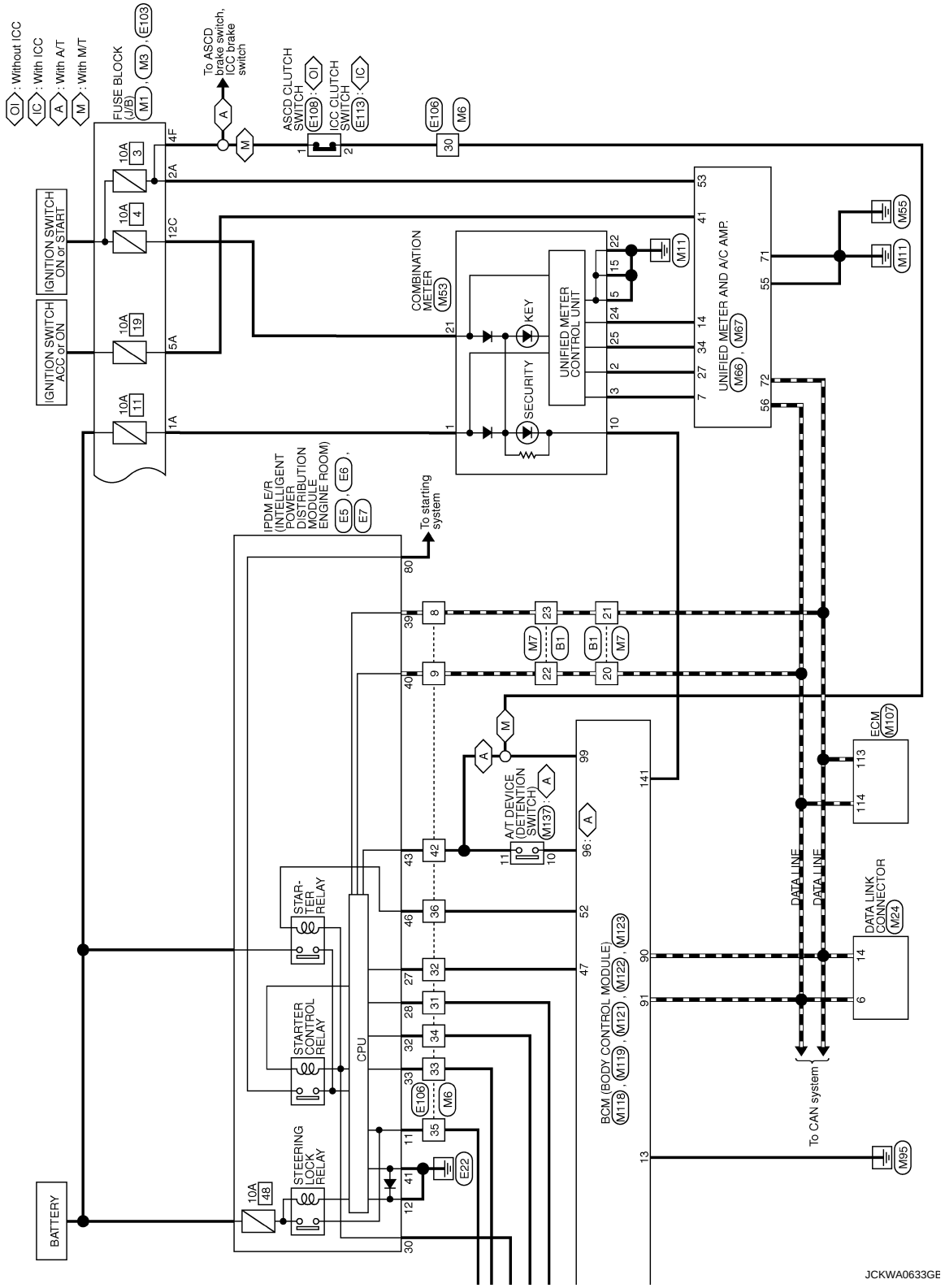



OI : Without ICC
IC : With ICC
A : With A/T
M : With M/T
FUSE BLOCK (J/B) M1, M3, E103
To ASCD brake switch, ICC brake switch
ASCD CLUTCH SWITCH E108 : OI
ICC CLUTCH SWITCH E113 : IC
E106 M6
IGNITION SWITCH ON or START
IGNITION SWITCH ACC or ON
10A 3
10A 4
10A 19
10A 11
4F
2A
12C
5A
1A
COMBINATION METER M53
KEY
SECURITY
UNIFIED METER CONTROL UNIT
UNIFIED METER AND A/C AMP. M66, M67
M11
M55
M111
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) E5, E6, E7
To starting system
M7 B1 B1 M7
A/T DEVICE (DETENTION SWITCH) M137
ECM M107
DATA LINE
DATA LINK CONNECTOR M24
BCM (BODY CONTROL MODULE) M118, M119, M121, M122, M123
To CAN system
STAR-TER RELAY
STARTER CONTROL RELAY
STEERING LOCK RELAY
CPU
E106 M6
E22
M95
BATTERY
10A 48
JCKWA0633GE

INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
20	L	–
21	P	–
22	L	–
23	P	–
71	V	–
73	P	–
74	L	–

Connector No.	B16
Connector Name	DRIVER SIDE DOOR SWITCH
Connector Type	A03FW

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

Connector No.	B49
Connector Name	INSIDE KEY ANTENNA (TRUNK ROOM)
Connector Type	RK02FGY

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

Connector No.	B201
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
97	GR	–

Connector No.	B216
Connector Name	PASSENGER SIDE DOOR SWITCH
Connector Type	A03FW

Terminal No.	Color of Wire	Signal Name [Specification]
2	GR	–

Connector No.	E3
Connector Name	WIRE TO WIRE
Connector Type	SAA36MB-RS8-SHZ8

Terminal No.	Color of Wire	Signal Name [Specification]
27	GR	–

Connector No.	E5
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4-1V

Terminal No.	Color of Wire	Signal Name [Specification]
11	BR	–
12	B/W	–
27	O	–
28	L	–
30	GR	–
32	V	–
33	P	–

Connector No.	E6
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH08FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
39	P	–
40	L	–
41	B/W	–
43	SB	–
46	P	–

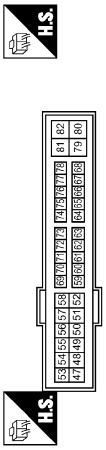
JCKWA0634GB

INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

Connector No.	E7
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4

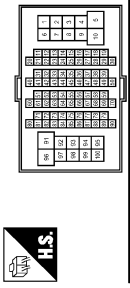
Terminal No.	Color of Wire	Signal Name [Specification]
80	W	–

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



Terminal No.	Color of Wire	Signal Name [Specification]
2F	W	–
4F	G	–
8F	L	–

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
8	P	–
9	L	–
30	R	–
31	L	–
32	O	–
33	P	–
34	V	–
35	BR	–
36	P	–
42	SB	–
44	GR	–

91	W	–
94	G	–

Connector No.	E108
Connector Name	ASCD CLUTCH SWITCH
Connector Type	S02FL

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

Connector No.	E110
Connector Name	STOP LAMP SWITCH
Connector Type	M04FW-LC

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

Connector No.	E111
Connector Name	CLUTCH INTERLOCK SWITCH
Connector Type	S02FL

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

Connector No.	E113
Connector Name	ICC CLUTCH SWITCH
Connector Type	S02FL

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

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INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

Connector No.	F1
Connector Name	WIRE TO WIRE
Connector Type	SAA36FB-RS8-SH28

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
27	GR	–

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

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
9	GR	–

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

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
3B	P	–
9B	SB	–

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FW-CS

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
12C	R	–

Connector No.	F151
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Type	SP10FBGY

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
8	G	START RLY

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
8	P	–
9	L	–
30	R	–
31	V	–
32	V	–
33	O	–
34	W	–
35	BR	–
36	SB	–
42	P	–
44	GR	– [With A/T]
44	R	– [With M/T]
91	W	–
94	G	–

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS08FW-M2

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1A	V	–
2A	G	–
4A	P	–
5A	L	–
7A	R	–

JCKWA0636GE

INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
20	L	–
21	P	–
22	L	–
23	P	–
71	R	–
73	SB	–
74	V	–

Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW

Terminal No.	Color of Wire	Signal Name [Specification]
6	L	–
14	P	–

Connector No.	M40
Connector Name	STEERING LOCK UNIT
Connector Type	TH08FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	S/L 12V (MECHANICAL)
2	Y	S/L (K LINE)
3	L	S/L CONDLTION1
5	B	GND
6	B	GND
7	W	S/L 12V(CPU)
8	P	S/L CONDLTION2

Connector No.	M50
Connector Name	PUSH-BUTTON IGNITION SWITCH
Connector Type	TK08FBR

Terminal No.	Color of Wire	Signal Name [Specification]
1	GR	–
4	BR	–
5	LG	–
6	O	–
7	Y	–
8	P	–

Connector No.	M53
Connector Name	COMBINATION METER
Connector Type	SAB40FW

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	BAT
2	LG	COMM (METER->AMP.)
3	GR	COMM (AMP->METER)
5	B	GND
10	R	SECURITY
15	B	GND
21	R	IGN
22	B	GND
24	BR	COMM (LCD->AMP.)
25	Y	COMM (AMP->LCD)

Connector No.	M66
Connector Name	UNIFIED METER AND A/C AMP.
Connector Type	TH40FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
7	GR	COMM (AMP->METER)
14	BR	COMM (LCD->AMP.)
27	LG	COMM (METER->AMP.)
34	Y	COMM (AMP->LCD)

Connector No.	M67
Connector Name	UNIFIED METER AND A/C AMP.
Connector Type	TH32FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
41	L	ACC
53	W	IGN
55	B	GND
56	L	CAN-H
71	GR	GND
72	P	CAN-L

Connector No.	M104
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Type	JAB04FB

Terminal No.	Color of Wire	Signal Name [Specification]
1	O	GND
2	Y	SIGNAL OUTPUT
4	LG	BATTERY

JCKWA0637GE

INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

Connector No.	M107
Connector Name	ECM
Connector Type	RH24FGY-RZ8-R-LH-Z

Terminal No.	Color of Wire	Signal Name [Specification]
113	P	VEHCAN-LI
114	L	VEHCAN-HI

Connector No.	M117
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
97	LG	–

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	M03FB-LC

Terminal No.	Color of Wire	Signal Name [Specification]
1	W	BAT (F/L)

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
11	R	BAT (FUSE)
13	B	GND
15	O	ACC LED

Connector No.	M121
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FGY-NH

Terminal No.	Color of Wire	Signal Name [Specification]
34	SB	TRUNK ANT1–
35	V	TRUNK ANT1+
47	Y	ING USM CONT1
52	SB	ST CONT USM

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH

Terminal No.	Color of Wire	Signal Name [Specification]
72	R	ROOM ANT2–
73	G	ROOM ANT2+
78	Y	ROOM ANT1–
79	BR	ROOM ANT1+
83	Y	KEYLESS TUNER SIGNAL
89	BR	ENG SW
90	P	CAN-L
91	L	CAN-H
93	Y	ON LED
96	GR	A/T DEVICE
97	L	S/L CONDITION 1
98	P	S/L CONDITION 2
99	R	SHIFT P
103	LG	KEYLESS TUNER POWER SUPPLY
106	W	S/L 12V (CPU)
111	Y	S/L (K LINE)

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH

Terminal No.	Color of Wire	Signal Name [Specification]
114	R	CLUTCH SW
116	SB	STOP LAMP LOW
118	BR	STOP LAMP HIGH
124	LG	DOOR SW (AS)
134	LG	LOCK LED
137	O	SENSOR GND
140	GR	SHIFT N/P
141	R	SECURITY INDICATOR OUTPUT
150	R	DOOR SW (DR)

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INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

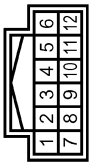
Connector No.	M131
Connector Name	INSIDE KEY ANTENNA (INSTRUMENT CENTER)
Connector Type	RK02FGY

H.S.

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

Connector No.	M137
Connector Name	A/T DEVICE
Connector Type	TH12FW-NH

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
10	GR	–
11	R	–

Connector No.	M146
Connector Name	INSIDE KEY ANTENNA (CONSOLE)
Connector Type	RK02FGY

H.S.

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

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Wiring Diagram - VEHICLE SECURITY SYSTEM -

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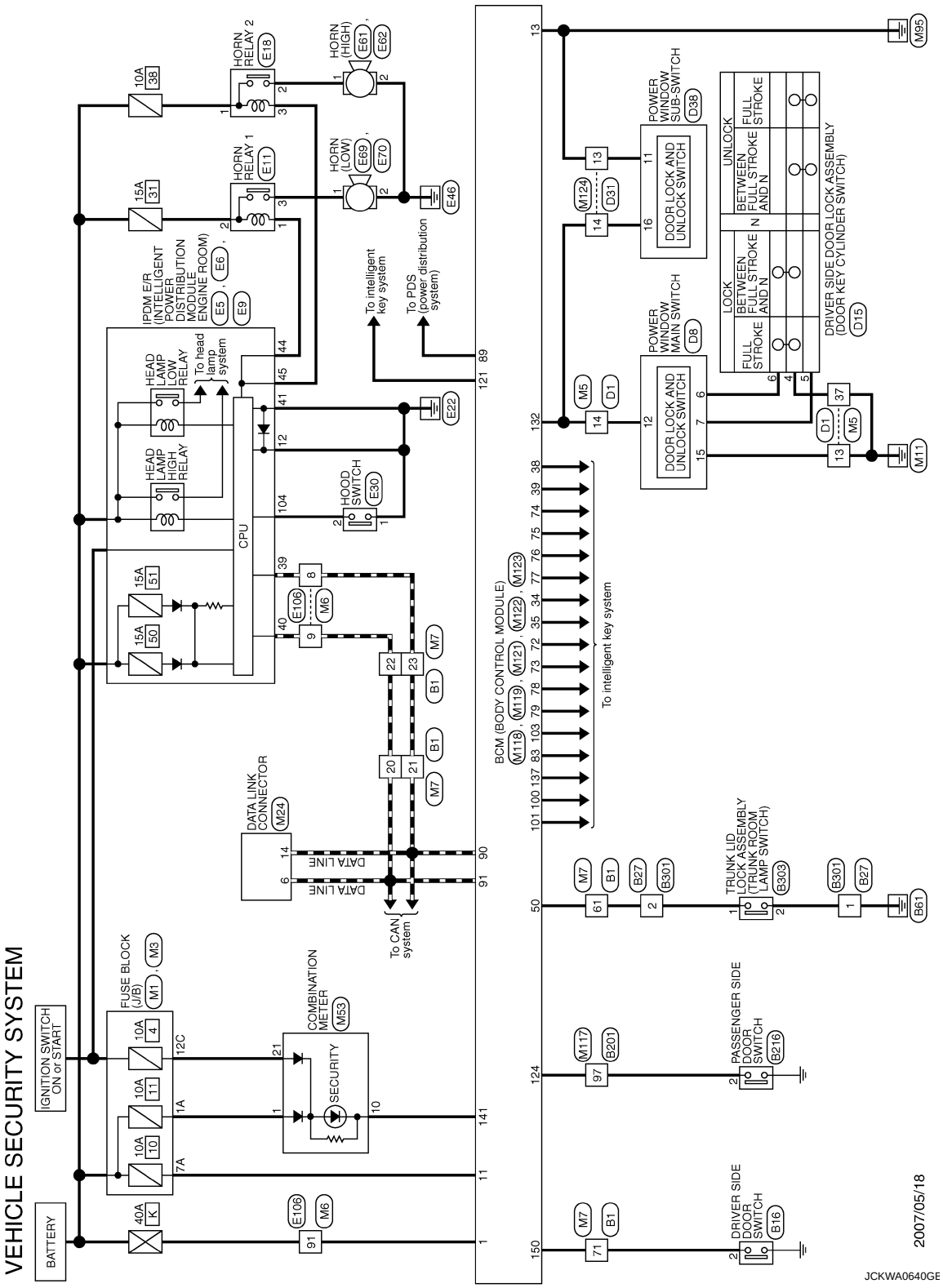


VEHICLE SECURITY SYSTEM

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
20	L	–
21	P	–
22	L	–
23	P	–
61	L	–
71	V	–

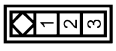
Connector No.	B216
Connector Name	PASSENGER SIDE DOOR SWITCH
Connector Type	A03FW

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
2	GR	–

Connector No.	B16
Connector Name	DRIVER SIDE DOOR SWITCH
Connector Type	A03FW

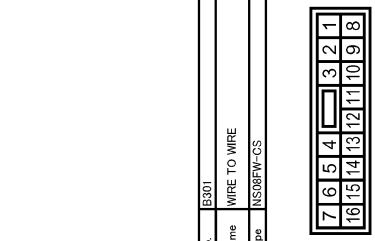
H.S.



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

Connector No.	B301
Connector Name	WIRE TO WIRE
Connector Type	NS08FW-CS

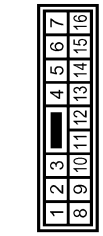
H.S.



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

Connector No.	B27
Connector Name	WIRE TO WIRE
Connector Type	NS08MW-CS

H.S.



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

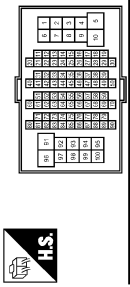
Connector No.	B303
Connector Name	TRUNK LID LOCK ASSEMBLY
Connector Type	TB03FW

H.S.

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

Connector No.	B201
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

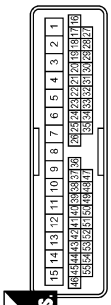
H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
97	GR	–

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Type	TH40FW-CS15

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
13	B	–
14	V	–
37	B	–

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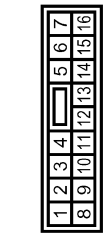
VEHICLE SECURITY SYSTEM

Connector No.	D8
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS16FW-CS

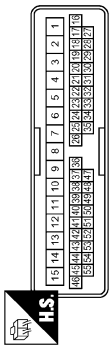


Terminal No.	Color of Wire	Signal Name [Specification]
6	GR	–
7	W	–
12	V	–
15	B	–

Connector No.	D15
Connector Name	DRIVER SIDE DOOR LOCK ASSEMBLY
Connector Type	E06FGY-RS

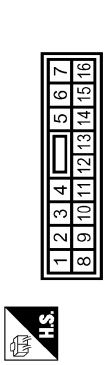
Terminal No.	Color of Wire	Signal Name [Specification]
4	B	–
5	W	–
6	GR	–

Connector No.	D31
Connector Name	WIRE TO WIRE
Connector Type	TH40FW-CS15



Terminal No.	Color of Wire	Signal Name [Specification]
13	B	–
14	Y	–

Connector No.	D38
Connector Name	POWER WINDOW SUB-SWITCH
Connector Type	NS16FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
11	B	–
16	Y	–

Connector No.	E11
Connector Name	HORN RELAY 1
Connector Type	24381-7990A

Terminal No.	Color of Wire	Signal Name [Specification]
1	LG	–
2	SB	–
3	G	–

Connector No.	E5
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4-1V

Terminal No.	Color of Wire	Signal Name [Specification]
12	B/W	–

Connector No.	E6
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH08FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
39	P	–
40	L	–
41	B/W	–
44	W	–
45	G	–

Connector No.	E9
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH16FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
104	LG	–

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VEHICLE SECURITY SYSTEM

Connector No.	E18
Connector Name	HORN RELAY 2
Connector Type	M03FW-R-LC

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

Connector No.	E30
Connector Name	HOOD SWITCH
Connector Type	RH02FB

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

Connector No.	E61
Connector Name	HORN (HIGH)
Connector Type	P01FB-A

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

Connector No.	E62
Connector Name	HORN (HIGH)
Connector Type	P01FB-A

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

Connector No.	E69
Connector Name	HORN (LOW)
Connector Type	P01FB-A

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

Connector No.	E70
Connector Name	HORN (LOW)
Connector Type	P01FB-A

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

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
8	P	–
9	L	–
91	W	–

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

Terminal No.	Color of Wire	Signal Name [Specification]
1A	V	–
7A	R	–

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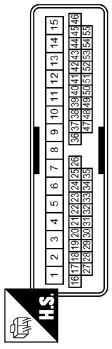
VEHICLE SECURITY SYSTEM

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FW-CS

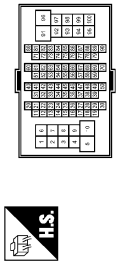
Terminal No.	Color of Wire	Signal Name [Specification]
12C	R	–

Connector No.	M5
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS15



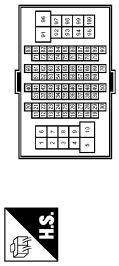
Terminal No.	Color of Wire	Signal Name [Specification]
13	B	–
14	V	–
37	B	–

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
8	P	–
9	L	–
91	W	–

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
20	L	–
21	P	–
22	L	–
23	P	–
61	R	–
71	R	–

Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW

Terminal No.	Color of Wire	Signal Name [Specification]
6	L	–
14	P	–

Connector No.	M53
Connector Name	COMBINATION METER
Connector Type	SAB40FW

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	BAT
10	R	SECURITY
21	R	IGN

Connector No.	M117
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
97	LG	–

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	M03FB-LC

Terminal No.	Color of Wire	Signal Name [Specification]
1	W	BAT (F/L)

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VEHICLE SECURITY SYSTEM

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
11	R	BAT (FUSE)
13	B	GND

Connector No.	M121
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FGY-NH

Terminal No.	Color of Wire	Signal Name [Specification]
34	SB	TRUNK ANT1–
35	V	TRUNK ANT1+
38	B	BACK ANT–
39	W	BACK ANT+
50	R	TRUNK SW

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH

Terminal No.	Color of Wire	Signal Name [Specification]
72	R	ROOM ANT2–
73	G	ROOM ANT2+
74	SB	AS DOOR ANT–
75	BR	AS DOOR ANT+
76	V	DR DOOR ANT–
77	LG	DR DOOR ANT+
78	Y	ROOM ANT1–
79	BR	ROOM ANT1+
83	Y	KEYLESS TUNER SIGNAL
89	BR	ENG SW
90	P	CAN-L
91	L	CAN-H
100	Y	AS REQUEST SW
101	P	DR REQUEST SW
103	LG	KEYLESS TUNER POWER SUPPLY

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH

Terminal No.	Color of Wire	Signal Name [Specification]
121	SB	KEY SWITCH SIGNAL
124	LG	DOOR SW (AS)
132	V	POWER WINDOW SERIAL LINK
137	O	SENSOR GND
141	R	SECURITY INDICATOR OUTPUT
150	R	DOOR SW (DR)

Connector No.	M124
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS15

Terminal No.	Color of Wire	Signal Name [Specification]
13	B	–
14	G	–

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Wiring Diagram - IVIS -

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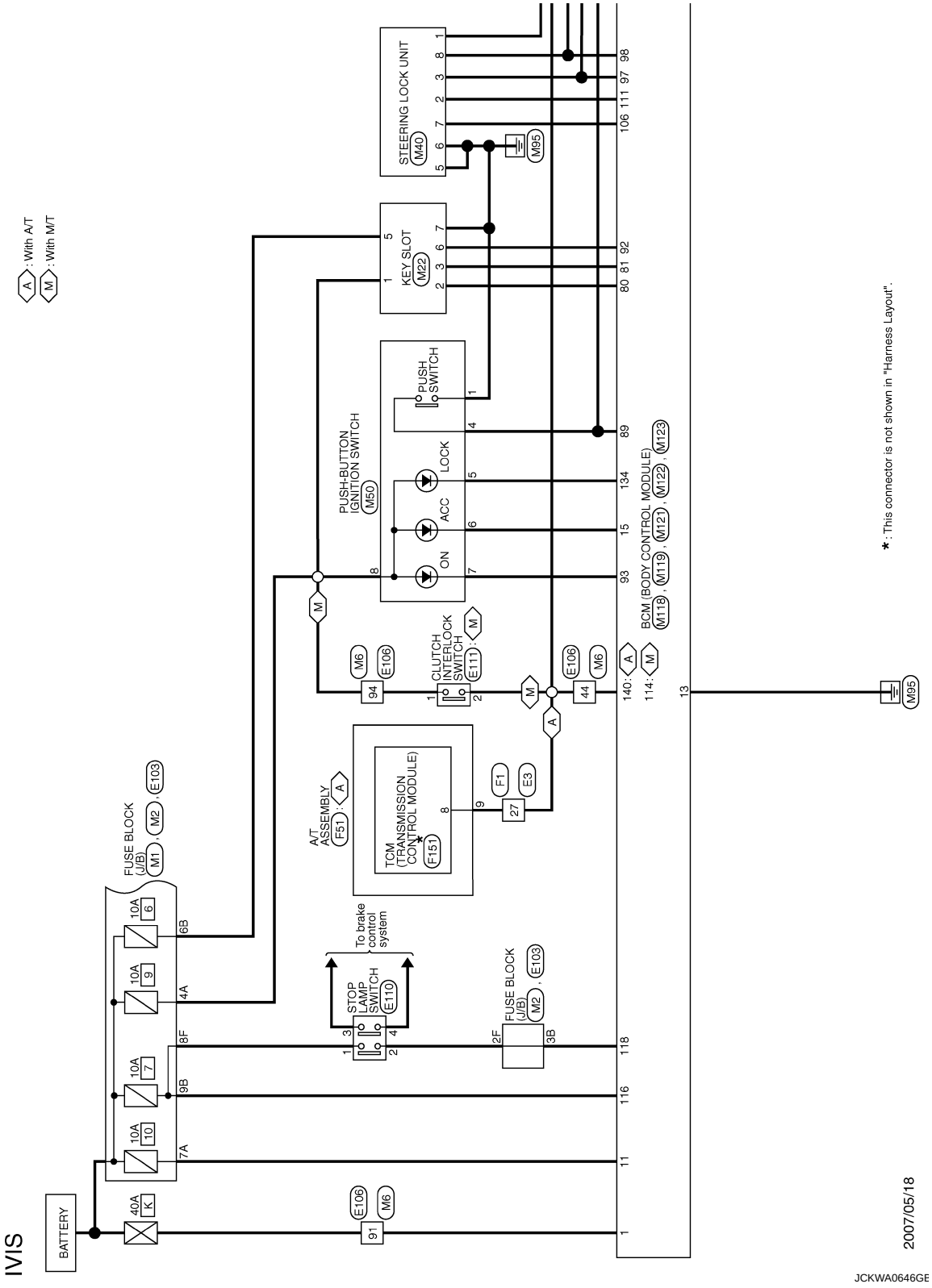
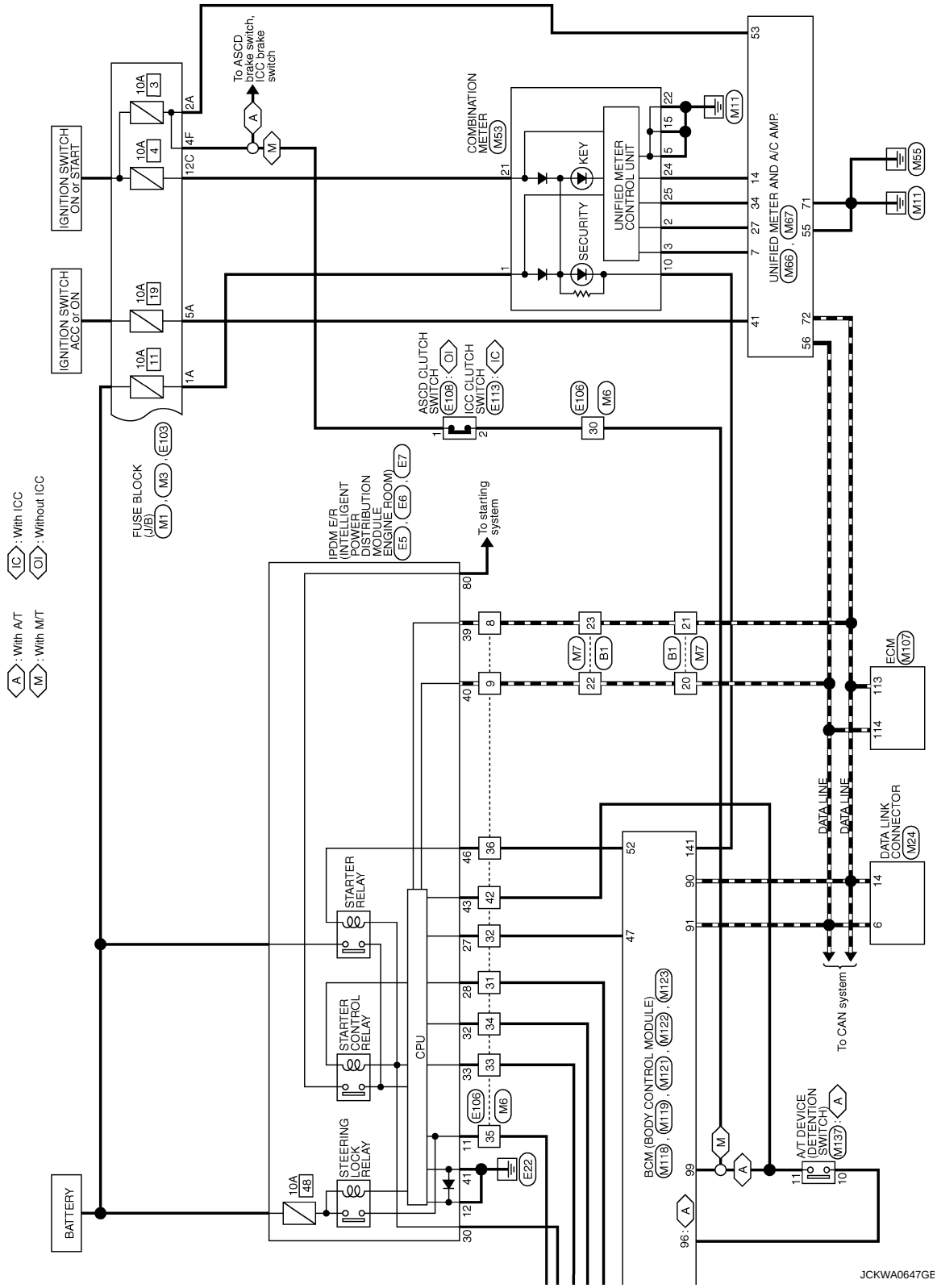


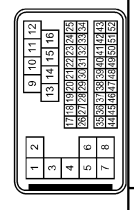

IGNITION SWITCH ON or START
IGNITION SWITCH ACC or ON
BATTERY
FUSE BLOCK (J/B) M1, M3, E103
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) E5, E6, E7
To ASCD brake switch, ICC brake switch
To starting system
COMBINATION METER M53
UNIFIED METER CONTROL UNIT
KEY
SECURITY
UNIFIED METER AND A/C AMP. M66, M67
ASCD CLUTCH SWITCH E108
ICC CLUTCH SWITCH E113
STARTER RELAY
STARTER CONTROL RELAY
STEERING LOCK RELAY
CPU
BCM (BODY CONTROL MODULE) M118, M119, M121, M122, M123
A/T DEVICE (DETENTION SWITCH) M137
ECM M107
DATA LINK CONNECTOR M24
DATA LINE
To CAN system
IC : With ICC
OI : Without ICC
A : With A/T
M : With M/T
JCKWA0647GE

IVIS

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

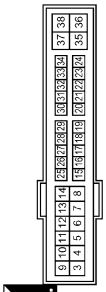
Terminal No.	Color of Wire	Signal Name [Specification]
20	L	–
21	P	–
22	L	–
23	P	–

Connector No.	E3
Connector Name	WIRE TO WIRE
Connector Type	SAA36MB-RS8-SHZ8



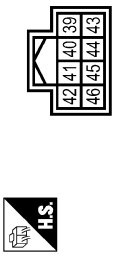
Terminal No.	Color of Wire	Signal Name [Specification]
27	GR	–

Connector No.	E5
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4-1V



Terminal No.	Color of Wire	Signal Name [Specification]
11	BR	–
12	B/W	–
27	O	–
28	L	–
30	GR	–
32	V	–
33	P	–

Connector No.	E6
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH08FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
39	P	–
40	L	–
41	B/W	–
43	SB	–
46	P	–

Connector No.	E7
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4

Terminal No.	Color of Wire	Signal Name [Specification]
80	W	–

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

Terminal No.	Color of Wire	Signal Name [Specification]
2F	W	–
4F	G	–
8F	L	–

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
8	P	–
9	L	–
30	R	–
31	L	–
32	O	–
33	P	–
34	V	–
35	BR	–
36	P	–
42	SB	–
44	GR	–

Terminal No.	Color of Wire	Signal Name [Specification]
91	W	–
94	G	–

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IVIS

Connector No.	E108
Connector Name	ASCD CLUTCH SWITCH
Connector Type	S02FL

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

Connector No.	E110
Connector Name	STOP LAMP SWITCH
Connector Type	M04FW-LC

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

Connector No.	E111
Connector Name	CLUTCH INTERLOCK SWITCH
Connector Type	S02FL

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

Connector No.	E113
Connector Name	ICC CLUTCH SWITCH
Connector Type	S02FL

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

Connector No.	F1
Connector Name	WIRE TO WIRE
Connector Type	SAA36FB-RS8-SHZ8

Terminal No.	Color of Wire	Signal Name [Specification]
27	GR	–

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

Terminal No.	Color of Wire	Signal Name [Specification]
9	GR	–

Connector No.	F151
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Type	SP10FBGY

Terminal No.	Color of Wire	Signal Name [Specification]
8	G	START RLY

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

Terminal No.	Color of Wire	Signal Name [Specification]
1A	V	–
2A	G	–
4A	P	–
5A	L	–
7A	R	–

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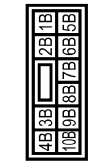
IVIS

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

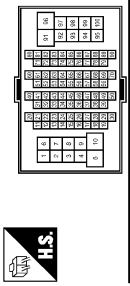


Terminal No.	Color of Wire	Signal Name [Specification]
3B	P	–
6B	Y	–
9B	SB	–

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
12O	R	–

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
8	P	–
9	L	–
30	R	–
31	V	–
32	Y	–
33	O	–
34	W	–
35	BR	–
36	SB	–
42	P	–
44	GR	– [With A/T]

44	R	– [With M/T]
91	W	–
94	G	–

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
20	L	–
21	P	–
22	L	–
23	P	–

Connector No.	M22
Connector Name	KEY SLOT
Connector Type	TH12FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
1	R	BAT
2	GR	CLOCK
3	W	DATA
5	Y	ILL BAT
6	LG	ILL
7	B	GND

Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW

Terminal No.	Color of Wire	Signal Name [Specification]
6	L	–
14	P	–

Connector No.	M40
Connector Name	STEERING LOCK UNIT
Connector Type	TH08FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	S/L 12V (MECHANICAL)
2	Y	S/L (K LINE)
3	L	S/L CONDLTLON1
5	B	GND
6	B	GND
7	W	S/L 12V(CPU)
8	P	S/L CONDLTLON2

JCKWA0650GB

IVIS

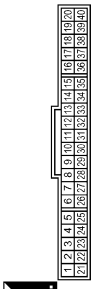
Connector No.	M50
Connector Name	PUSH-BUTTON IGNITION SWITCH
Connector Type	TK08FBR

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	GR	–
4	BR	–
5	LG	–
6	O	–
7	Y	–
8	P	–

Connector No.	M53
Connector Name	COMBINATION METER
Connector Type	SAB40FW

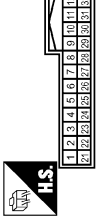
H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
1	V	BAT
2	LG	COMM (METER->AMP.)
3	GR	COMM (AMP.->METER)
5	B	GND
10	R	SECURITY
15	B	GND
21	R	IGN
22	B	GND
24	BR	COMM (LCD->AMP.)
25	Y	COMM (AMP->LCD)

Connector No.	M66
Connector Name	UNIFIED METER AND A/C AMP.
Connector Type	TH40FW-NH

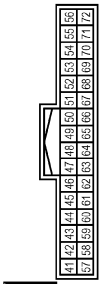
H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
7	GR	COMM (AMP->METER)
14	BR	COMM (LCD->AMP.)
27	LG	COMM (METER->AMP.)
34	Y	COMM (AMP->LCD)

Connector No.	M67
Connector Name	UNIFIED METER AND A/C AMP.
Connector Type	TH32FW-NH

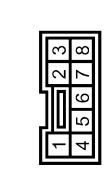
H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
41	L	ACC
53	W	IGN
55	B	GND
56	L	CAN-H
71	GR	GND
72	P	CAN-L

Connector No.	M107
Connector Name	ECM
Connector Type	RH24FGY-RZ8-R-LH-Z

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
113	P	VEHCAN-LI
114	L	VEHCAN-HI

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	MG3FB-LC

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	W	BAT (F/L)

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	MS16FW-CS

H.S.

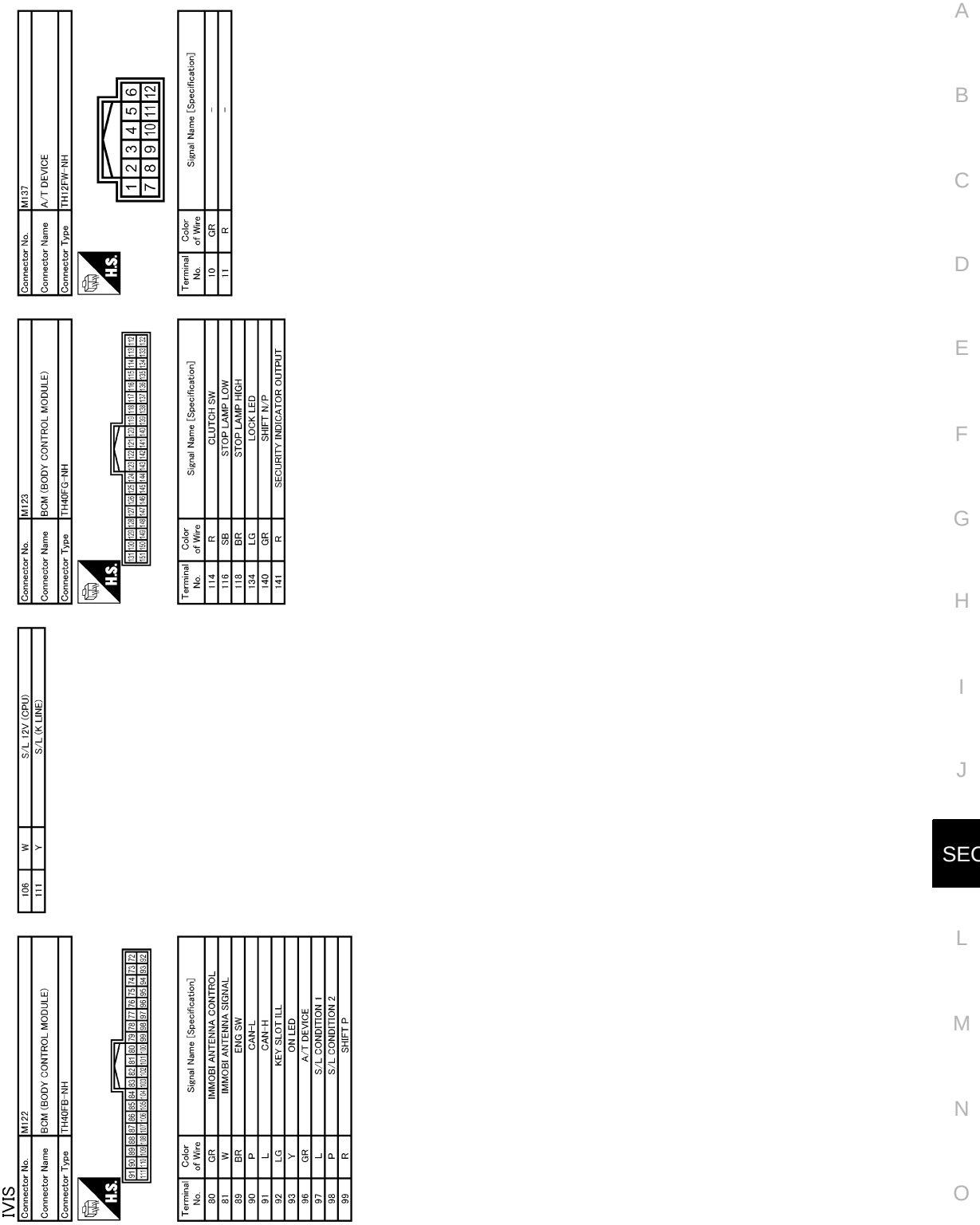
Terminal No.	Color of Wire	Signal Name [Specification]
11	R	BAT (FUSE)
13	B	GND
15	O	ACC LED

Connector No.	M121
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FGY-NH

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
47	Y	ING USM CONT1
52	SB	ST CONT USM

JCKWA0651GE



JCKWA0652GE

Fail Safe

INFOID:0000000001911535

Display contents of CONSULT	Fail-safe	Cancellation
B2013: ID DISCORD BCM-S/L	Inhibit engine cranking	Erase DTC
B2014: CHAIN OF S/L-BCM	Inhibit engine cranking	Erase DTC
B2190: NATS ANTTENA AMP	Inhibit engine cranking	Erase DTC

Display contents of CONSULT	Fail-safe	Cancellation
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
B2557: VEHICLE SPEED	Inhibit steering lock	When normal vehicle speed signals have been received from ABS actuator and electric unit (control unit) for 500 ms
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
B2563: HI VOLTAGE	• Inhibit engine cranking • Inhibit steering lock	500 ms after the power supply voltage decreases to less than 18 V
B2601: SHIFT POSITION	Inhibit steering lock	500 ms after the following signal reception status becomes consistent • Selector lever P position switch signal • P range signal (CAN)
B2602: SHIFT POSITION	Inhibit steering lock	5 seconds after the following BCM recognition conditions are fulfilled • Ignition switch is in the ON position • Selector lever P position switch signal: Except P position (battery voltage) • Vehicle speed: 4 /h or more
B2603: SHIFT POSI STATUS	Inhibit steering lock	500 ms after the following BCM recognition conditions are fulfilled • Ignition switch is in the ON position • Selector lever P position switch signal: Except P position (battery voltage) • Selector lever P/N position signal: Except P and N positions (0 V)
B2604: PNP SW	Inhibit steering lock	500 ms after any of the following BCM recognition conditions is fulfilled • Status 1 - Ignition switch is in the ON position - Selector lever P/N position signal: P and N position (battery voltage) - P range signal or N range signal (CAN): ON • Status 2 - Ignition switch is in the ON position - Selector lever P/N position signal: Except P and N positions (0 V) - P range signal and N range signal (CAN): OFF
B2605: PNP SW	Inhibit steering lock	500 ms after any of the following BCM recognition conditions is fulfilled • Ignition switch is in the ON position - Power position: IGN - Selector lever P/N position signal: Except P and N positions (0 V) - Interlock/PNP switch signal (CAN): OFF • Status 2 - Ignition switch is in the ON position - Selector lever P/N position signal: P or N position (battery voltage) - PNP switch signal (CAN): ON
B2606: S/L RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent • Steering lock relay signal (Request signal) • Steering lock relay signal (Condition signal)
B2607: S/L RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent • Steering lock relay signal (Request signal) • Steering lock relay signal (Condition signal)

Display contents of CONSULT	Fail-safe	Cancellation
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)
B2609: S/L STATUS	• Inhibit engine cranking • Inhibit steering lock	When the following steering lock conditions agree • BCM steering lock control status • Steering lock condition No. 1 signal status • Steering lock condition No. 2 signal status
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)
B2612: S/L STATUS	• Inhibit engine cranking • Inhibit steering lock	When any of the following conditions is fulfilled • Steering lock unit status signal (CAN) is received normally • The BCM steering lock control status matches the steering lock status recognized by the steering lock unit status signal (CAN from IPDM E/R)
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
B2619: BCM	Inhibit engine cranking	1 second after the steering lock unit power supply output control inside BCM becomes normal
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization
B26E1: ENG STATE NO RECIV	Inhibit engine cranking	When any of the following conditions is fulfilled • Power position changes to ACC • Receives engine status signal (CAN)

DTC Inspection Priority Chart

INFOID:0000000001911536

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

Priority	DTC
1	• B2562: LOW VOLTAGE • B2563: HI VOLTAGE
2	• U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN)
3	• B2190: NATS ANTTENA AMP • B2191: DIFFERENCE OF KEY • B2192: ID DISCORD BCM-ECM • B2193: CHAIN OF BCM-ECM

Priority	DTC
4	• B2013: ID DISCORD BCM-S/L • B2014: CHAIN OF S/L-BCM • 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 SW • B2605: PNP SW • B2606: S/L RELAY • B2607: S/L RELAY • B2608: STARTER RELAY • B2609: S/L STATUS • B260A: IGNITION RELAY • B260B: STEERING LOCK UNIT • B260C: STEERING LOCK UNIT • B260D: STEERING LOCK UNIT • B260F: ENG STATE SIG LOST • B2611: ACC RELAY • B2612: S/L STATUS • B2614: ACC RELAY CIRC • B2615: BLOWER RELAY CIRC • B2616: IGN RELAY CIRC • B2617: STARTER RELAY CIRC • B2618: BCM • B2619: BCM • B261A: PUSH-BTN IGN SW • B261E: VEHICLE TYPE • B26E1: ENG STATE NO RECIV • C1729: VHCL SPEED SIG ERR • U0415: VEHICLE SPEED SIG
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	• B2621: INSIDE ANTENNA • B2622: INSIDE ANTENNA • B2623: INSIDE ANTENNA

DTC Index

INFOID:0000000001911537

NOTE:
The details of time display are as follows.
- CRNT: A malfunction is detected now
- PAST: A malfunction was detected in the past.

IGN counter is displayed on Freeze Frame Data. The details of Freeze Frame Data and IGN Counter. Refer to BCS-13, "COMMON ITEM : CONSULT-III Function (BCM - COMMON ITEM)".

CONSULT display	Fail-safe	Freeze Frame Data	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-33
U1010: CONTROL UNIT (CAN)	—	—	—	—	BCS-34
U0415: VEHICLE SPEED SIG	—	—	—	—	BCS-35
B2013: ID DISCORD BCM-S/L	×	×	—	—	SEC-54
B2014: CHAIN OF S/L-BCM	×	×	—	—	SEC-55
B2190: NATS ANTTENA AMP	×	—	—	—	SEC-46
B2191: DIFFERENCE OF KEY	×	—	—	—	SEC-49
B2192: ID DISCORD BCM-ECM	×	—	—	—	SEC-50
B2193: CHAIN OF BCM-ECM	×	—	—	—	SEC-52
B2553: IGNITION RELAY	—	×	—	—	PCS-50
B2555: STOP LAMP	—	×	—	—	SEC-58
B2556: PUSH-BTN IGN SW	—	×	×	—	SEC-60
B2557: VEHICLE SPEED	×	×	×	—	SEC-62
B2560: STARTER CONT RELAY	×	×	×	—	SEC-63
B2562: LOW VOLTAGE	—	×	—	—	BCS-36
B2563: HI VOLTAGE	×	×	×	—	BCS-37
B2601: SHIFT POSITION	×	×	×	—	SEC-64
B2602: SHIFT POSITION	×	×	×	—	SEC-67
B2603: SHIFT POSI STATUS	×	×	×	—	SEC-69
B2604: PNP SW	×	×	×	—	SEC-72
B2605: PNP SW	×	×	×	—	SEC-74
B2606: S/L RELAY	×	×	×	—	SEC-76
B2607: S/L RELAY	×	×	×	—	SEC-77
B2608: STARTER RELAY	×	×	×	—	SEC-79
B2609: S/L STATUS	×	×	×	—	SEC-81
B260A: IGNITION RELAY	×	×	×	—	PCS-52
B260B: STEERING LOCK UNIT	—	×	×	—	SEC-85
B260C: STEERING LOCK UNIT	—	×	×	—	SEC-86
B260D: STEERING LOCK UNIT	—	×	×	—	SEC-87
B260F: ENG STATE SIG LOST	×	×	×	—	SEC-88
B2611: ACC RELAY	—	×	—	—	PCS-54
B2612: S/L STATUS	×	×	×	—	SEC-90
B2614: ACC RELAY CIRC	—	×	×	—	PCS-57
B2615: BLOWER RELAY CIRC	—	×	×	—	PCS-60

CONSULT display	Fail-safe	Freeze Frame Data	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2616: IGN RELAY CIRC	—	×	×	—	PCS-63
B2617: STARTER RELAY CIRC	×	×	×	—	SEC-94
B2618: BCM	×	×	×	—	PCS-66
B2619: BCM	×	×	×	—	SEC-96
B261A: PUSH-BTN IGN SW	—	×	×	—	SEC-97
B261E: VEHICLE TYPE	×	×	× (Turn ON for 15 seconds)	—	SEC-100
B2621: INSIDE ANTENNA	—	×	—	—	DLK-59
B2622: INSIDE ANTENNA	—	×	—	—	DLK-61
B2623: INSIDE ANTENNA	—	×	—	—	DLK-63
B26E1: ENG STATE NO RES	×	×	×	—	SEC-89
C1704: LOW PRESSURE FL	—	—	—	×	WT-15
C1705: LOW PRESSURE FR	—	—	—	×	WT-15
C1706: LOW PRESSURE RR	—	—	—	×	WT-15
C1707: LOW PRESSURE RL	—	—	—	×	WT-15
C1708: [NO DATA] FL	—	—	—	×	WT-17
C1709: [NO DATA] FR	—	—	—	×	WT-17
C1710: [NO DATA] RR	—	—	—	×	WT-17
C1711: [NO DATA] RL	—	—	—	×	WT-17
C1712: [CHECKSUM ERR] FL	—	—	—	×	WT-20
C1713: [CHECKSUM ERR] FR	—	—	—	×	WT-20
C1714: [CHECKSUM ERR] RR	—	—	—	×	WT-20
C1715: [CHECKSUM ERR] RL	—	—	—	×	WT-20
C1716: [PRESSDATA ERR] FL	—	—	—	×	WT-23
C1717: [PRESSDATA ERR] FR	—	—	—	×	WT-23
C1718: [PRESSDATA ERR] RR	—	—	—	×	WT-23
C1719: [PRESSDATA ERR] RL	—	—	—	×	WT-23
C1720: [CODE ERR] FL	—	—	—	×	WT-25
C1721: [CODE ERR] FR	—	—	—	×	WT-25
C1722: [CODE ERR] RR	—	—	—	×	WT-25
C1723: [CODE ERR] RL	—	—	—	×	WT-25
C1724: [BATT VOLT LOW] FL	—	—	—	×	WT-28
C1725: [BATT VOLT LOW] FR	—	—	—	×	WT-28
C1726: [BATT VOLT LOW] RR	—	—	—	×	WT-28
C1727: [BATT VOLT LOW] RL	—	—	—	×	WT-28
C1729: VHCL SPEED SIG ERR	—	—	—	×	WT-31
C1734: CONTROL UNIT	—	—	—	×	WT-32

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

Reference Value

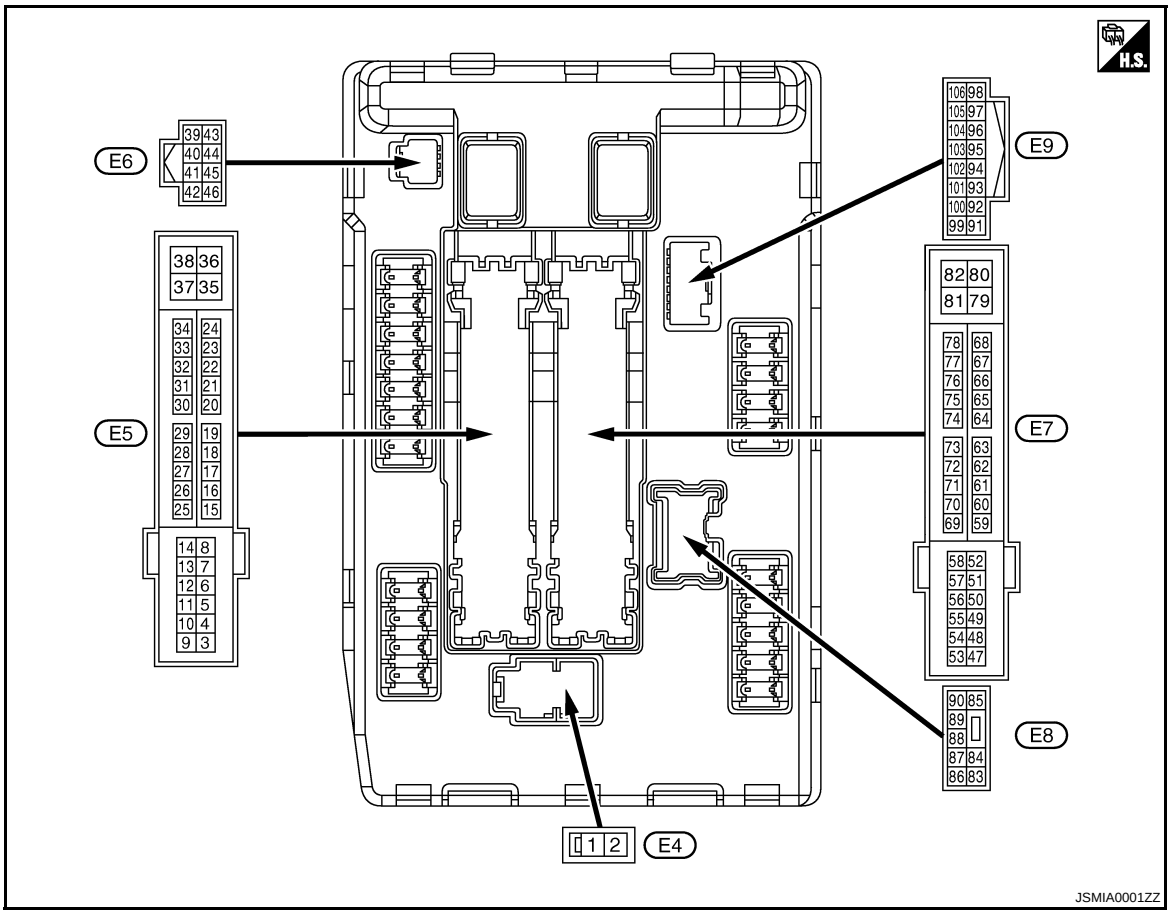
INFOID:0000000001726800

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition		Value/Status
RAD FAN REQ	Engine idle speed	Changes depending on engine coolant temperature, air conditioner operation status, vehicle speed, etc.	0 - 100 %
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)	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	A/T selector lever in any position other than P or N (A/T models)	Off
		Release clutch pedal (M/T models)	
	Ignition switch ON	A/T selector lever in P or N position (A/T models)	On
		Depress clutch pedal (M/T models)	
ST RLY CONT	Ignition switch ON		Off
	At engine cranking		On

Monitor Item	Condition		Value/Status
IHBT RLY -REQ	Ignition switch ON		Off
	At engine cranking		On
ST/INHI RLY	Ignition switch ON		Off
	At engine cranking		INHI → ST
	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 A/T selector lever in P position • A/T selector lever in any position other than P	Off
	Release the A/T selector button with A/T selector lever in P position **NOTE:** Fixed On for M/T models		On
S/L RLY -REQ	None of the conditions below are present		Off
	• Open the driver door after the ignition switch is turned OFF (for a few seconds) • Press the push-button ignition switch when the steering lock is activated • Depress the clutch pedal when the steering lock is activated		On
S/L STATE	Steering lock is activated		LOCK
	Steering lock is deactivated		UNLK
	[DTC: B210A] is detected		UNKWN
DTRL REQ	**NOTE:** The item is indicated, but not monitored.		Off
OIL P SW	Ignition switch OFF, ACC or engine running		Open
	Ignition switch ON		Close
HOOD SW	Close the hood		Off
	Open the hood		On
HL WASHER REQ	**NOTE:** The item is indicated, but not monitored.		Off
THFT HRN REQ	Not operation		Off
	• Panic alarm is activated • Horn is activated with VEHICLE SECURITY (THEFT WARNING) SYSTEM		On
HORN CHIRP	Not operating		Off
	Door locking with Intelligent Key (horn chirp mode)		On
CRNRNG LMP REQ	**NOTE:** The item is indicated, but not monitored.		Off

TERMINAL LAYOUT

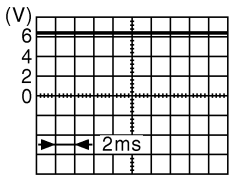
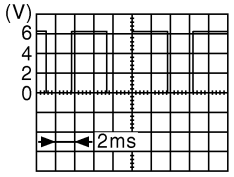
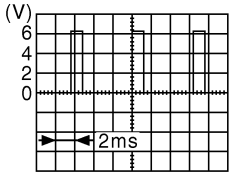


PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
		Signal name	Input/ Output			
+	–					
1 (W)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (L)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
4 (V)	Ground	Front wiper LO	Output	Ignition switch ON	Front wiper switch OFF	0 V
					Front wiper switch LO	Battery voltage
5 (L)	Ground	Front wiper HI	Output	Ignition switch ON	Front wiper switch OFF	0 V
					Front wiper switch HI	Battery voltage
7 (R)	Ground	Tail, license plate lamps & illuminations	Output	Ignition switch ON	Lighting switch OFF	0 V
					Lighting switch 1ST	Battery voltage
11 (BR)	Ground	Steering lock unit power supply	Output	Ignition switch OFF	A few seconds after opening the driver door	Battery voltage
				Ignition switch LOCK	Press the push-button ignition switch	Battery voltage
				Ignition switch ACC or ON		0 V
12 (B/W)	Ground	Ground	—	Ignition switch ON		0 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
13 (Y)	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
16 (LG)	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 (W)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
25 (G)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
26*1 (R)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
27 (O)	Ground	Ignition relay monitor	Input	Ignition switch OFF or ACC		Battery voltage
				Ignition switch ON		0 V
28 (L)	Ground	Push-button ignition switch	Input	Press the push-button ignition switch		0 V
				Release the push-button ignition switch		Battery voltage
30 (GR)	Ground	Starter relay control	Input	A/T models	A/T selector lever in any position other than P or N (Ignition switch ON)	0 V
					A/T selector lever P or N (Ignition switch ON)	Battery voltage
				M/T models	Release the clutch pedal	0 V
					Depress the clutch pedal	Battery voltage
32 (V)	Ground	Steering lock unit condition-1	Input	Steering lock is activated		0 V
				Steering lock is deactivated		Battery voltage
33 (P)	Ground	Steering lock unit condition-2	Input	Steering lock is activated		Battery voltage
				Steering lock is deactivated		0 V
36 (G)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
39 (P)	—	CAN - L	Input/ Output	—		—
40 (L)	—	CAN - H	Input/ Output	—		—
41 (B/W)	Ground	Ground	—	Ignition switch ON		0 V
42 (Y)	Ground	Cooling fan relay control	Input	Ignition switch OFF or ACC		0 V
				Ignition switch ON		0.7 V
43*2 (SB)	Ground	A/T device (Detention switch)	Input	Ignition switch ON	Press the A/T selector button (A/T selector lever P)	Battery voltage
					• A/T selector lever in any position other than P • Release the A/T selector button (A/T selector lever P)	0 V
44 (W)	Ground	Horn relay control	Input	The horn is deactivated		Battery voltage
				The horn is activated		0 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
45 (G)	Ground	Anti theft horn relay control	Input	The horn is deactivated		Battery voltage
				The horn is activated		0 V
46 (P)	Ground	Starter relay control	Input	A/T models	A/T selector lever in any position other than P or N (Ignition switch ON)	0 V
					A/T selector lever P or N (Ignition switch ON)	Battery voltage
				M/T models	Release the clutch pedal	0 V
					Depress the clutch pedal	Battery voltage
48 (BR)	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
49 (O)	Ground	ECM relay power supply	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		0 V
				• Ignition switch ON • Ignition switch OFF (For a few seconds after turning ignition switch OFF)		Battery voltage
51 (Y)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
53 (W)	Ground	ECM relay power supply	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		0 V
				• Ignition switch ON • Ignition switch OFF (For a few seconds after turning ignition switch OFF)		Battery voltage
54 (P)	Ground	Throttle control motor relay power supply	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		0 V
				• Ignition switch ON • Ignition switch OFF (For a few seconds after turning ignition switch OFF)		Battery voltage
55 (SB)	Ground	ECM power supply	Output	Ignition switch OFF		Battery voltage
56 (LG)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
57 (G)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
58*2 (L)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
69 (BR)	Ground	ECM relay control	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		Battery voltage
				• Ignition switch ON • Ignition switch OFF (For a few seconds after turning ignition switch OFF)		0 - 1.5 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
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
73*3 (P)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
74 (G)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
75 (SB)	Ground	Oil pressure switch	Input	Ignition switch ON	Engine stopped	0 V
					Engine running	Battery voltage
76 (Y)	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 (R)	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 (W)	Ground	Starter motor	Output	At engine cranking		Battery voltage
83 (R)	Ground	Headlamp LO (RH)	Output	Ignition switch ON	Lighting switch OFF	0 V
					Lighting switch 2ND	Battery voltage
84 (P)	Ground	Headlamp LO (LH)	Output	Ignition switch ON	Lighting switch OFF	0 V
					Lighting switch 2ND	Battery voltage

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
86 (W)	Ground	Front fog lamp (RH)	Output	Lighting switch 2ND	• Front fog lamp switch ON • Daytime running light activated (Only for Canada)	Battery voltage
					Front fog lamp switch OFF	0 V
87 (L)	Ground	Front fog lamp (LH)	Output	Lighting switch 2ND	• Front fog lamp switch ON • Daytime running light activated (Only for Canada)	Battery voltage
					Front fog lamp switch OFF	0 V
88 (G)	Ground	Washer pump power supply	Output	Ignition switch ON		Battery voltage
89 (BR)	Ground	Headlamp HI (RH)	Output	Ignition switch ON	• Lighting switch HI • Lighting switch PASS	Battery voltage
					Lighting switch OFF	0 V
90 (LG)	Ground	Headlamp HI (LH)	Output	Ignition switch ON	• Lighting switch HI • Lighting switch PASS	Battery voltage
					Lighting switch OFF	0 V
91 (P)	Ground	Parking lamp (RH)	Output	Ignition switch ON	Lighting switch 1ST	Battery voltage
					Lighting switch OFF	0 V
92 (O)	Ground	Parking lamp (LH)	Output	Ignition switch ON	Lighting switch 1ST	Battery voltage
					Lighting switch OFF	0 V
97 (V)	Ground	Cooling fan control	Output	Engine idling		0 - 5 V
104 (LG)	Ground	Hood switch	Input	Close the hood		Battery voltage
				Open the hood		0 V

*1: Only for the models with ICC system

*2: A/T models only

*3: M/T models only

Wiring Diagram - INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION -

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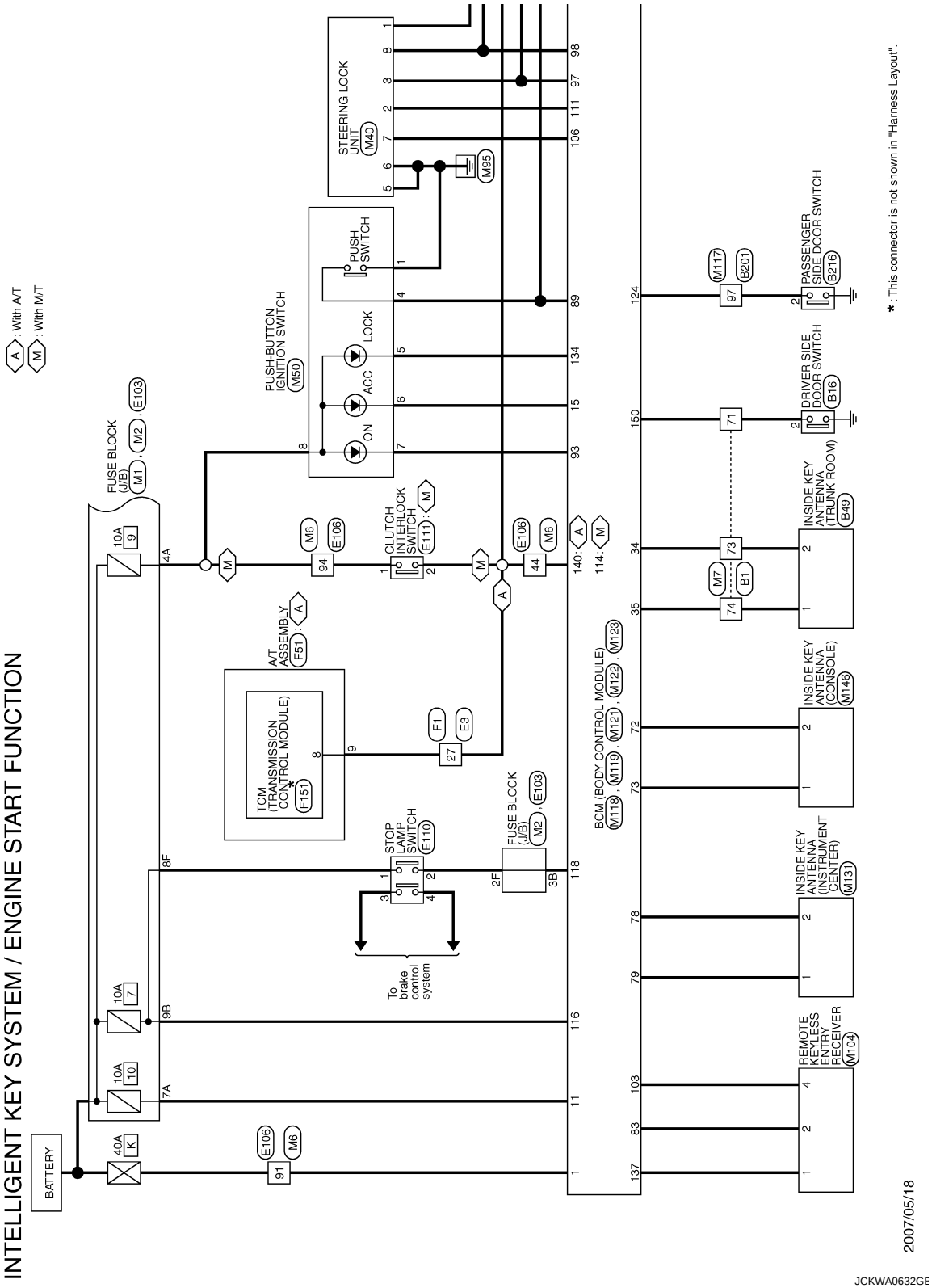

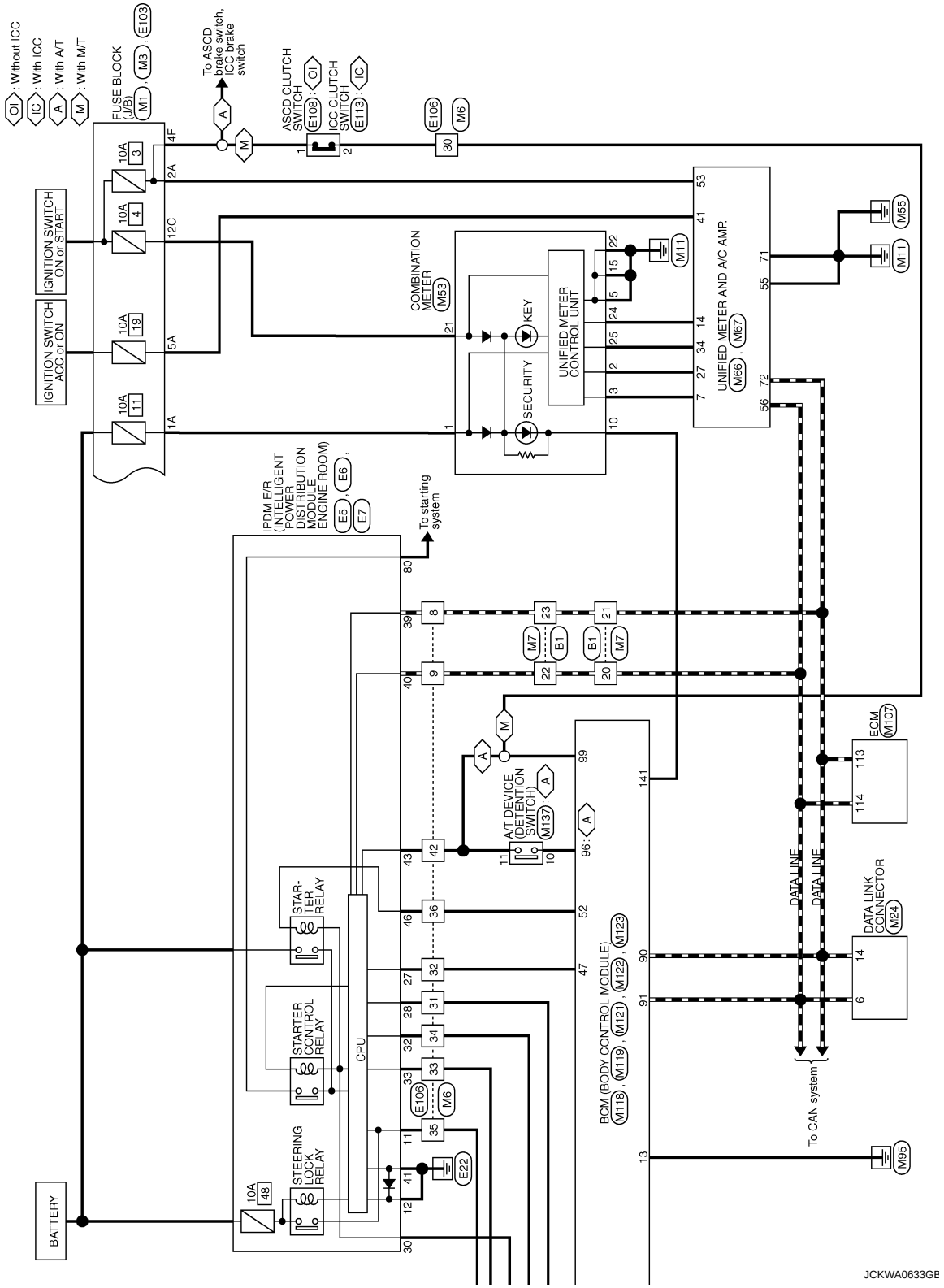
OI : Without ICC
IC : With ICC
A : With A/T
M : With M/T
FUSE BLOCK (J/B)
M1, M3, E103
To ASCD brake switch, ICC brake switch
ASCD CLUTCH SWITCH E108 : OI
ICC CLUTCH SWITCH E113 : IC
E106
M6
IGNITION SWITCH ON or START
IGNITION SWITCH ACC or ON
10A 3
10A 4
10A 19
10A 11
4F
2A
12C
5A
1A
COMBINATION METER M53
KEY
SECURITY
UNIFIED METER CONTROL UNIT
UNIFIED METER AND A/C AMP.
M66, M67
M11
M55
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E5, E6, E7
To starting system
M7
B1
ECM M107
A/T DEVICE (DETENTION SWITCH) M137
STAR-TER RELAY
STARTER CONTROL RELAY
STEERING LOCK RELAY
CPU
BCM (BODY CONTROL MODULE)
M118, M119, M121, M122, M123
DATA LINE
DATA LINK CONNECTOR M24
To CAN system
E22
M95
BATTERY
10A 48
JCKWA0633GB

INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
20	L	–
21	P	–
22	L	–
23	P	–
71	V	–
73	P	–
74	L	–

Connector No.	B16
Connector Name	DRIVER SIDE DOOR SWITCH
Connector Type	A03FW

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

Connector No.	B49
Connector Name	INSIDE KEY ANTENNA (TRUNK ROOM)
Connector Type	RK02FGY

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

Connector No.	B201
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
97	GR	–

Connector No.	B216
Connector Name	PASSENGER SIDE DOOR SWITCH
Connector Type	A03FW

Terminal No.	Color of Wire	Signal Name [Specification]
2	GR	–

Connector No.	E3
Connector Name	WIRE TO WIRE
Connector Type	SAA36MB-RS8-SHZ8

Terminal No.	Color of Wire	Signal Name [Specification]
27	GR	–

Connector No.	E5
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4-1V

Terminal No.	Color of Wire	Signal Name [Specification]
11	BR	–
12	B/W	–
27	O	–
28	L	–
30	GR	–
32	V	–
33	P	–

Connector No.	E6
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH08FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
39	P	–
40	L	–
41	B/W	–
43	SB	–
46	P	–

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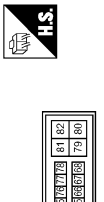
INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

Connector No.	E7
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4

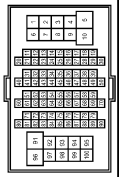
Terminal No.	Color of Wire	Signal Name [Specification]
80	W	–

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



Terminal No.	Color of Wire	Signal Name [Specification]
2F	W	–
4F	G	–
8F	L	–

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
8	P	–
9	L	–
30	R	–
31	L	–
32	O	–
33	P	–
34	V	–
35	BR	–
36	P	–
42	SB	–
44	GR	–

91	W	–
94	G	–

Connector No.	E108
Connector Name	ASCD CLUTCH SWITCH
Connector Type	S02FL

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

Connector No.	E110
Connector Name	STOP LAMP SWITCH
Connector Type	M04FW-LC

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

Connector No.	E111
Connector Name	CLUTCH INTERLOCK SWITCH
Connector Type	S02FL

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

Connector No.	E113
Connector Name	ICC CLUTCH SWITCH
Connector Type	S02FL

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

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INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

Connector No.	F1
Connector Name	WIRE TO WIRE
Connector Type	SAA36FB-RS8-SH28

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
27	GR	–

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

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
9	GR	–

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

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
2B	P	–
9B	SB	–

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FW-CS

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
12C	R	–

Connector No.	F151
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Type	SP10FBGY

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
8	G	START RLY

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
8	P	–
9	L	–
30	R	–
31	V	–
32	Y	–
33	O	–
34	W	–
35	BR	–
36	SB	–
42	P	–
44	GR	– [With A/T]

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

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1A	V	–
2A	G	–
4A	P	–
5A	L	–
7A	R	–

Terminal No.	Color of Wire	Signal Name [Specification]
44	R	– [With M/T]
91	W	–
94	G	–

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INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
20	L	–
21	P	–
22	L	–
23	P	–
71	R	–
73	SB	–
74	V	–

Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
6	L	–
14	P	–

Connector No.	M40
Connector Name	STEERING LOCK UNIT
Connector Type	TH08FW-NH

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	S/L 12V (MECHANICAL)
2	Y	S/L (K LINE)
3	L	S/L CONDLTLON1
5	B	GND
6	B	GND
7	W	S/L 12V(CPU)
8	P	S/L CONDLTLON2

Connector No.	M50
Connector Name	PUSH-BUTTON IGNITION SWITCH
Connector Type	TK08FBR

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	GR	–
4	BR	–
5	LG	–
6	O	–
7	Y	–
8	P	–

Connector No.	M53
Connector Name	COMBINATION METER
Connector Type	SAB40FW

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	BAT
2	LG	COMM (METER->AMP.)
3	GR	COMM (AMP->METER)
5	B	GND
10	R	SECURITY
15	B	GND
21	R	IGN
22	B	GND
24	BR	COMM (LCD->AMP.)
25	Y	COMM (AMP.->LCD)

Connector No.	M66
Connector Name	UNIFIED METER AND A/C AMP.
Connector Type	TH40FW-NH

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
7	GR	COMM (AMP->METER)
14	BR	COMM (LCD->AMP.)
27	LG	COMM (METER->AMP.)
34	Y	COMM (AMP->LCD)

Connector No.	M67
Connector Name	UNIFIED METER AND A/C AMP.
Connector Type	TH32FW-NH

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
41	L	ACC
53	W	IGN
55	B	GND
56	L	CAN-H
71	GR	GND
72	P	CAN-L

Connector No.	M104
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Type	JAB04FB

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	O	GND
2	Y	SIGNAL OUTPUT
4	LG	BATTERY

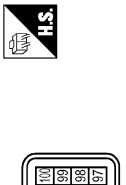
JCKWA0637GB

INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

Connector No.	M107
Connector Name	ECM
Connector Type	RH24FGY-R28-R-LH-Z

Terminal No.	Color of Wire	Signal Name [Specification]
113	P	VEHCAN-LI
114	L	VEHCAN-HI

Connector No.	M117
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

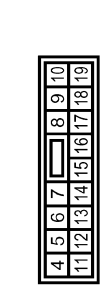


Terminal No.	Color of Wire	Signal Name [Specification]
97	LG	–

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	M03FB-LC

Terminal No.	Color of Wire	Signal Name [Specification]
1	W	BAT (F/L)

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
11	R	BAT (FUSE)
13	B	GND
15	O	ACC LED

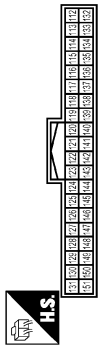
Connector No.	M121
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FGY-NH

Terminal No.	Color of Wire	Signal Name [Specification]
24	SB	TRUNK ANT1–
35	V	TRUNK ANT1+
47	Y	ING USM CONT1
52	SB	ST CONT USM

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH

Terminal No.	Color of Wire	Signal Name [Specification]
72	R	ROOM ANT2–
73	G	ROOM ANT2+
78	Y	ROOM ANT1–
79	BR	ROOM ANT1+
83	Y	KEYLESS TUNER SIGNAL
89	BR	ENG SW
90	P	CAN-L
91	L	CAN-H
93	Y	ON LED
96	GR	A/T DEVICE
97	L	S/L CONDITION 1
98	P	S/L CONDITION 2
99	R	SHIFT P
103	LG	KEYLESS TUNER POWER SUPPLY
106	W	S/L 12V (CPU)
111	Y	S/L (K LINE)

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH



Terminal No.	Color of Wire	Signal Name [Specification]
114	R	CLUTCH SW
116	SB	STOP LAMP LOW
118	BR	STOP LAMP HIGH
124	LG	DOOR SW (AS)
134	LG	LOCK LED
137	O	SENSOR GND
140	GR	SHIFT N/P
141	R	SECURITY INDICATOR OUTPUT
150	R	DOOR SW (DR)

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INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

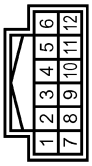
Connector No.	M131
Connector Name	INSIDE KEY ANTENNA (INSTRUMENT CENTER)
Connector Type	RK02FGY

H.S.

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

Connector No.	M137
Connector Name	A/T DEVICE
Connector Type	TH12FW-NH

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
10	GR	–
11	R	–

Connector No.	M146
Connector Name	INSIDE KEY ANTENNA (CONSOLE)
Connector Type	RK02FGY

H.S.

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

JCKWA0639GE

Wiring Diagram - VEHICLE SECURITY SYSTEM -

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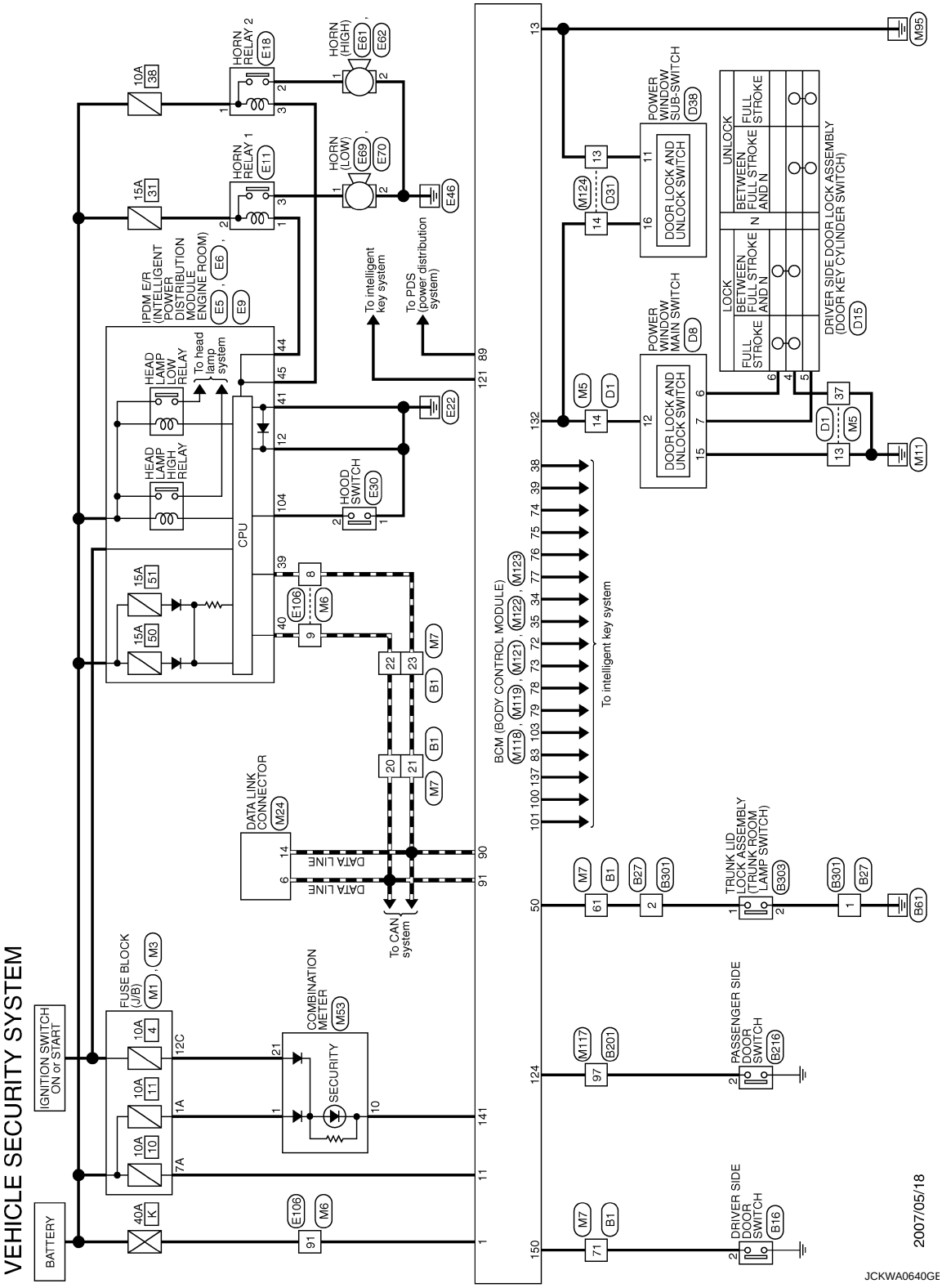

VEHICLE SECURITY SYSTEM

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
20	L	–
21	P	–
22	L	–
23	P	–
61	L	–
71	V	–

Connector No.	B16
Connector Name	DRIVER SIDE DOOR SWITCH
Connector Type	A03FW

H.S.

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

Connector No.	B27
Connector Name	WIRE TO WIRE
Connector Type	NS08MW-CS

H.S.

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

Connector No.	B201
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
97	GR	–

Connector No.	B216
Connector Name	PASSENGER SIDE DOOR SWITCH
Connector Type	A03FW

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
2	GR	–

Connector No.	B301
Connector Name	WIRE TO WIRE
Connector Type	NS08FW-CS

H.S.

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

Connector No.	B303
Connector Name	TRUNK LID LOCK ASSEMBLY
Connector Type	TB03FW

H.S.

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

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Type	TH40FW-CS15

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
13	B	–
14	V	–
37	B	–

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VEHICLE SECURITY SYSTEM

Connector No.	D8
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS16FW-CS

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
6	GR	–
7	W	–
12	V	–
15	B	–

Connector No.	D15
Connector Name	DRIVER SIDE DOOR LOCK ASSEMBLY
Connector Type	E06FGY-RS

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
4	B	–
5	W	–
6	GR	–

Connector No.	D31
Connector Name	WIRE TO WIRE
Connector Type	TH40FW-CS15

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
13	B	–
14	Y	–

Connector No.	D38
Connector Name	POWER WINDOW SUB-SWITCH
Connector Type	NS16FW-CS

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
11	B	–
16	Y	–

Connector No.	E11
Connector Name	HORN RELAY 1
Connector Type	24381 7990A

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1	LG	–
2	SB	–
3	G	–

Connector No.	E5
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4-1V

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
12	B/W	–

Connector No.	E6
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH08FW-NH

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
39	P	–
40	L	–
41	B/W	–
44	W	–
45	G	–

Connector No.	E9
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH16FW-NH

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
104	LG	–

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VEHICLE SECURITY SYSTEM

Connector No.	E18
Connector Name	HORN RELAY 2
Connector Type	M03FW-R-LC

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

Connector No.	E69
Connector Name	HORN (LOW)
Connector Type	P01FB-A

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

Connector No.	E30
Connector Name	HOOD SWITCH
Connector Type	RH02FB

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

Connector No.	E70
Connector Name	HORN (LOW)
Connector Type	P01FB-A

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

Connector No.	E61
Connector Name	HORN (HIGH)
Connector Type	P01FB-A

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

Connector No.	E62
Connector Name	HORN (HIGH)
Connector Type	P01FB-A

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

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
8	P	–
9	L	–
91	W	–

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

Terminal No.	Color of Wire	Signal Name [Specification]
1A	V	–
7A	R	–

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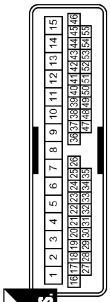
VEHICLE SECURITY SYSTEM

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FW-CS

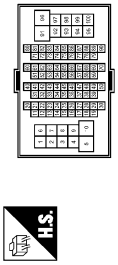
Terminal No.	Color of Wire	Signal Name [Specification]
12C	R	–

Connector No.	M5
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS15



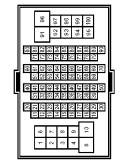
Terminal No.	Color of Wire	Signal Name [Specification]
13	B	–
14	V	–
37	B	–

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
8	P	–
9	L	–
91	W	–

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
20	L	–
21	P	–
22	L	–
23	P	–
61	R	–
71	R	–

Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW

Terminal No.	Color of Wire	Signal Name [Specification]
6	L	–
14	P	–

Connector No.	M53
Connector Name	COMBINATION METER
Connector Type	SAB40FW

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	BAT
10	R	SECURITY
21	R	IGN

Connector No.	M117
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
97	LG	–

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	M03FB-LC

Terminal No.	Color of Wire	Signal Name [Specification]
1	W	BAT (F/L)

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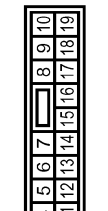
VEHICLE SECURITY SYSTEM

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-CS

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
11	R	BAT (FUSE)
13	B	GND

Connector No.	M121
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FGY-NH

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
34	SB	TRUNK ANT1–
35	V	TRUNK ANT1+
38	B	BACK ANT–
39	W	BACK ANT+
50	R	TRUNK SW

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
72	R	ROOM ANT2–
73	G	ROOM ANT2+
74	SB	AS DOOR ANT–
75	BR	AS DOOR ANT+
76	V	DR DOOR ANT–
77	LG	DR DOOR ANT+
78	Y	ROOM ANT1–
79	BR	ROOM ANT1+
83	Y	KEYLESS TUNER SIGNAL
89	BR	ENG SW
90	P	CAN-L

91	L	CAN-H
100	Y	AS REQUEST SW
101	P	DR REQUEST SW
103	LG	KEYLESS TUNER POWER SUPPLY

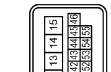
Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
121	SB	KEY SWITCH SIGNAL
124	LG	DOOR SW (AS)
132	V	POWER WINDOW SERIAL LINK
137	O	SENSOR GND
141	R	SECURITY INDICATOR OUTPUT
150	R	DOOR SW (DR)

Connector No.	M124
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS15

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
13	B	–
14	G	–

JCKWA0645GE

Wiring Diagram - IVIS -

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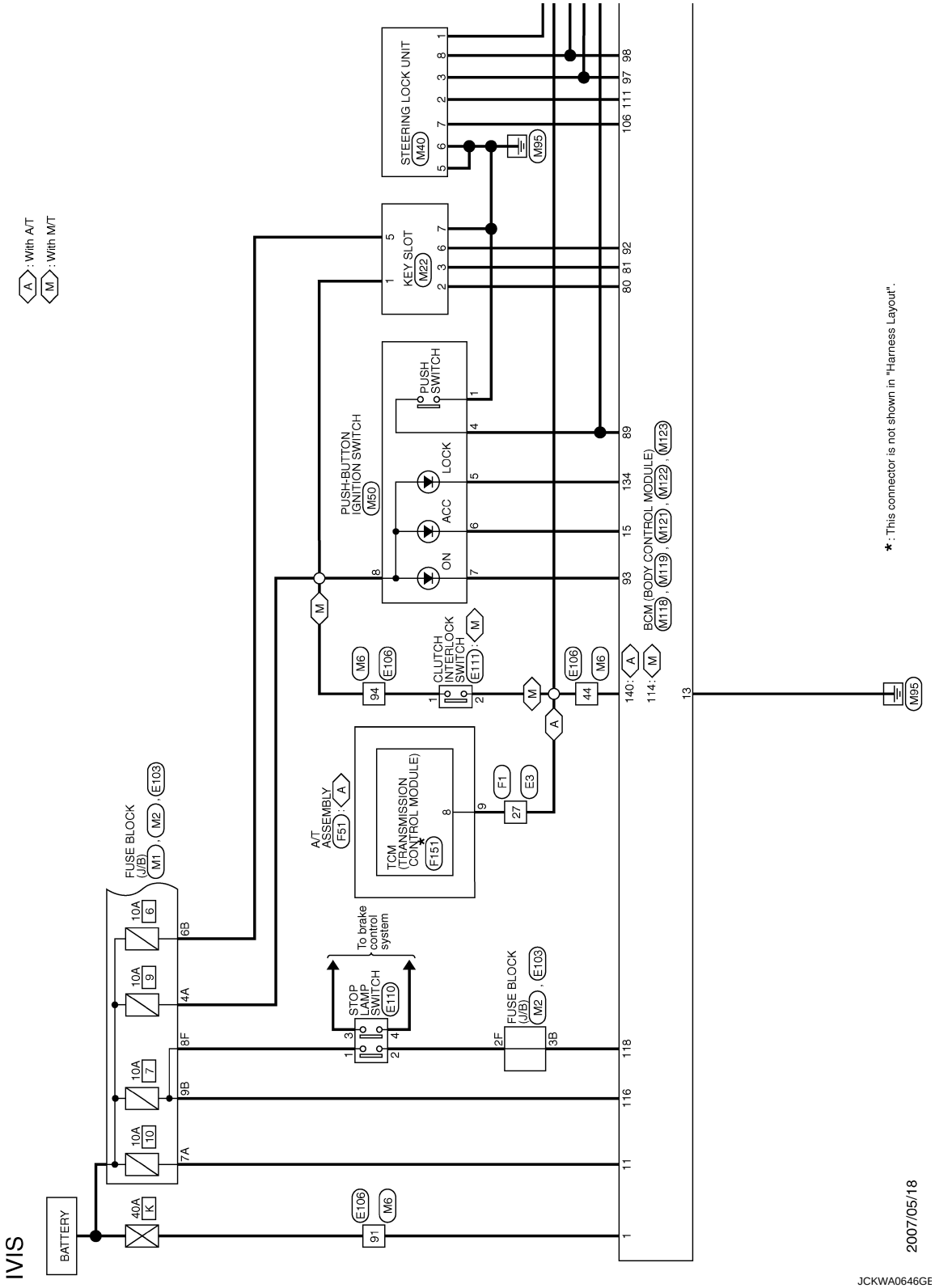
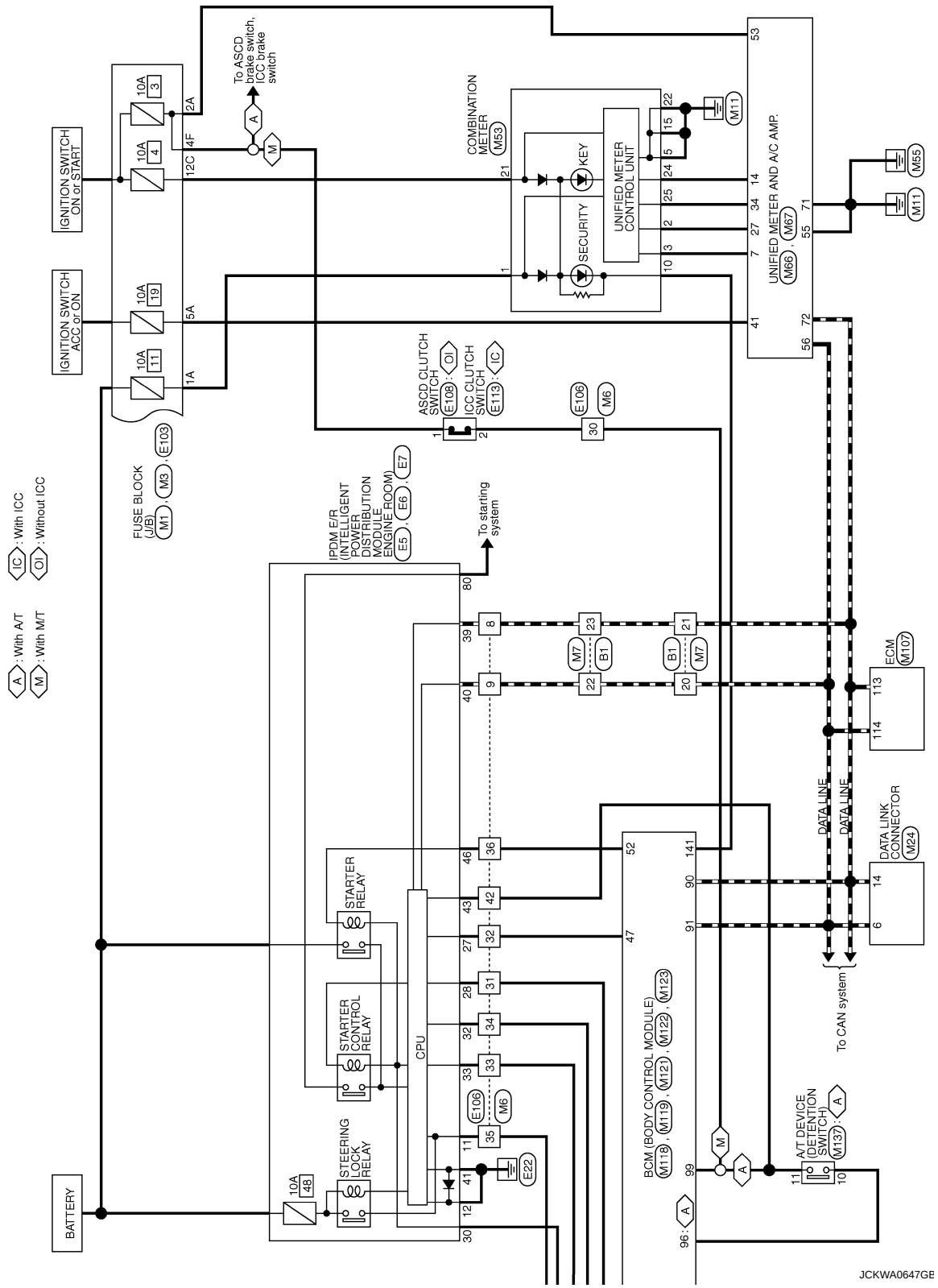
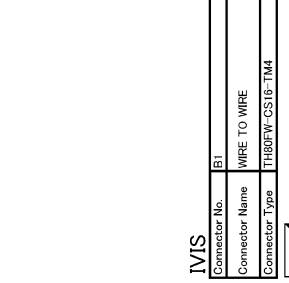



IC : With ICC
OI : Without ICC
A : With A/T
M : With M/T
BATTERY
IGNITION SWITCH ON or START
IGNITION SWITCH ACC or ON
FUSE BLOCK (J/B) M1, M3, E103
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) E5, E6, E7
To ASCD brake switch, ICC brake switch
To starting system
COMBINATION METER M53
UNIFIED METER CONTROL UNIT
KEY
SECURITY
UNIFIED METER AND A/C AMP. M66, M67
ASCD CLUTCH SWITCH E108
ICC CLUTCH SWITCH E113
STARTER RELAY
STARTER CONTROL RELAY
STEERING LOCK RELAY
CPU
BCM (BODY CONTROL MODULE) M118, M119, M121, M122, M123
A/T DEVICE (DETENTION SWITCH) M137
ECM M107
DATA LINE
DATA LINK CONNECTOR M24
To CAN system
JCKWA0647GE

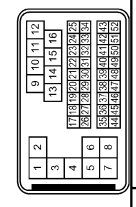
IVIS

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



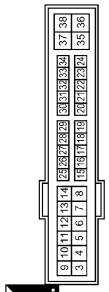
Terminal No.	Color of Wire	Signal Name [Specification]
20	L	–
21	P	–
22	L	–
23	P	–

Connector No.	E3
Connector Name	WIRE TO WIRE
Connector Type	SAA36MB-RS8-SHZ8



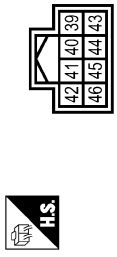
Terminal No.	Color of Wire	Signal Name [Specification]
27	GR	–

Connector No.	E5
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4-1V



Terminal No.	Color of Wire	Signal Name [Specification]
11	BR	–
12	B/W	–
27	O	–
28	L	–
30	GR	–
32	V	–
33	P	–

Connector No.	E6
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH08FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
39	P	–
40	L	–
41	B/W	–
43	SB	–
46	P	–

Terminal No.	Color of Wire	Signal Name [Specification]
91	W	–
94	G	–

Connector No.	E7
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4

Terminal No.	Color of Wire	Signal Name [Specification]
80	W	–

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

Terminal No.	Color of Wire	Signal Name [Specification]
2F	W	–
4F	G	–
8F	L	–

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
8	P	–
9	L	–
30	R	–
31	L	–
32	O	–
33	P	–
34	V	–
35	BR	–
36	P	–
42	SB	–
44	GR	–

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IVIS

Connector No.	E108
Connector Name	ASCD CLUTCH SWITCH
Connector Type	S02FL

H.S.

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

Connector No.	E110
Connector Name	STOP LAMP SWITCH
Connector Type	M04FW-LC

H.S.

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

Connector No.	E111
Connector Name	CLUTCH INTERLOCK SWITCH
Connector Type	S02FL

H.S.

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

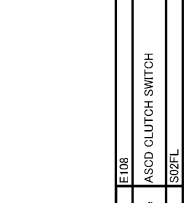
Connector No.	E113
Connector Name	ICC CLUTCH SWITCH
Connector Type	S02FL

H.S.

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

Connector No.	F1
Connector Name	WIRE TO WIRE
Connector Type	SAA36FB-FCS8-SHZ8

H.S.



Terminal No.	Color of Wire	Signal Name [Specification]
27	GR	–

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

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
9	GR	–

Connector No.	F151
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Type	SP10FBGY

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
8	G	START RLY

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

H.S.

Terminal No.	Color of Wire	Signal Name [Specification]
1A	V	–
2A	G	–
4A	P	–
5A	L	–
7A	R	–

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IVIS

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

Terminal No.	Color of Wire	Signal Name [Specification]
3B	P	–
6B	Y	–
9B	SB	–

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
12C	R	–

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
8	P	–
9	L	–
30	R	–
31	V	–
32	Y	–
33	O	–
34	W	–
35	BR	–
36	SB	–
42	P	–
44	GR	– [With A/T]
44	R	– [With M/T]
91	W	–
94	G	–

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
20	L	–
21	P	–
22	L	–
23	P	–

Connector No.	M22
Connector Name	KEY SLOT
Connector Type	TH12FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
1	R	BAT
2	GR	CLOCK
3	W	DATA
5	Y	ILL BAT
6	LG	ILL
7	B	GND

Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW

Terminal No.	Color of Wire	Signal Name [Specification]
6	L	–
14	P	–

Connector No.	M40
Connector Name	STEERING LOCK UNIT
Connector Type	TH08FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	S/L 12V (MECHANICAL)
2	Y	S/L (K LINE)
3	L	S/L CONDLTLON1
5	B	GND
6	B	GND
7	W	S/L 12V(CPU)
8	P	S/L CONDLTLOIN2

JCKWA0650GE

IVIS

Connector No.	M50
Connector Name	PUSH-BUTTON IGNITION SWITCH
Connector Type	TK08FBR

Terminal No.	Color of Wire	Signal Name [Specification]
1	GR	–
4	BR	–
5	LG	–
6	O	–
7	Y	–
8	P	–

Connector No.	M53
Connector Name	COMBINATION METER
Connector Type	SAB40FW

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	BAT
2	LG	COMM (METER->AMP.)
3	GR	COMM (AMP.->METER)
5	B	GND
10	R	SECURITY
15	B	GND
21	R	IGN
22	B	GND
24	BR	COMM (LCD->AMP.)
25	Y	COMM (AMP.->LCD)

Connector No.	M66
Connector Name	UNIFIED METER AND A/C AMP.
Connector Type	TH40FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
7	GR	COMM (AMP.->METER)
14	BR	COMM (LCD->AMP.)
27	LG	COMM (METER->AMP.)
34	Y	COMM (AMP.->LCD)

Connector No.	M67
Connector Name	UNIFIED METER AND A/C AMP.
Connector Type	TH32FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
41	L	ACC
53	W	IGN
55	B	GND
56	L	CAN-H
71	GR	GND
72	P	CAN-L

Connector No.	M107
Connector Name	ECM
Connector Type	RH24FGY-RZ8-R-LH-Z

Terminal No.	Color of Wire	Signal Name [Specification]
113	P	VEHCAN-LI
114	L	VEHCAN-HI

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	M03FB-LC

Terminal No.	Color of Wire	Signal Name [Specification]
1	W	BAT (F/L)

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-CS

Terminal No.	Color of Wire	Signal Name [Specification]
11	R	BAT (FUSE)
13	B	GND
15	O	ACC LED

Connector No.	M121
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FGY-NH

Terminal No.	Color of Wire	Signal Name [Specification]
47	Y	ING USM CONT1
52	SB	ST CONT USM

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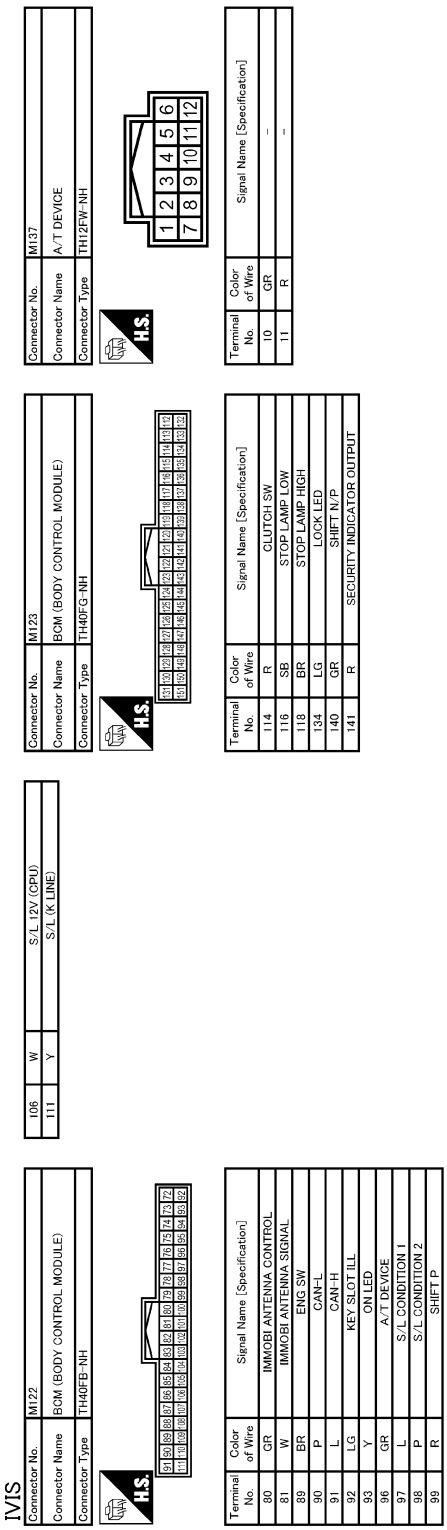


JCKWA0652GE

Fail Safe

INFOID:0000000001726801

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 operation
Cooling fan	• Outputs the pulse duty signal (PWM signal) 100% when the ignition switch is turned ON • Outputs the pulse duty signal (PWM signal) 0% when the ignition switch is turned OFF
A/C compressor	A/C relay OFF
Alternator	Outputs the power generation command signal (PWM signal) 0%

If No CAN Communication Is Available With BCM

Control part	Fail-safe 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 • License plate lamps • Side maker lamps • Illuminations • 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	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
Steering lock unit	Steering lock 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 inside it.
- IPDM E/R judges the ignition relay error if the voltage differs between the contact circuit and the excitation coil circuit.
- If the ignition relay cannot turn OFF due to contact seizure, it activates the tail lamp relay for 10 minutes to alert the user to the ignition relay malfunction when the ignition switch is turned OFF.

DTC	Ignition switch	Ignition relay	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	Front wiper auto stop signal
ON	OFF	The front wiper auto stop signal (stop position) cannot be input for 10 seconds.
	ON	The front wiper auto stop 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:0000000001726802

NOTE:

- The details of time display are as follows.
  - CRNT: A malfunction is detected now
  - PAST: A malfunction was detected in the past.
- IGN counter is displayed on FFD (Freeze Frame data).
  - The number is 0 when is detected now
  - The number increases like 1 → 2 ··· 38 → 39 after returning to the normal condition whenever IGN OFF → ON.
  - The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.

×: Applicable

CONSULT display	Fail-safe	Refer to
No DTC is detected. further testing may be required.	—	—
U1000: CAN COMM CIRCUIT	×	PCS-16
B2098: IGN RELAY ON	×	PCS-17
B2099: IGN RELAY OFF	—	PCS-18
B2108: STRG LCK RELAY ON	—	SEC-101
B2109: STRG LCK RELAY OFF	—	SEC-102
B210A: STRG LCK STATE SW	—	SEC-103
B210B: START CONT RLY ON	—	SEC-107
B210C: START CONT RLY OFF	—	SEC-108
B210D: STARTER RELAY ON	—	SEC-109
B210E: STARTER RELAY OFF	—	SEC-110
B210F: INTRLCK/PNP SW ON	—	SEC-112
B2110: INTRLCK/PNP SW OFF	—	SEC-116

SYMPTOM DIAGNOSIS

SECURITY CONTROL SYSTEM

Symptom Table

INFOID:0000000001715880

The engine start function, door lock function, power distribution system and NATS-IVIS/NMS in the Intelligent Key system are closely related to each other regarding control. Narrow down the functional area in question by performing following table to identify which function is malfunctioning. The vehicle security function can operate only when the door lock and power distribution system are operating normally. Therefore, it is easy to identify any factor unique to the vehicle security system by performing following table.
Use the chart below to help you find the cause of the symptom. The numbers indicate the order of the inspection.

NOTE:
Before starting vehicle security system operation check, the following condition are met.
- Open front windows
- Turn ignition switch OFF
- Pull out Intelligent Key from key slot.

NO.	Function	Operation condition	Symptom	Diagnostic Item	Reference page
1	INTELLIGENT KEY SYSTEM/ DOOR LOCK FUNCTION	Lock/unlock door with door request switch. (Intelligent Key is into the outside key antenna detection area)	Door does not lock/unlock	—	DLK-158
2	POWER DISTRIBUTION FUNCTION	Press push-button ignition switch under the following condition. **A/T models** • A/T selector lever position is in P or N position • Do not depress brake pedal **M/T models** • Do not depress clutch pedal	Push-button ignition switch is not operated	—	PCS-127
3	INTELLIGENT KEY SYSTEM/ ENGINE START FUNCTION	Start engine with Intelligent Key into the vehicle (inside key antenna detection area)	Engine can not start with Intelligent Key	—	SEC-217
4		Open the door after ignition switch turn NO to OFF.	Steering is not locked	—	SEC-218
5	INFINITI VEHICLE IMMOBILIZEER SYSTEM-NATS FUNCTION	Start engine with Intelligent Key into the key slot.	Engine can not start (Intelligent Key into the key slot)	—	SEC-219
6		Insert Intelligent Key into the keyslot.	Keyslot indicator is not illuminate	—	SEC-224

NO.	Function	Operation condition	Symptom	Diagnostic Item	Reference page
7	VEHICLE SECURITY SYSTEM	Lock all doors with Intelligent Key or door request switch	Vehicle security system can not be set	—	SEC-221
		Lock all doors with Intelligent Key or door request switch	Security indicator does not turn ON	—	SEC-220
		In the armed phase, open the door	Vehicle security alarm does not activate	Horn	SEC-222
				Head lamp	
		When alarm sound, press Intelligent Key button	Vehicle security system can not be canceled	—	SEC-223
		When alarm sound, press door request switch		—	SEC-223
8	POWER DISTRIBUTION FUNCTION	Press push-button ignition switch under the following condition. **A/T models** • A/T selector lever position is in P or N position • Do not depress brake pedal **M/T models** • Do not depress clutch pedal	Push-button ignition switch position indicator does not turn on	—	PCS-128

ENGINE DOES NOT START WITH INTELLIGENT KEY

Description

INFOID:0000000001715887

- Before performing the diagnosis in the following table, check “Work Flow”. Refer to SEC-5, "Work Flow".
- Check that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.

Conditions of Vehicle (Operating Conditions)

- “ENGINE START BY I-KEY” in “WORK SUPPORT” is ON when setting on CONSULT-III.
- Intelligent Key is not inserted in key slot.
- One or more of Intelligent Keys with registered Intelligent Key ID is in the vehicle.

Diagnosis Procedure

INFOID:0000000001715888

1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit.
Refer to SEC-119, "BCM : Diagnosis Procedure".

Is the inspection normal?

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

2. CHECK IPDM E/R POWER SUPPLY AND GROUND CIRCUIT

Check IPDM E/R power supply and ground circuit.
Refer to SEC-119, "IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) : Diagnosis Procedure".

Is the inspection normal?

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

3. CHECK PUSH-BUTTON IGNITION SWITCH

Check push-button ignition switch.
Refer to PCS-71, "Component Function Check".

Is the inspection normal?

YES >> GO TO 4 (M/T models).
>> GO TO 5 (A/T models).
NO >> Repair or replace malfunctioning parts.

4. CHECK ASCD OR ICC CLUTCH SWITCH FOR M/T MODELS

Check ASCD or ICC clutch switch.
Refer to SEC-124, "Component Function Check".

Is the inspection normal?

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

5. CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection normal?

YES >> Check intermittent incident. Refer to GI-38, "Intermittent Incident".
NO >> GO TO 1.

STEERING DOES NOT LOCK

Description

INFOID:0000000001726094

If door switch is malfunctioning, BCM cannot lock the steering. If BCM does not detect DTC, steering lock unit is normal.

Diagnosis Procedure

INFOID:0000000001726120

1.CHECK DOOR SWITCH

Check door switch.
Refer to DLK-66, "Component_Function_Check".

Is the inspection normal?

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

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection normal?

YES >> Check intermittent incident. Refer to .
NO >> GO TO 1.

ENGINE DOES NOT START WHEN INTELLIGENT KEY IS INSERTED INTO KEY SLOT

Description

INFOID:0000000001715899

- Before performing the diagnosis in the following table, check “Work Flow”. Refer to SEC-5, "Work Flow".
- Check that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.

Conditions of Vehicle (Operating Conditions)

- Intelligent Key is inserted in key slot.
- One or more of Intelligent Keys with registered Intelligent Key ID is in the vehicle.

Diagnosis Procedure

INFOID:0000000001715900

1.CHECK KEY SLOT

Check key slot.
Refer to SEC-121, "Component_Function_Check".

Is the inspection result normal?

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

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-38, "Intermittent Incident".
NO >> GO TO 1.

SECURITY INDICATOR DOES NOT TURN ON

Description

INFOID:0000000001715891

- Before performing the diagnosis in the following table, check “Work Flow”. Refer to SEC-5, "Work Flow".
- Check that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.

Conditions of Vehicle (Operating Conditions)

- Intelligent Key is not inserted in key slot.
- Ignition switch position is not in the ON position.

Diagnosis Procedure

INFOID:0000000001715892

1.CHECK VEHICLE SECURITY INDICATOR

Check vehicle security indicator.
Refer to SEC-135, "Component Function Check".

Is the inspection result normal?

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

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-38, "Intermittent Incident".
NO >> GO TO 1.

VEHICLE SECURITY SYSTEM CAN NOT BE SET

Description

INFOID:0000000001715889

Before performing the diagnosis in the following table, check “Work Flow”. Refer to SEC-5, "Work Flow".

Diagnosis Procedure

INFOID:0000000001715890

1.CHECK HOOD SWITCH

Check hood switch.
Refer to SEC-129, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace hood switch.

2.CHECK TRUNK ROOM LAMP SWITCH

Check trunk room lamp switch.
Refer to DLK-81, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace trunk room lamp switch.

3.CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch.
Refer to SEC-127, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace door key cylinder switch.

4.CHECK INTELLIGENT KEY

Check Intelligent Key.
Refer to DLK-99, "Component Function Check".

Is the inspection result normal?

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

5.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-38, "Intermittent Incident".
NO >> GO TO 1.

VEHICLE SECURITY ALARM DOES NOT ACTIVATE

Description

INFOID:0000000001715893

Before performing the diagnosis in the following table, check “Work Flow”. Refer to SEC-5, "Work Flow".

Diagnosis Procedure

INFOID:0000000001715894

1.CHECK CONDITION OF ALARM

Oprate alarm

Whitch alarm does not operate?

Headlamp and horn>>GO TO 2.
Headlamp>>GO TO 3.
Horn >> GO TO 4.

2.CHECK HOOD SWITCH

Check hood switch.
Refer to SEC-129, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace hood switch.

3.CHECK HEADLAMP ALARM

Check headlamp operation.
Refer to SEC-133, "Component Function Check".

Is the inspection result normal?

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

4.CHECK HORN

Check horn.
Refer to SEC-131, "Component Function Check".

Is the inspection result normal?

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

5.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-38, "Intermittent Incident".
NO >> GO TO 1.

VEHICLE SECURITY SYSTEM CAN NOT CANCELED

INTELLIGENT KEY

INTELLIGENT KEY : Description

INFOID:0000000001715895

Before performing the diagnosis in the following table, check “Work Flow”. Refer to SEC-5, "Work Flow".

INTELLIGENT KEY : Diagnosis Procedure

INFOID:0000000001715896

1. CHECK INTELLIGENT KEY

Check Intelligent Key.
Refer to DLK-99, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace Intelligent Key.

2. CHECK INTELLIGENT KEY SYSTEM

Check Intelligent Key system.
Refer to DLK-20, "INTELLIGENT KEY : System Description".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Refer to SEC-5, "Work Flow".

3. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-38, "Intermittent Incident".
NO >> GO TO 1.

DOOR REQUEST SWITCH

DOOR REQUEST SWITCH : Description

INFOID:0000000001715897

Before performing the diagnosis in the following table, check “Work Flow”. Refer to SEC-5, "Work Flow".

DOOR REQUEST SWITCH : Diagnosis Procedure

INFOID:0000000001715898

1. CHECK DOOR REQUEST SWITCH

Check door request switch.
Refer to DLK-83, "Component Function Check".

Is the inspection normal?

YES >> GO TO 2.
NO >> Replace door request switch.

2. CHECK INTELLIGENT KEY SYSTEM

Check Intelligent Key system.
Refer to DLK-15, "DOOR REQUEST SWITCH : System Description".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Refer to DLK-8, "Work Flow".

3. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-38, "Intermittent Incident".
NO >> GO TO 1.

KEY SLOT INDICATOR DOES NOT ILLUMINATE

Description

INFOID:0000000001728288

- Before performing the diagnosis in the following table, check “Work Flow”. Refer to SEC-5, "Work Flow".
- Check that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.

Conditions of Vehicle (Operating Conditions)

- Intelligent Key is inserted in key slot.

Diagnosis Procedure

INFOID:0000000001728289

1.CHECK KEY SLOT ILLUMINATION

Check key slot illumination.
Refer to SEC-122, "Component Function Check".

Is the inspection normal?

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

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection normal?

YES >> Check intermittent incident. Refer to GI-38, "Intermittent Incident".
NO >> GO TO 1.

PRECAUTION

PRECAUTIONS

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

INFOID:0000000001903395

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

WARNING:

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision 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 “SRS AIRBAG”.**
- **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.**

Precaution Necessary for Steering Wheel Rotation after Battery Disconnect

INFOID:0000000001903396

NOTE:

- Before removing and installing any control units, first turn the push-button ignition switch to the LOCK position, then disconnect both battery cables.
- After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

This vehicle is equipped with a push-button ignition switch and a steering lock unit.
If the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.
If turning the steering wheel is required with the battery disconnected or discharged, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

1. Connect both battery cables.
   NOTE:
   Supply power using jumper cables if battery is discharged.
2. Carry the Intelligent Key or insert it to the key slot and turn the push-button ignition switch to ACC position. (At this time, the steering lock will be released.)
3. Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.
4. Perform the necessary repair operation.
5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the push-button ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the push-button ignition switch is turned to LOCK position.)
6. Perform self-diagnosis check of all control units using CONSULT-III.

Precautions For Xenon Headlamp Service

INFOID:0000000001903397

WARNING:
Comply with the following warnings to prevent any serious accident.

- **Disconnect the battery cable (negative terminal) or the power supply fuse before installing, removing, or touching the xenon headlamp (bulb included). The xenon headlamp contains high-voltage generated parts.**
- **Never work with wet hands.**
- **Check the xenon headlamp ON-OFF status after assembling it to the vehicle. Never turn the xenon headlamp ON in other conditions. Connect the power supply to the vehicle-side connector. (Turning it ON outside the lamp case may cause fire or visual impairments.)**
- **Never touch the bulb glass immediately after turning it OFF. It is extremely hot.**

CAUTION:

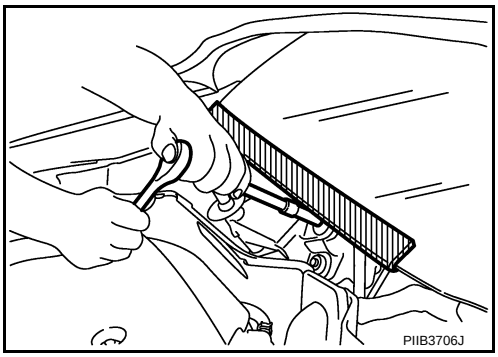
Comply with the following cautions to prevent any error and malfunction.

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

Precaution for Procedure without Cowl Top Cover

INFOID:0000000001903398

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



ON-VEHICLE REPAIR

KEY SLOT

Exploded View

INFOID:0000000001700091

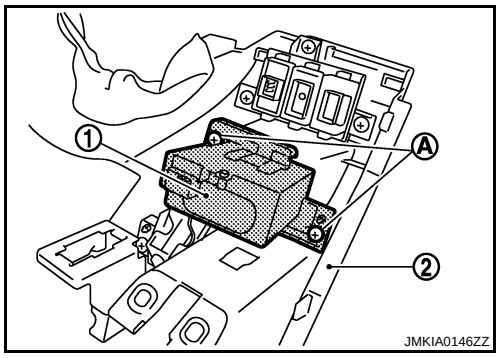
Refer to IP-11, "Exploded View".

Removal and Installation

INFOID:0000000001700092

REMOVAL

1. Remove the instrument driver lower panel (2). Refer to IP-12, "Removal and Installation".
2. Disconnect key slot connector.
3. Remove the key slot mounting screw (A), and then remove key slot (1) from instrument driver lower panel (2).



INSTALLATION

Install in the reverse order of removal.

PUSH BUTTON IGNITION SWITCH

Exploded View

INFOID:0000000001700093

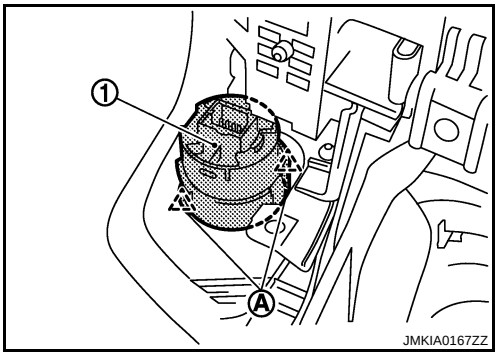
Refer to IP-11, "Exploded View".

Removal and Installation

INFOID:0000000001700094

REMOVAL

1. Remove the cluster lid A assembly. Refer to IP-12, "Removal and Installation".
2. Remove the push-button ignition switch (1) from cluster lid A assembly, and then remove pawl (A). Press push-button ignition switch (1) back to disengage from cluster lid A assembly.



INSTALLATION

Install in the reverse order of removal.