

SECTION **SEC** SECURITY CONTROL SYSTEM

CONTENTS

INTELLIGENT KEY SYSTEM	INTELLIGENT KEY25	F
BASIC INSPECTION 5	INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY)25	G
DIAGNOSIS AND REPAIR WORK FLOW 5	THEFT ALM29	H
Work Flow5	THEFT ALM : CONSULT-III Function (BCM - THEFT)29	I
INSPECTION AND ADJUSTMENT 8	IMMU30	J
ECM RE-COMMUNICATING FUNCTION8	IMMU : CONSULT-III Function (BCM - IMMU)30	
ECM RE-COMMUNICATING FUNCTION : De- scription8	DTC/CIRCUIT DIAGNOSIS31	
ECM RE-COMMUNICATING FUNCTION : Spe- cial Repair Requirement8	U1000 CAN COMM CIRCUIT31	
SYSTEM DESCRIPTION 9	BCM31	
INTELLIGENT KEY SYSTEM/ENGINE	BCM : Description31	
START FUNCTION 9	BCM : DTC Logic31	
System Diagram9	BCM : Diagnosis Procedure31	
System Description9	IPDM E/R31	
Component Parts Location12	IPDM E/R : Description31	
Component Description13	IPDM E/R : DTC Logic31	
INFINITI VEHICLE IMMOBILIZER SYSTEM-	IPDM E/R : Diagnosis Procedure31	
NATS15	U1010 CONTROL UNIT (CAN)33	
System Diagram15	BCM33	
System Description15	BCM : DTC Logic33	
Component Parts Location16	BCM : Diagnosis Procedure33	
Component Description17	BCM : Special Repair Requirement33	
VEHICLE SECURITY SYSTEM19	P1610 LOCK MODE34	
System Diagram19	Description34	
System Description19	DTC Logic34	
Component Parts Location21	Diagnosis Procedure34	
Component Description22	P1611 ID DISCORD, IMMU-ECM35	
DIAGNOSIS SYSTEM (BCM)24	Description35	
COMMON ITEM24	DTC Logic35	
COMMON ITEM : CONSULT-III Function (BCM - COMMON ITEM)24	Diagnosis Procedure35	
	P1612 CHAIN OF ECM-IMMU36	

SEC

Description	36	Description	56
DTC Logic	36	DTC Logic	56
Diagnosis Procedure	36	Diagnosis Procedure	56
P1614 CHAIN OF IMMU-KEY	37	B2560 STARTER CONTROL RELAY	57
Description	37	Description	57
DTC Logic	37	DTC Logic	57
Diagnosis Procedure	37	Diagnosis Procedure	57
P1615 DIFFERENCE OF KEY	40	B2601 SHIFT POSITION	58
Description	40	Description	58
DTC Logic	40	DTC Logic	58
Diagnosis Procedure	40	Diagnosis Procedure	58
B2190 NATS ANTENNA AMP.	41	Component Inspection	60
Description	41	B2602 SHIFT POSITION	61
DTC Logic	41	Description	61
Diagnosis Procedure	41	DTC Logic	61
B2191 DIFFERENCE OF KEY	44	Diagnosis Procedure	61
Description	44	B2603 SHIFT POSITION STATUS	63
DTC Logic	44	Description	63
Diagnosis Procedure	44	DTC Logic	63
B2192 ID DISCORD, IMMU-ECM	45	Diagnosis Procedure	63
Description	45	B2604 PNP SWITCH	66
DTC Logic	45	Description	66
Diagnosis Procedure	45	DTC Logic	66
B2193 CHAIN OF ECM-IMMU	46	Diagnosis Procedure	66
Description	46	B2605 PNP SWITCH	68
DTC Logic	46	Description	68
Diagnosis Procedure	46	DTC Logic	68
B2195 ANTI-SCANNING	47	Diagnosis Procedure	68
Description	47	B2606 STEERING LOCK RELAY	70
DTC Logic	47	Description	70
Diagnosis Procedure	47	DTC Logic	70
B2013 ID DISCORD, IMMU-STRG	48	Diagnosis Procedure	70
Description	48	B2607 STEERING LOCK RELAY	71
DTC Logic	48	Description	71
Diagnosis Procedure	48	DTC Logic	71
B2014 CHAIN OF STRG-IMMU	49	Diagnosis Procedure	71
Description	49	B2608 STARTER RELAY	73
DTC Logic	49	Description	73
Diagnosis Procedure	49	DTC Logic	73
B2555 STOP LAMP	52	Diagnosis Procedure	73
Description	52	B2609 STEERING STATUS	75
DTC Logic	52	Description	75
Diagnosis Procedure	52	DTC Logic	75
Component Inspection	53	Diagnosis Procedure	75
B2556 PUSH-BUTTON IGNITION SWITCH	54	B260B STEERING LOCK UNIT	79
Description	54	Description	79
DTC Logic	54	DTC Logic	79
Diagnosis Procedure	54	Diagnosis Procedure	79
Component Inspection	55	B260C STEERING LOCK UNIT	80
B2557 VEHICLE SPEED	56	Description	80

DTC Logic	80	Diagnosis Procedure	98	
Diagnosis Procedure	80			A
B260D STEERING LOCK UNIT	81	B210A STEERING LOCK CONDITION SWITCH	99	
Description	81	Description	99	B
DTC Logic	81	DTC Logic	99	
Diagnosis Procedure	81	Diagnosis Procedure	99	
B260F ENGINE STATUS	82	B210B STARTER CONTROL RELAY	103	C
Description	82	Description	103	
DTC Logic	82	DTC Logic	103	
Diagnosis Procedure	82	Diagnosis Procedure	103	D
B26E1 NO RECEPTION OF ENGINE STATUS SIGNAL	83	B210C STARTER CONTROL RELAY	104	
Description	83	Description	104	E
DTC Logic	83	DTC Logic	104	
Diagnosis Procedure	83	Diagnosis Procedure	104	
B26E9 STEERING STATUS	84	B210D STARTER RELAY	105	F
Description	84	Description	105	
DTC Logic	84	DTC Logic	105	
Diagnosis Procedure	84	Diagnosis Procedure	105	G
B26EA KEY REGISTRATION	85	B210E STARTER RELAY	106	
Description	85	Description	106	H
DTC Logic	85	DTC Logic	106	
Diagnosis Procedure	85	Diagnosis Procedure	106	
B2612 STEERING STATUS	86	B210F PNP/CLUTCH INTERLOCK SWITCH	108	I
Description	86	Description	108	
DTC Logic	86	DTC Logic	108	
Diagnosis Procedure	86	Diagnosis Procedure	108	J
B2617 STARTER RELAY CIRCUIT	90	B2110 PNP/CLUTCH INTERLOCK SWITCH	110	
Description	90	Description	110	
DTC Logic	90	DTC Logic	110	
Diagnosis Procedure	90	Diagnosis Procedure	110	SEC
B2619 BCM	92	POWER SUPPLY AND GROUND CIRCUIT	112	
Description	92	BCM	112	L
DTC Logic	92	BCM : Diagnosis Procedure	112	
Diagnosis Procedure	92	IPDM E/R	112	M
B261A PUSH-BUTTON IGNITION SWITCH	93	IPDM E/R : Diagnosis Procedure	112	
Description	93	HOOD SWITCH	114	N
DTC Logic	93	Description	114	
Diagnosis Procedure	93	Component Function Check	114	
B261E VEHICLE TYPE	96	Diagnosis Procedure	114	O
Description	96	Component Inspection	115	
DTC Logic	96	HEADLAMP	116	P
Diagnosis Procedure	96	Description	116	
B2108 STEERING LOCK RELAY	97	Component Function Check	116	
Description	97	Diagnosis Procedure	116	
DTC Logic	97	SECURITY INDICATOR LAMP	117	
Diagnosis Procedure	97	Description	117	
B2109 STEERING LOCK RELAY	98	Component Function Check	117	
Description	98	Diagnosis Procedure	117	
DTC Logic	98			

KEY WARNING LAMP	118	INTELLIGENT KEY	196
Description	118	INTELLIGENT KEY : Description	196
Component Function Check	118	INTELLIGENT KEY : Diagnosis Procedure	196
Diagnosis Procedure	118		
INTELLIGENT KEY SYSTEM/ENGINE		DOOR REQUEST SWITCH	196
START FUNCTION	119	DOOR REQUEST SWITCH : Description	196
Wiring Diagram - INTELLIGENT KEY SYSTEM/ ENGINE START FUNCTION -	119	DOOR REQUEST SWITCH : Diagnosis Proce- dure	196
INFINITI VEHICLE IMMOBILIZER SYSTEM-		DOOR KEY CYLINDER	197
NATS	128	DOOR KEY CYLINDER : Description	197
Wiring Diagram - IVIS -	128	DOOR KEY CYLINDER : Diagnosis Procedure ..	197
VEHICLE SECURITY SYSTEM	136	VEHICLE SECURITY ALARM DOES NOT	
Wiring Diagram - VEHICLE SECURITY SYSTEM		ACTIVATE	198
-	136	Description	198
		Diagnosis Procedure	198
ECU DIAGNOSIS INFORMATION	142	VEHICLE SECURITY SYSTEM CAN NOT	
		CANCELED	199
BCM (BODY CONTROL MODULE)	142	INTELLIGENT KEY	199
Reference Value	142	INTELLIGENT KEY : Description	199
Wiring Diagram - BCM -	166	INTELLIGENT KEY : Diagnosis Procedure	199
Fail-safe	172		
DTC Inspection Priority Chart	174	DOOR REQUEST SWITCH	199
DTC Index	176	DOOR REQUEST SWITCH : Description	199
		DOOR REQUEST SWITCH : Diagnosis Proce- dure	199
IPDM E/R (INTELLIGENT POWER DISTRI-		DOOR KEY CYLINDER	199
BUTION MODULE ENGINE ROOM)	179	DOOR KEY CYLINDER : Description	200
Reference Value	179	DOOR KEY CYLINDER : Diagnosis Procedure ..	200
Wiring Diagram - IPDM E/R -	186		
Fail-safe	189	INTELLIGENT KEY INSERT INFORMATION	
DTC Index	191	DOES NOT OPERATE	201
SYMPTOM DIAGNOSIS	192	Description	201
		Diagnosis Procedure	201
ENGINE DOES NOT START WITH INTELLI-		PRECAUTION	203
GEN T KEY	192	PRECAUTIONS	203
Description	192	Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TEN- SIONER"	203
Diagnosis Procedure	192	Precaution for Procedure without Cowl Top Cover. 203	
STEERING DOES NOT LOCK	193	Precaution Necessary for Steering Wheel Rota- tion after Battery Disconnect	203
Description	193		
Diagnosis Procedure	193	REMOVAL AND INSTALLATION	205
ENGINE DOES NOT START WHEN INTELLI-		KEY SLOT	205
GEN T KEY IS INSERTED INTO KEY SLOT ..	194	Exploded View	205
Description	194	Removal and Installation	205
Diagnosis Procedure	194	PUSH-BUTTON IGNITION SWITCH	206
SECURITY INDICATOR LAMP DOES NOT		Removal and Installation	206
TURN ON OR BLINK	195		
Description	195		
Diagnosis Procedure	195		
VEHICLE SECURITY SYSTEM CAN NOT BE			
SET	196		

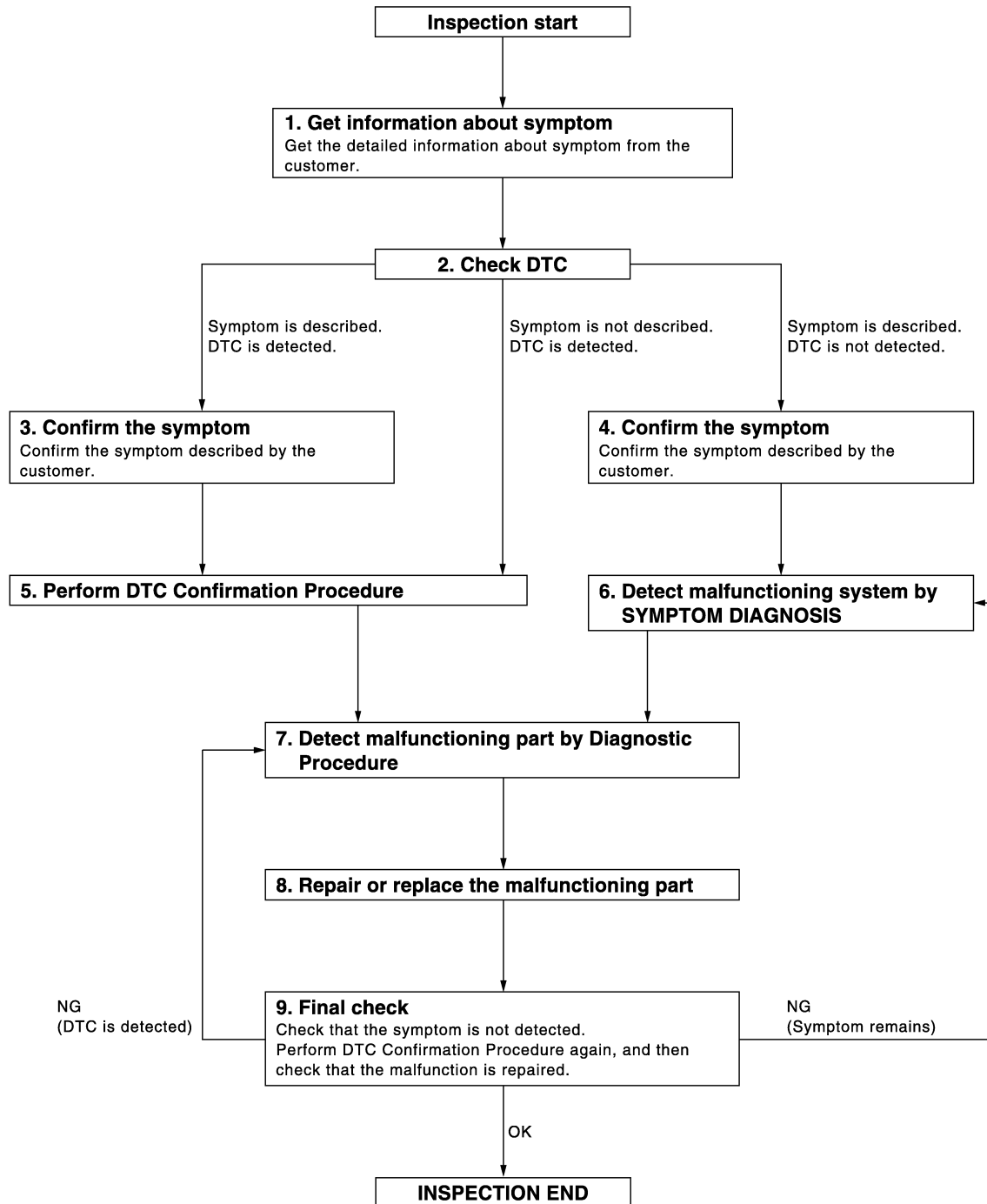
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:000000004346363

OVERALL SEQUENCE



SEC

DETAILED FLOW

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DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[INTELLIGENT KEY SYSTEM]

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 detected.
 - 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 detected>>GO TO 3.

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

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

3.CONFIRM THE SYMPTOM

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 detected 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-174. "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-40. "Intermittent Incident"](#).

6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM DIAGNOSIS

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

>> 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.

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[INTELLIGENT KEY SYSTEM]

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 detected, 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**

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INSPECTION AND ADJUSTMENT

ECM RE-COMMUNICATING FUNCTION

ECM RE-COMMUNICATING FUNCTION : Description

INFOID:000000004346364

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:000000004346365

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?

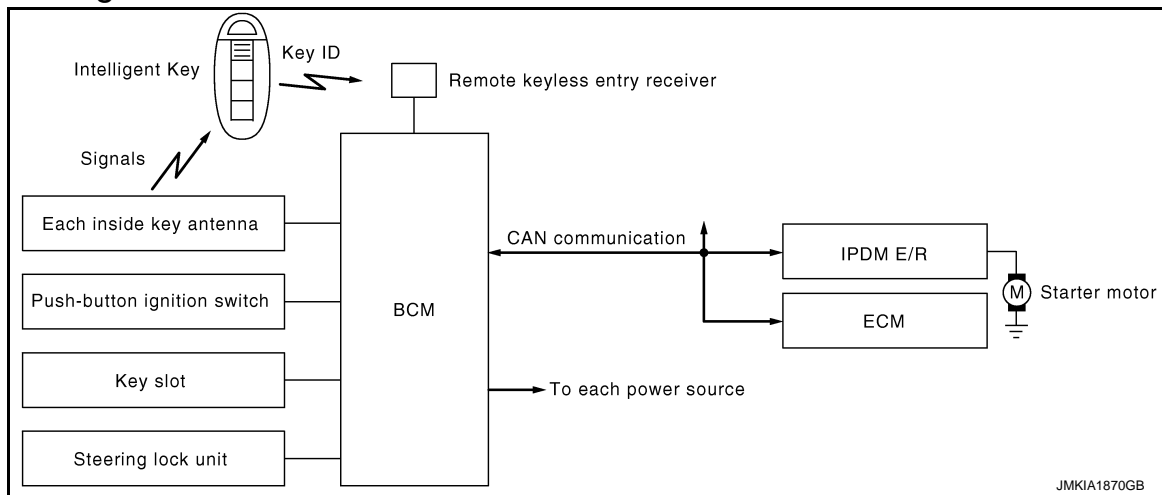
YES >> Procedure is completed.

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

SYSTEM DESCRIPTION

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

System Diagram



System Description

INFOID:0000000004346367

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, 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

- When the push-button ignition switch is pressed, the BCM signals the inside key antenna and transmits the request signal to the Intelligent Key.
- The Intelligent Key receives the request signal and transmits the Intelligent Key ID signal to the BCM via the remote keyless entry receiver.

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< SYSTEM DESCRIPTION >

[INTELLIGENT KEY SYSTEM]

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.
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-15, "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
- Selector lever is in the P position

Reset Condition of Battery Saver System

In order to prevent the battery from discharging, the battery saver system will cut off the power supply when all doors are closed, the selector lever is on P position and the ignition switch is left on ACC position for 60 minutes. 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.

STEERING LOCK OPERATION

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

- Opening door

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< SYSTEM DESCRIPTION >

[INTELLIGENT KEY SYSTEM]

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

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

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

NOTE:

- When an Intelligent Key is within the detection area of inside key antenna and when it is inserted to the key slot, it is equivalent to the operations below.
- When starting the engine, the BCM monitors under the engine start conditions,
 - Brake pedal operating condition
 - Selector lever position
 - Vehicle speed

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

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

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

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

Emergency stop operation

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

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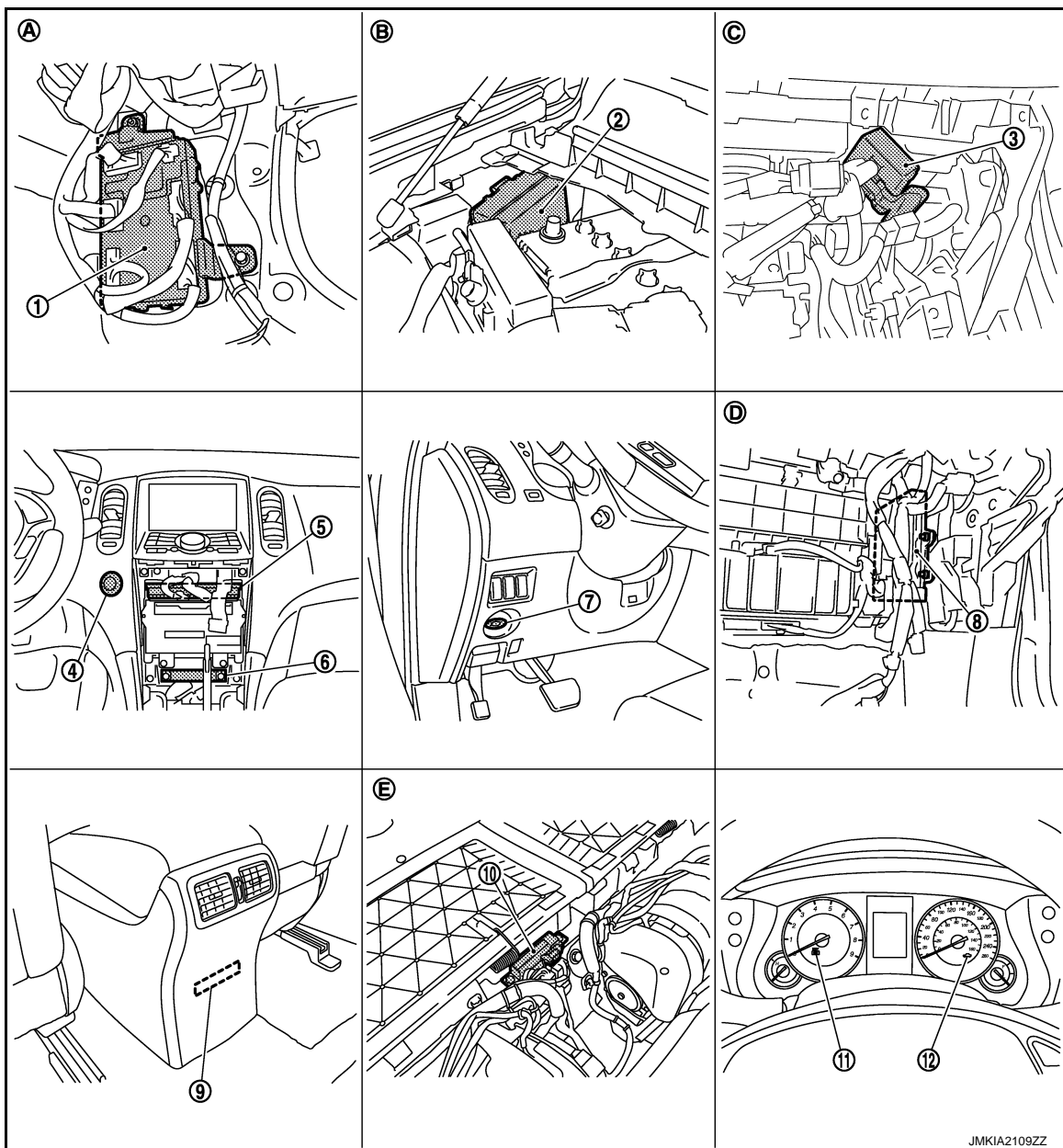
INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< SYSTEM DESCRIPTION >

[INTELLIGENT KEY SYSTEM]

Component Parts Location

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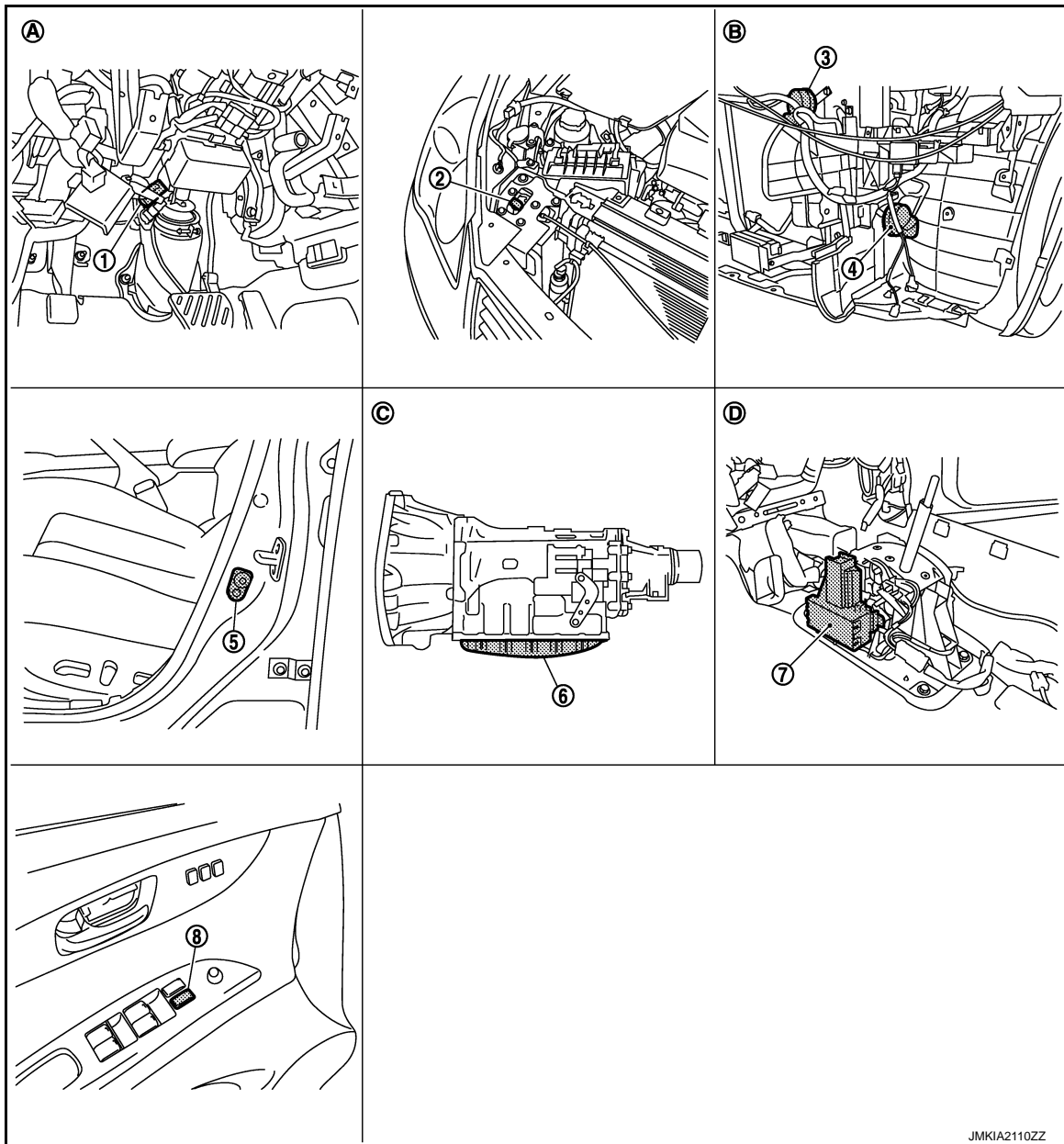
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|---|--|---|
| 1. BCM M118, M119, M121, M122, M123 | 2. IPDM E/R E5, E6, E7 | 3. Remote keyless entry receiver M104 |
| 4. Push-button ignition switch M50 | 5. Unified meter and A/C amp. M66, M67 | 6. Inside key antenna (instrument center) M131 |
| 7. Key slot M22 | 8. ECM E107 | 9. Inside key antenna (console) M146 |
| 10. Inside key antenna (luggage room) B228 | 11. Combination meter (KEY warning lamp) M53 | 12. Combination meter (security indicator lamp) M53 |
| A. Dash side lower (passenger side) | B. Engine room dash panel (RH) | C. Behind the instrument assist lower panel |
| D. Behind the instrument assist lower panel | E. Under the rear seat seatback | |

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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< SYSTEM DESCRIPTION >

[INTELLIGENT KEY SYSTEM]



- | | | |
|--|--|---------------------------------------|
| 1. Stop lamp switch E110 | 2. Hood switch E30 | 3. Horn (high) E61, E62 |
| 4. Horn (low) E69, E70 | 5. Front door switch (driver side) B16 | 6. TCM F151 (built into A/T assembly) |
| 7. A/T shift selector (detention switch) M137 | 8. Power window main switch (door lock and unlock switch) D8, D9 | |
| A. Behind the instrument driver lower cover | B. Behind the front bumper | C. A/T assembly |
| D. View with the center console assembly removed | | |

Component Description

INFOID:0000000004346369

Component	Reference
BCM	SEC-92
Steering lock unit	SEC-79
Push-button ignition switch	SEC-93
Door switch	DLK-66

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

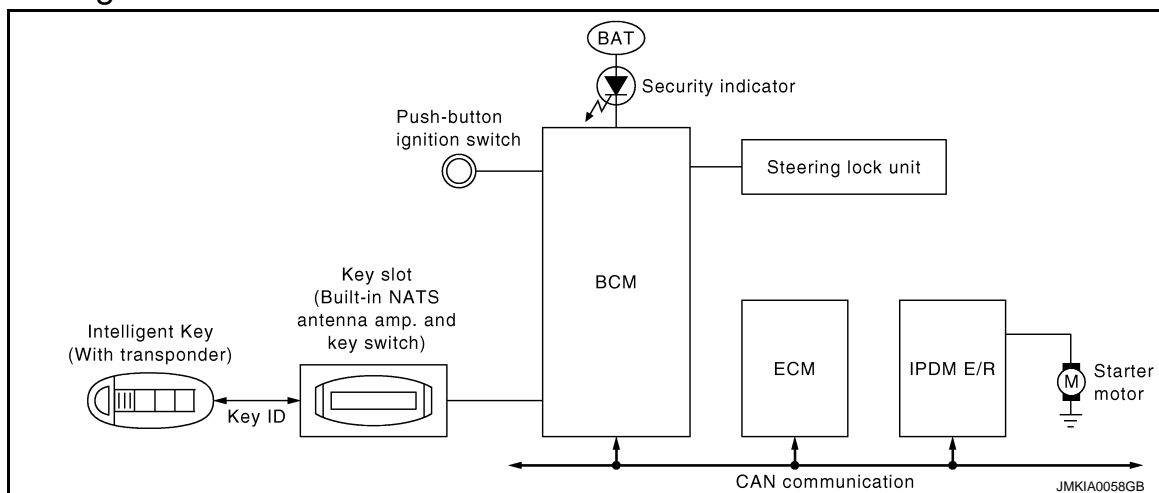
< SYSTEM DESCRIPTION >

[INTELLIGENT KEY SYSTEM]

Component	Reference
A/T shift selector (detention switch)	SEC-58
Inside key antenna	DLK-59
Remote keyless entry receiver	DLK-81
Stop lamp switch	SEC-52
Transmission range switch	SEC-66
Steering lock relay	SEC-70
Starter relay	SEC-73
Starter control relay	SEC-57
Security indicator lamp	SEC-117
Key warning lamp	SEC-118

INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS

System Diagram



System Description

INFOID:000000004346371

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 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 lamp and apply the anti-theft system equipment sticker, forewarn that the IVIS (NATS) is onboard with the model.
- Security indicator lamp always blinks when the ignition switch is in any position except the ON 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 can not start". 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 LAMP

INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS

[INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

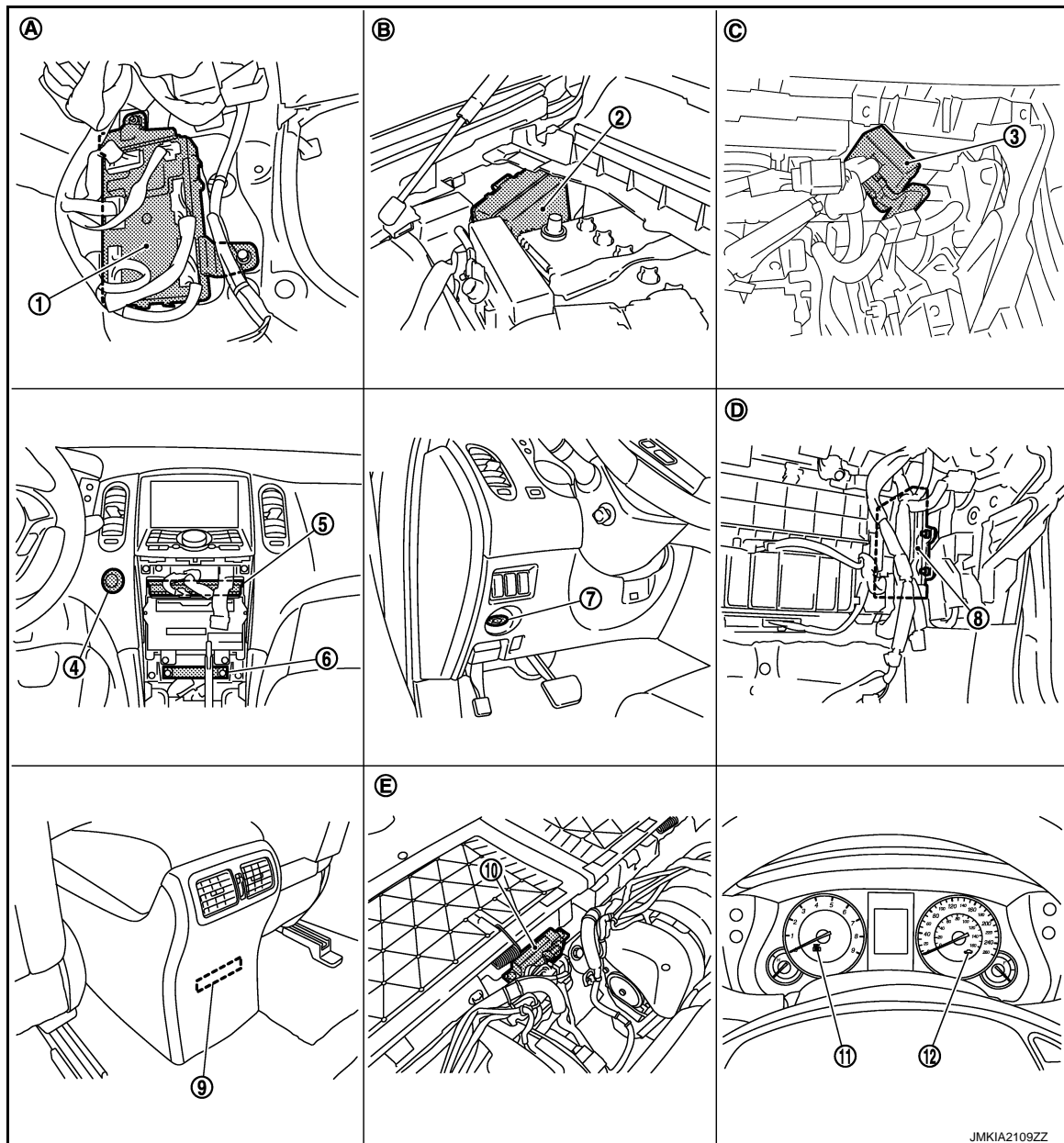
- Warns that the vehicle is equipped with IVIS (NATS).
- Security indicator lamp always blinks when the ignition switch is in any position except the ON position.

NOTE:

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

Component Parts Location

INFOID:0000000004931925

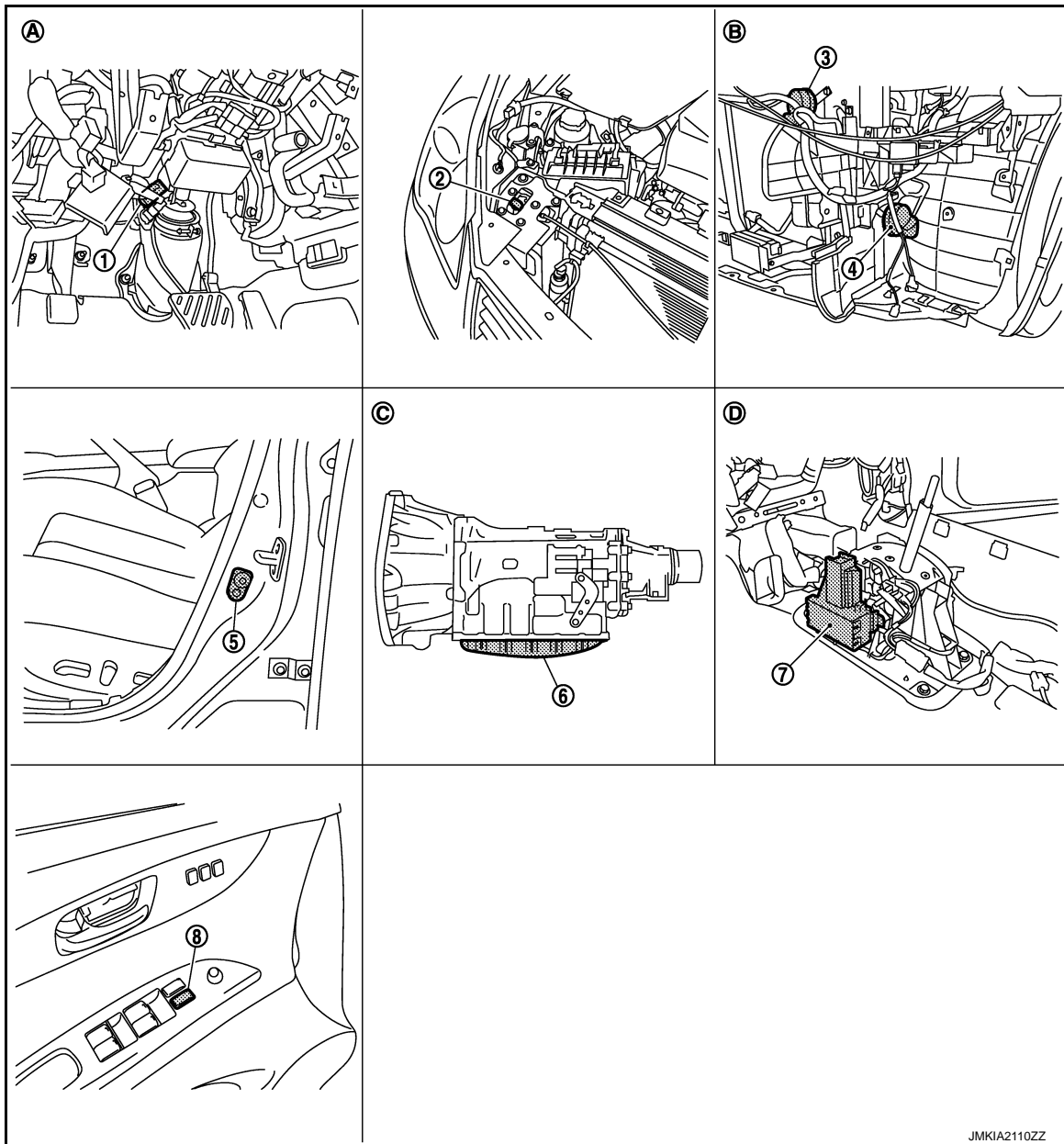


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|-----|--|-----|--|-----|---|
| 1. | BCM M118, M119, M121, M122, M123 | 2. | IPDM E/R E5, E6, E7 | 3. | Remote keyless entry receiver M104 |
| 4. | Push-button ignition switch M50 | 5. | Unified meter and A/C amp. M66, M67 | 6. | Inside key antenna (instrument center) M131 |
| 7. | Key slot M22 | 8. | ECM E107 | 9. | Inside key antenna (console) M146 |
| 10. | Inside key antenna (luggage room) B228 | 11. | Combination meter (KEY warning lamp) M53 | 12. | Combination meter (security indicator lamp) M53 |
| A. | Dash side lower (passenger side) | B. | Engine room dash panel (RH) | C. | Behind the instrument assist lower panel |
| D. | Behind the instrument assist lower panel | E. | Under the rear seat seatback | | |

INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS

< SYSTEM DESCRIPTION >

[INTELLIGENT KEY SYSTEM]



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|--|--|---------------------------------------|
| 1. Stop lamp switch E110 | 2. Hood switch E30 | 3. Horn (high) E61, E62 |
| 4. Horn (low) E69, E70 | 5. Front door switch (driver side) B16 | 6. TCM F151 (built into A/T assembly) |
| 7. A/T shift selector (detention switch) M137 | 8. Power window main switch (door lock and unlock switch) D8, D9 | |
| A. Behind the instrument driver lower cover | B. Behind the front bumper | C. A/T assembly |
| D. View with the center console assembly removed | | |

Component Description

INFOID:0000000004346373

Component	Reference
BCM	SEC-92
Steering lock unit	SEC-79
Push-button ignition switch	SEC-93
Door switch	DLK-66

INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS

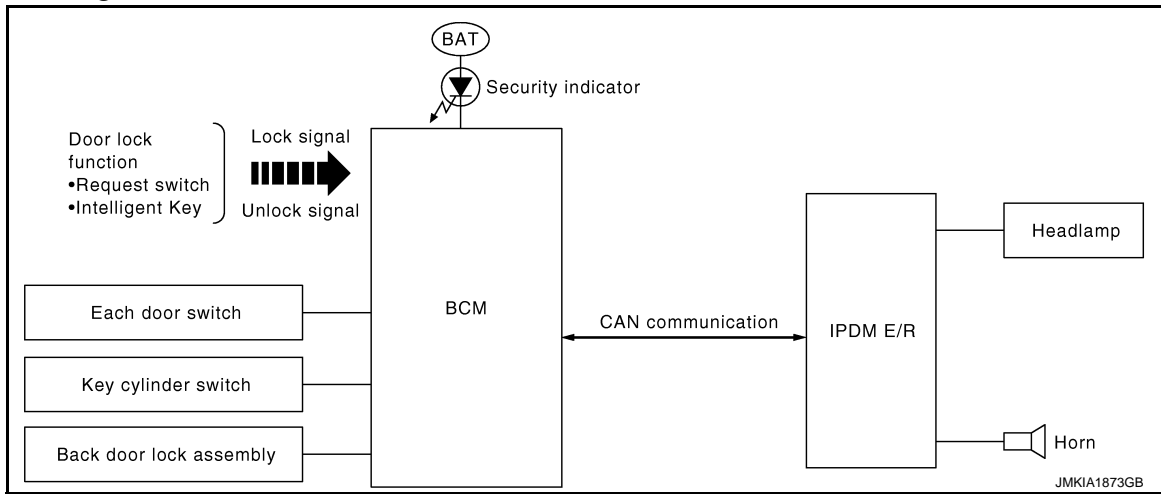
< SYSTEM DESCRIPTION >

[INTELLIGENT KEY SYSTEM]

Component	Reference
key slot	DLK-99
A/T shift selector (detention switch)	SEC-58
Inside key antenna	DLK-59
Remote keyless entry receiver	DLK-81
Stop lamp switch	SEC-52
Transmission range switch	SEC-66
Steering lock relay	SEC-70
Starter relay	SEC-73
Starter control relay	SEC-57
Security indicator lamp	SEC-117
Key warning lamp	SEC-118

VEHICLE SECURITY SYSTEM

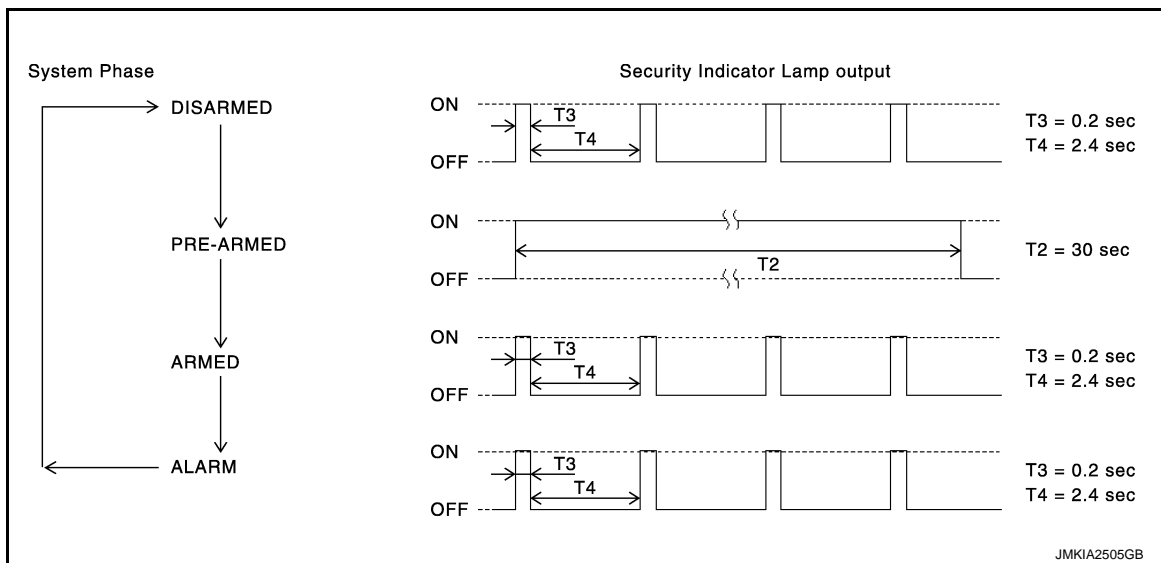
System Diagram



System Description

INFOID:000000004346375

OPERATION FLOW



SETTING THE VEHICLE SECURITY SYSTEM

Initial Condition

Ignition switch is in OFF position.

Disarmed Phase

- When any door or back door 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, security indicator lamp blinks every 2.4 seconds.

Pre-armed Phase and Armed Phase

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

1. BCM receives LOCK signal from front door request switch, Intelligent Key or door key cylinder, after back door and all doors are closed.
2. Security indicator lamp lamp illuminates for 30 seconds. Then, the system automatically shifts into the “armed” phase.

CANCELING THE SET VEHICLE SECURITY SYSTEM

VEHICLE SECURITY SYSTEM

< SYSTEM DESCRIPTION >

[INTELLIGENT KEY SYSTEM]

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

1. Unlock the all doors with the door request switch, Intelligent Key or door key cylinder.
2. Turn ignition switch "ON" or "ACC" position.

CANCELING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM

When unlocking the all doors with the door request switch, Intelligent Key or door key cylinder switch the alarm operation is canceled.

ACTIVATING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM

Check that the system is in the armed phase. (Security indicator lamp 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. Back door 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 (high beam and low beam) and horns (high and low).

The headlamps flash and the horn sounds intermittently.

The alarm automatically turns off after 50 seconds or when BCM receives any signal from Intelligent Key, door request switch or door key cylinder.

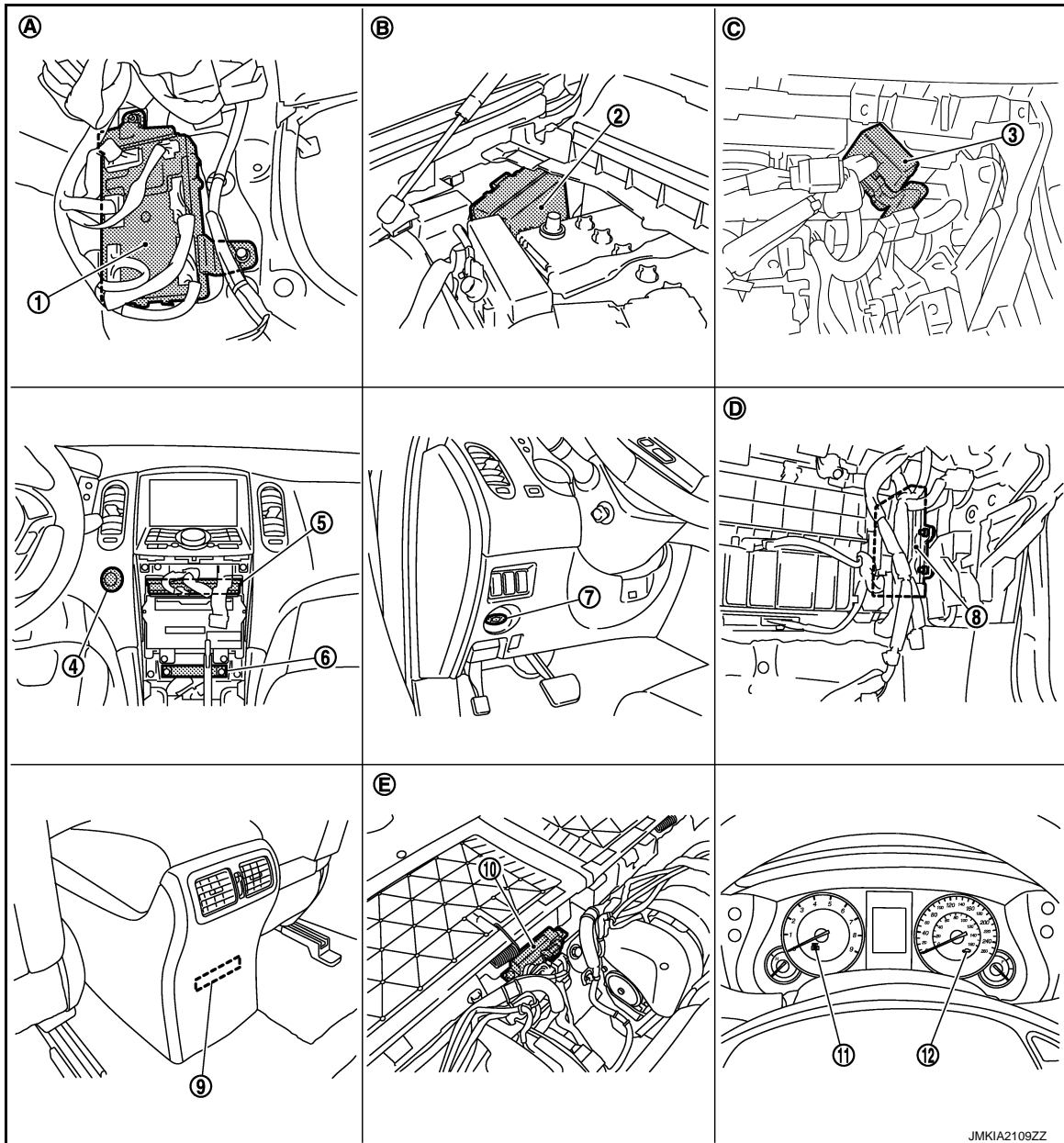
VEHICLE SECURITY SYSTEM

< SYSTEM DESCRIPTION >

[INTELLIGENT KEY SYSTEM]

Component Parts Location

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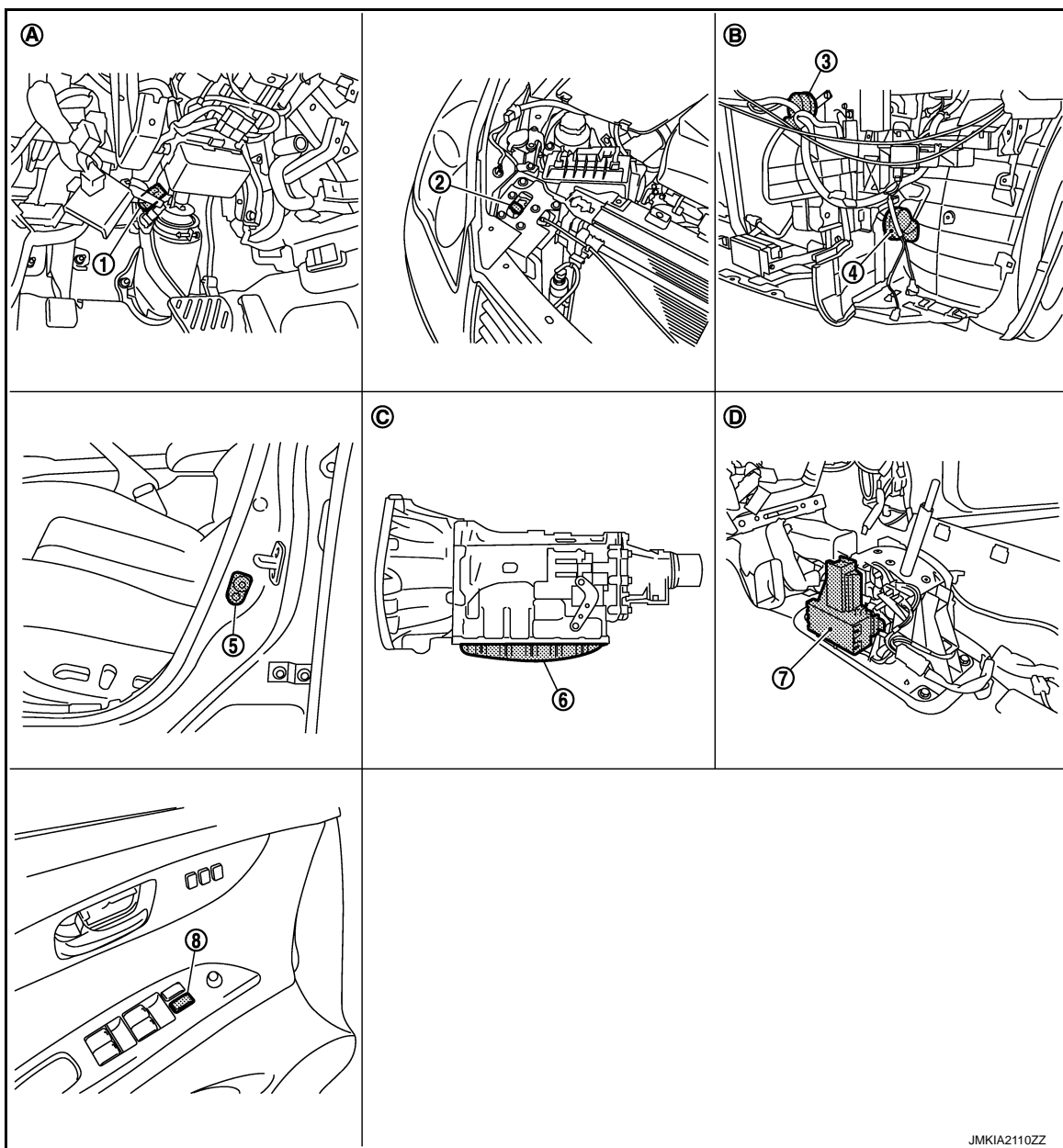
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|---|--|---|
| 1. BCM M118, M119, M121, M122, M123 | 2. IPDM E/R E5, E6, E7 | 3. Remote keyless entry receiver M104 |
| 4. Push-button ignition switch M50 | 5. Unified meter and A/C amp. M66, M67 | 6. Inside key antenna (instrument center) M131 |
| 7. Key slot M22 | 8. ECM E107 | 9. Inside key antenna (console) M146 |
| 10. Inside key antenna (luggage room) B228 | 11. Combination meter (KEY warning lamp) M53 | 12. Combination meter (security indicator lamp) M53 |
| A. Dash side lower (passenger side) | B. Engine room dash panel (RH) | C. Behind the instrument assist lower panel |
| D. Behind the instrument assist lower panel | E. Under the rear seat seatback | |

VEHICLE SECURITY SYSTEM

< SYSTEM DESCRIPTION >

[INTELLIGENT KEY SYSTEM]



- | | | |
|--|--|---------------------------------------|
| 1. Stop lamp switch E110 | 2. Hood switch E30 | 3. Horn (high) E61, E62 |
| 4. Horn (low) E69, E70 | 5. Front door switch (driver side) B16 | 6. TCM F151 (built into A/T assembly) |
| 7. A/T shift selector (detention switch) M137 | 8. Power window main switch (door lock and unlock switch) D8, D9 | |
| A. Behind the instrument driver lower cover | B. Behind the front bumper | C. A/T assembly |
| D. View with the center console assembly removed | | |

Component Description

INFOID:000000004346377

Component	Reference
BCM	SEC-92
Horn relay 1	DLK-103
Horn relay 2	DLK-103
Security indicator lamp	SEC-117

VEHICLE SECURITY SYSTEM

< SYSTEM DESCRIPTION >

[INTELLIGENT KEY SYSTEM]

Component	Reference
Door switch	DLK-66
Hood switch	SEC-114
Back door lock assembly (door witch)	DLK-66
Door key cylinder switch	DLK-79

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DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[INTELLIGENT KEY SYSTEM]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

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

INFOID:000000004904382

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 Monitor	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	<ul style="list-style-type: none"> Read and save the vehicle specification. Write the vehicle specification when replacing BCM.

SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

It can perform the diagnosis modes except the following for all sub system selection items.

×: Applicable item

System	Sub system selection item	Diagnosis mode		
		Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
—	AIR CONDITONER*			
<ul style="list-style-type: none"> Intelligent Key system Engine start system 	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
IVIS - NATS	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open system	TRUNK		×	×
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	TPMS (AIR PRESSURE MONITOR)	×	×	×

NOTE:

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

FREEZE FRAME DATA (FFD)

The BCM records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT-III.

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[INTELLIGENT KEY SYSTEM]

CONSULT screen item	Indication/Unit	Description
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected
Vehicle Condition	SLEEP>LOCK	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	0 - 39	The number of times that ignition switch is turned ON after DTC is detected
		<ul style="list-style-type: none"> 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:0000000004904381

WORK SUPPORT

Monitor item	Description
CONFIRM KEY FOB ID	It can be checked whether Intelligent Key ID code is registered or not in this mode.
AUTO LOCK SET	Auto door lock time can be changed in this mode. <ul style="list-style-type: none"> MODE 1: 1 minute MODE 2: 5 minutes MODE 3: 30 seconds MODE 4: 2 minutes

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[INTELLIGENT KEY SYSTEM]

Monitor item	Description
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch (driver side, passenger side and back door) 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 back door 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. <ul style="list-style-type: none"> • MODE 1: 0.5 sec. • MODE 2: Non-operation • MODE 3: 1.5 sec.
PW DOWN SET	Unlock button pressing time on Intelligent Key button can be selected from the following with this mode. <ul style="list-style-type: none"> • MODE 1: 3 sec. • MODE 2: Non-operation • MODE 3: 5 sec.
TAKE OUT FROM WIN WARN	NOTE: This item is displayed, but cannot be supported.
TRUNK OPEN DELAY	NOTE: This item is displayed, but cannot be supported.
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.
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. <ul style="list-style-type: none"> • LOCK ONLY: Door lock operation only • UNLOCK ONLY: Door unlock operation only • LOCK/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. <ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> • 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.
WELCOME LIGHT OP SET	Welcome light function mode can be changed to operate (WITH) or not operate (WITHOUT) with this mode.
WELCOME LIGHT SELECT	Welcome light function mode can be selected from the following with this mode. <ul style="list-style-type: none"> • Without room lamp • With room lamp • Without paddle lamp • With paddle lamp

SELF-DIAG RESULT

Refer to [DLK-167, "DTC Index"](#).

DATA MONITOR

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[INTELLIGENT KEY SYSTEM]

Monitor Item	Condition
REQ SW -DR	Indicates [ON/OFF] condition of door request switch (driver side).
REQ SW -AS	Indicates [ON/OFF] condition of door request switch (passenger side).
REQ SW -RR	NOTE: This item is displayed, but cannot be monitored.
REQ SW -RL	NOTE: This item is displayed, but cannot be monitored.
REQ SW -BD/TR	Indicates [ON/OFF] condition of back door 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.
CLUCH SW	NOTE: This item is displayed, but cannot be monitored.
BRAKE SW 1	Indicates [ON/OFF] condition of brake switch power supply.
BRAKE SW 2	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 unit (LOCK).
S/L -UNLOCK	Indicates [ON/OFF] condition of steering lock unit (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 unit (LOCK).
S/L UNLK-IPDM	Indicates [ON/OFF] condition of steering lock unit (UNLOCK).
S/L RELAY-REQ	Indicates [ON/OFF] condition of steering lock relay.
VEH SPEED 1	Display the vehicle speed signal received from unified meter and A/C amp. 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].
DOOR STAT-DR	Indicates [LOCK/READY/UNLOCK] condition of driver side door status.
DOOR STAT-AS	Indicates [LOCK/READY/UNLOCK] 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	NOTE: This item is displayed, but cannot be monitored.
RKE-LOCK	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.
RKE-UNLOCK	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.
RKE-TR/BD	NOTE: This item is displayed, but cannot be monitored.
RKE-PANIC	Indicates [ON/OFF] condition of PANIC button of Intelligent Key.

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DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[INTELLIGENT KEY SYSTEM]

Monitor Item	Condition
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.
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.

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.
INSIDE BUZZER	This test is able to check warning chime in combination meter operation. <ul style="list-style-type: none"> 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.
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation. The Intelligent Key warning buzzer will be activated after "ON" on CONSULT-III screen is touched.
INDICATOR	This test is able to check warning lamp operation. <ul style="list-style-type: none"> "KEY" Warning lamp illuminates when "KEY ON" on CONSULT-III screen is touched. "KEY" Warning lamp flashes when "KEY IND" 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 <ul style="list-style-type: none"> Engine start information displays when "BP N" on CONSULT-III screen is touched. Engine start information displays when "BP I" on CONSULT-III screen is touched. Key ID warning displays when "ID NG" on CONSULT-III screen is touched. Steering lock information displays when "ROTAT" on CONSULT-III screen is touched. P position warning displays when "SFT P" on CONSULT-III screen is touched. Intelligent Key insert information displays when "INSRT" on CONSULT-III screen is touched. Intelligent Key low battery warning displays when "BATT" on CONSULT-III screen is touched. Take away through window warning displays when "NO KY" on CONSULT-III screen is touched. Take away warning display when "OUTKY" on CONSULT-III screen is touched. OFF position warning display when "LK WN" on CONSULT-III screen is touched.
TRUNK/GLASS HATCH	This test is able to check back door opener actuator open operation. This actuator opens when "ON" on CONSULT-III screen is touched.
FLASHER	This test is able to check hazard warning lamp operation. The hazard warning 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.
P RANGE	This test is able to check A/T shift selector power supply A/T shift selector 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 INDICATOR	This test is able to check LOCK indicator in push-ignition switch operation. LOCK indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched;
ACC INDICATOR	This test is able to check ACC indicator in push-ignition switch operation. Indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched.
IGNITION ON IND	This test is able to check ON indicator in push-ignition switch operation. Indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched.

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[INTELLIGENT KEY SYSTEM]

Test item	Description
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.
TRUNK/BACK DOOR	NOTE: This item is displayed, but cannot be tested.

THEFT ALM

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

INFOID:000000004346380

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 -RR	NOTE: This is displayed even when it is not equipped.
REQ SW -RL	NOTE: This is displayed even when it is not equipped.
REQ SW -BD/TR	Indicates [ON/OFF] condition of back door request switch.
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch
UNLK SEN -DR	Indicates [ON/OFF] condition of driver door UNLOCK status.
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	Indicates [ON/OFF] condition of back door switch.
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	NOTE: This is displayed even when it is not equipped.
TR/BD OPEN SW	Indicates [ON/OFF] condition of back door opener switch.
TRNK/HAT MNTR	NOTE: This is displayed even when it is not equipped.
RKE-LOCK	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.
RKE-UNLOCK	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.
RKE-TR/BD	NOTE: This is displayed even when it is not equipped.

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

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[INTELLIGENT KEY SYSTEM]

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.
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:000000004346381

DATA MONITOR

Monitor item	Content
CONFIRM 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.

DTC/CIRCUIT DIAGNOSIS**U1000 CAN COMM CIRCUIT****BCM****BCM : Description**

INFOID:0000000004346382

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-26, "CAN Communication Signal Chart"](#).

BCM : DTC Logic

INFOID:0000000004346383

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

BCM : Diagnosis Procedure

INFOID:0000000004346384

1.PERFORM SELF DIAGNOSTIC

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

Is "U1000: CAN COMM CIRCUIT" displayed?

YES >> Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).

NO >> Refer to [GI-40, "Intermittent Incident"](#).

IPDM E/R

SEC

IPDM E/R : Description

INFOID:0000000004346385

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-26, "CAN Communication Signal Chart"](#).

IPDM E/R : DTC Logic

INFOID:0000000004346386

DTC DETECTION LOGIC

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

IPDM E/R : Diagnosis Procedure

INFOID:0000000004346387

1.PERFORM SELF DIAGNOSTIC

U1000 CAN COMM CIRCUIT

[INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

1. Turn ignition switch ON and wait for 2 seconds or more.
2. Check "Self Diagnostic Result" of IPDM E/R.

Is "CAN COMM CIRCUIT" displayed?

- YES >> Refer to [LAN-17, "Trouble Diagnosis Flow Chart"](#).
- NO >> Refer to [GI-40, "Intermittent Incident"](#).

U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

U1010 CONTROL UNIT (CAN)

BCM

BCM : DTC Logic

INFOID:0000000004346388

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

BCM : Diagnosis Procedure

INFOID:0000000004346389

1.REPLACE BCM

When DTC "U1010: CONTROL UNIT (CAN)" is detected, replace BCM.

>> Replace BCM. Refer to [BCS-85. "Exploded View"](#).

BCM : Special Repair Requirement

INFOID:0000000004346390

1.REQUIRED WORK WHEN REPLACING BCM

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

>> Work end.

SEC

P1610 LOCK MODE

Description

INFOID:000000004346391

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 is malfunctioning.

DTC Logic

INFOID:000000004346392

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. <ul style="list-style-type: none"> • Unregistered Intelligent Key • BCM or ECM is 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-34. "Diagnosis Procedure"](#).

NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346393

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:0000000004346394

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:0000000004346395

DTC DETECTION LOGIC

NOTE:

- If DTC B1611 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : DTC Logic"](#).
- If DTC B1611 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-33, "BCM : 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.	<ul style="list-style-type: none"> • BCM • ECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

- YES >> Go to [SEC-35, "Diagnosis Procedure"](#).
 NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004346396

1.PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Reregister 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 reregistered Intelligent Key?

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

2.REPLACE BCM

1. Replace BCM. Refer to [BCS-85, "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 reregistered Intelligent Key?

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

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-40, "Intermittent Incident"](#).

>> INSPECTION END

P1612 CHAIN OF ECM-IMMU

Description

INFOID:000000004346397

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:000000004346398

DTC DETECTION LOGIC

NOTE:

- If DTC P1612 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : DTC Logic"](#).
- If DTC P1612 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-33, "BCM : DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1612	CHAIN OF ECM-IMMU	Inactive communication between ECM and BCM	<ul style="list-style-type: none"> • 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.
 - Selector lever is in the P or N position.
 - Do not depress brake pedal.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-36, "Diagnosis Procedure"](#).
 NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346399

1. REPLACE BCM

1. Replace BCM. Refer to [BCS-85, "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

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

>> INSPECTION END

P1614 CHAIN OF IMMU-KEY

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

P1614 CHAIN OF IMMU-KEY

Description

INFOID:0000000004346400

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:0000000004346401

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1614	CHAIN OF IMMU-KEY	Inactive communication between key slot and BCM.	<ul style="list-style-type: none">• Harness or connectors (key slot circuit is open or shorted)• Key slot• BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

1. Insert Intelligent Key into the key slot.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Go to [SEC-37, "Diagnosis Procedure"](#).
NO >> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE 2

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

Is DTC detected?

YES >> Go to [SEC-37, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004346402

SEC

1. INSPECTION START

Perform inspection in accordance with procedure that confirms DTC.

Which procedure confirms DTC?

DTC confirmation procedure 1>>GO TO 2.
DTC confirmation procedure 2>>GO TO 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.

(+)		(-)	Voltage (V) (Approx.)
Key slot			
Connector	Terminal		
M22	2	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace key slot. Refer to [SEC-205, "Removal and Installation"](#).
NO >> GO TO 3.

3.CHECK KEY SLOT CIRCUIT

1. Disconnect BCM connector.

P1614 CHAIN OF IMMU-KEY

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

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		Not existed

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace 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		Battery voltage

Is the inspection result normal?

YES >> Replace key slot. Refer to [SEC-205. "Removal and Installation"](#).

NO >> GO TO 6.

6.CHECK KEY SLOT COMMUNICATION SIGNAL CIRCUIT

1. Disconnect BCM connector.
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		Not existed

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace 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.

P1614 CHAIN OF IMMU-KEY

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Key slot		Ground	Continuity
Connector	Terminal		
M22	7		Existed

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness or connector.

8.CHECK INTERMITTENT INCIDENT

Refer to [GI-40. "Intermittent Incident"](#).

>> INSPECTION END

A
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SEC

P1615 DIFFERENCE OF KEY

Description

INFOID:000000004346403

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:000000004346404

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-40, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346405

1.PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Reregister 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 reregistered 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 reregistered Intelligent Key?

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

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-40, "Intermittent Incident"](#).

>> INSPECTION END

B2190 NATS ANTENNA AMP.

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2190 NATS ANTENNA AMP.

Description

INFOID:0000000004346406

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:0000000004346407

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2190	NATS ANTENNA AMP	Inactive communication between key slot and BCM.	<ul style="list-style-type: none">• 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-41, "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-41, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004346408

SEC

1. INSPECTION START

Perform inspection in accordance with procedure that confirms DTC.

Which procedure confirms DTC?

DTC confirmation procedure 1>>GO TO 2.
DTC confirmation procedure 2>>GO TO 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.

(+)		(-)	Voltage (V) (Approx.)
Key slot			
Connector	Terminal		
M22	2	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace key slot. Refer to [SEC-205, "Removal and Installation"](#).
NO >> GO TO 3.

3.CHECK KEY SLOT CIRCUIT

B2190 NATS ANTENNA AMP.

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

1. Disconnect BCM connector.
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		Not existed

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace 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		(-)	Voltage (V) (Approx.)
Connector	Terminal		
M22	3	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace key slot. Refer to [SEC-205. "Removal and Installation"](#).

NO >> GO TO 6.

6.CHECK KEY SLOT COMMUNICATION SIGNAL CIRCUIT

1. Disconnect BCM connector.
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		Not existed

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness or connector.

7.CHECK KEY SLOT GROUND CIRCUIT

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

B2190 NATS ANTENNA AMP.

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

3. 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 8.

NO >> Repair or replace harness or connector.

8.CHECK INTERMITTENT INCIDENT

Refer to [GI-40. "Intermittent Incident"](#).

>> INSPECTION END

A
B
C
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G
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I
J
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SEC

B2191 DIFFERENCE OF KEY

Description

INFOID:000000004346409

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:000000004346410

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-44, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346411

1.PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Reregister 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 reregistered 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 reregistered Intelligent Key?

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

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-40, "Intermittent Incident"](#).

>> INSPECTION END

B2192 ID DISCORD, IMMU-ECM

Description

INFOID:000000004346412

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:000000004346413

DTC DETECTION LOGIC

NOTE:

- If DTC B2192 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : DTC Logic"](#).
- If DTC B2192 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-33, "BCM : 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.	<ul style="list-style-type: none"> • BCM • ECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

- YES >> Go to [SEC-45, "Diagnosis Procedure"](#).
 NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346414

1.PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Reregister 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 reregistered Intelligent Key?

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

2.REPLACE BCM

1. Replace BCM. Refer to [BCS-85, "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 reregistered Intelligent Key?

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

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-40, "Intermittent Incident"](#).

>> INSPECTION END

B2193 CHAIN OF ECM-IMMU

Description

INFOID:000000004346415

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:000000004346416

DTC DETECTION LOGIC

NOTE:

- If DTC B2193 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : DTC Logic"](#).
- If DTC B2193 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-33, "BCM : DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2193	CHAIN OF ECM-IMMU	Inactive communication between ECM and BCM	<ul style="list-style-type: none"> • 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.
 - Selector lever is in the P or N position.
 - Do not depress brake pedal.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Go to [SEC-46, "Diagnosis Procedure"](#).
 NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346417

1. REPLACE BCM

1. Replace BCM. Refer to [BCS-85, "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

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

>> INSPECTION END

B2195 ANTI-SCANNING

Description

INFOID:000000004914171

When ignition switch is turned ON, BCM performs ID verification with ECM. If ID verification that is out of the specified specification is detected, BCM prohibits further ID verification and engine cranking.

DTC Logic

INFOID:000000004914172

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2195	ANTI-SCANNING	ID verification between BCM and ECM that is out of the specified specification is detected	ID verification request out of the specified specification

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- Turn ignition switch ON under the following conditions.
 - Selector lever is in the P or N position
 - Do not depress brake pedal
- Check "Self-diagnostic result" using CONSULT-III.

Is DTC detected?

- YES >> Refer to [SEC-47, "Diagnosis Procedure"](#).
 NO >> INSPECTION END.

Diagnosis Procedure

INFOID:000000004914173

1.CHECK SELF-DIAGNOSTIC RESULT-1

- Perform "Self-diagnostic result" of BCM using CONSULT-III.
- Erase DTC.
- Perform DTC Confirmation Procedure. Refer to [SEC-47, "DTC Logic"](#).

Is DTC 2195 detected?

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

2.CHECK EQUIPMENT OF THE VEHICLE

Check that unspecified accessory part related to engine start is not installed.

Is unspecified accessory part related to engine start installed?

- YES >> GO TO 3.
 NO >> Replace BCM. Refer to [BCS-85, "Removal and Installation"](#).

3.CHECK SELF-DIAGNOSTIC RESULT-2

- Obtain the customers approval to remove unspecified accessory part related to engine start, and then remove it.
- Perform "Self-diagnostic result" of BCM using CONSULT-III.
- Erase DTC.
- Perform DTC Confirmation Procedure. Refer to [SEC-47, "DTC Logic"](#).

Is DTC 2195 detected?

- YES >> Replace BCM. Refer to [BCS-85, "Removal and Installation"](#).
 NO >> INSPECTION END

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B2013 ID DISCORD, IMMU-STRG

Description

INFOID:000000004346418

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:000000004346419

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 lock unit are NG. 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-48. "Diagnosis Procedure"](#).
 NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346420

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-40. "Intermittent Incident"](#).

>> INSPECTION END

B2014 CHAIN OF STRG-IMMU

Description

INFOID:000000004346421

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:000000004346422

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2014	CHAIN OF STRG-IMMU	Inactive communication between steering lock unit and BCM	<ul style="list-style-type: none"> • 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-49. "Diagnosis Procedure"](#).
 NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346423

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.

(+)		(-)	Condition		Voltage (V) (Approx.)
Steering lock unit					
Connector	Terminal				
M40	7	Ground	Ignition switch	OFF or ACC	Battery voltage
				ON	0

Is the inspection result 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.
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		Not existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace 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		Existed
	6		

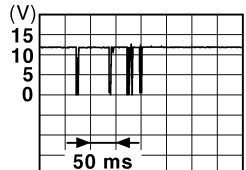
Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace 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		(-)	Condition	Voltage (V) (Approx.)
Connector	Terminal			
M40	2	Ground	Steering lock unit	Lock status
			Lock or unlock	Battery voltage
				 <p>JMK1A0066GB</p>
			For 15 seconds after unlock	Battery voltage
			15 seconds or later after unlock.	0

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 result 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.
3. Check continuity between steering lock unit harness connector and BCM harness connector.

B2014 CHAIN OF STRG-IMMU

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

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		Not existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness or connector.

6.CHECK INTERMITTENT INCIDENT

Refer to [GI-40, "Intermittent Incident"](#).

>> INSPECTION END

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SEC

B2555 STOP LAMP

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2555 STOP LAMP

Description

INFOID:000000004346424

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:000000004346425

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.	<ul style="list-style-type: none">• 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-52, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346426

1.CHECK STOP LAMP SWITCH INPUT SIGNAL

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

(+)		(-)	Voltage (V) (Approx.)
BCM			
Connector	Terminal		
M123	116	Ground	Battery voltage

Is the inspection normal?

YES >> GO TO 2.
NO-1 >> Check 10A fuse [No. 7, located in the fuse block (J/B)]
NO-2 >> Check harness for open or short between BCM and fuse.

2.CHECK STOP LAMP SWITCH POWER SUPPLY CIRCUIT

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

(+)		(-)	Voltage (V) (Approx.)
Stop lamp switch			
Connector	Terminal		
E110	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

B2555 STOP LAMP

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

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		Not existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness or connector.

4.CHECK STOP LAMP SWITCH

Refer to [SEC-53, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace stop lamp switch. Refer to [BR-18, "Exploded View"](#).

5.CHECK INTERMITTENT INCIDENT

Refer to [GI-40, "Intermittent Incident"](#).

>> INSPECTION END

Component Inspection

INFOID:000000004346427

1.CHECK STOP LAMP SWITCH

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

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

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace stop lamp switch. Refer to [BR-18, "Exploded View"](#).

B2556 PUSH-BUTTON IGNITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2556 PUSH-BUTTON IGNITION SWITCH

Description

INFOID:000000004346428

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:000000004346429

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	<ul style="list-style-type: none">• 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-54, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346430

1.CHECK PUSH-BUTTON IGNITION SWITCH INPUT SIGNAL

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

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

Is the inspection result normal?

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

2.CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT

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

Push-button ignition switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
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		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-85, "Removal and Installation"](#).

B2556 PUSH-BUTTON IGNITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

NO >> Repair or replace harness or connector.

3.CHECK PUSH-BUTTON IGNITION SWITCH GROUND CIRCUIT

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

Push-button ignition switch		Ground	Continuity
Connector	Terminal		
M50	1		Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness or connector.

4.CHECK PUSH-BUTTON IGNITION SWITCH

Refer to [SEC-55, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace push-button ignition switch. Refer to [SEC-206, "Removal and Installation"](#).

5.CHECK INTERMITTENT INCIDENT

Refer to [GI-40, "Intermittent Incident"](#).

>> INSPECTION END

Component Inspection

INFOID:000000004346431

1.CHECK PUSH-BUTTON IGNITION SWITCH

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

Push-button ignition switch		Condition	Continuity
Terminals			
1	4	Pressed	Existed
		Not pressed	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace push-button ignition switch. Refer to [SEC-206, "Removal and Installation"](#).

SEC

B2557 VEHICLE SPEED

Description

INFOID:000000004346432

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:000000004346433

DTC DETECTION LOGIC

NOTE:

- If DTC B2557 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : DTC Logic"](#).
- If DTC B2557 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-33, "BCM : 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 <ul style="list-style-type: none"> • One is 10 km/h (6.2 MPH) or more and the other is 4 km/h (2.5 MPH) or less. 	<ul style="list-style-type: none"> • 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-56, "Diagnosis Procedure"](#).
 NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346434

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

Check “Self diagnostic result” with CONSULT-III. Refer to [BRC-96, "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"](#).

Is the inspection result normal?

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

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-40, "Intermittent Incident"](#).

>> INSPECTION END

B2560 STARTER CONTROL RELAY

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2560 STARTER CONTROL RELAY

Description

INFOID:000000004346435

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:000000004346436

DTC DETECTION LOGIC

NOTE:

- If DTC B2560 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : DTC Logic"](#)
- If DTC B2560 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-33, "BCM : 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.
 - Selector lever is in the P or N position.
 - Do not depress brake pedal.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-57, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346437

1.CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III. Refer to [SEC-191, "DTC Index"](#).

Is the inspection result normal?

- YES >> GO TO 2.
NO >> Replace IPDM E/R. Refer to [PCS-33, "Removal and Installation"](#).

2.CHECK INTERMITTENT INCIDENT

Refer to [GI-40, "Intermittent Incident"](#)

>> INSPECTION END

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SEC

B2601 SHIFT POSITION

Description

INFOID:000000004346438

BCM confirms the shift position with the following 4 signals.

- Selector lever
- Transmission range switch
- P position signal from IPDM E/R (CAN)
- P position signal from TCM (CAN)

DTC Logic

INFOID:000000004346439

DTC DETECTION LOGIC

NOTE:

- If DTC B2601 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : DTC Logic"](#).
- If DTC B2601 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-33, "BCM : DTC Logic"](#).
- If DTC B2601 is displayed with DTC B2603, first perform the trouble diagnosis for DTC B2603. Refer to [SEC-68, "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	<ul style="list-style-type: none"> • Harness or connectors (A/T shift selector circuit is open or shorted.) • A/T shift selector (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.
 - 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-58, "Diagnosis Procedure"](#).
 NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346440

1. CHECK A/T SHIFT SELECTOR POWER SUPPLY

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

(+)		(-)	Voltage (V) (Approx.)
A/T shift selector (detention switch)			
Connector	Terminal		
M137	10	Ground	Battery voltage

Is the inspection result normal?

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

2. CHECK A/T SHIFT SELECTOR POWER SUPPLY CIRCUIT

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

B2601 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

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

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

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

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-85, "Removal and Installation"](#).

NO >> Repair or replace harness or connector.

3.CHECK A/T SHIFT SELECTOR CIRCUIT (BCM)

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

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

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

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

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness or connector.

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

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

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

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

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

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness or connector.

5.CHECK A/T SHIFT SELECTOR (DETENTION SWITCH)

Refer to [SEC-60, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace A/T shift selector. Refer to [TM-158, "2WD : Removal and Installation"](#) (2WD) or [TM-161, "AWD : Removal and Installation"](#) (AWD).

B2601 SHIFT POSITION

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

6.CHECK INTERMITTENT INCIDENT

Refer to [GI-40, "Intermittent Incident"](#).

>> INSPECTION END

Component Inspection

INFOID:000000004346441

1.CHECK A/T SHIFT SELECTOR (DETENTION SWITCH)

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

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

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace A/T shift selector. Refer to [TM-158, "2WD : Removal and Installation"](#) (2WD) or [TM-161, "AWD : Removal and Installation"](#) (AWD).

B2602 SHIFT POSITION

Description

INFOID:000000004346442

BCM confirms the shift position with the following 4 signals.

- Selector lever
- Transmission range switch
- P position signal from IPDM E/R (CAN)
- P position signal from TCM (CAN)

DTC Logic

INFOID:000000004346443

DTC DETECTION LOGIC

NOTE:

- If DTC B2602 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : DTC Logic"](#).
- If DTC B2602 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-33, "BCM : DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2602	SHIFT POSITION	BCM detects the following status for 10 seconds. <ul style="list-style-type: none"> • Shift position is in P position • Vehicle speed is 4 km/h (2.5 MPH) or more • Ignition switch is in the ON position 	<ul style="list-style-type: none"> • Harness or connectors (A/T shift selector circuit is open or shorted) • A/T shift selector (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.
 - 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-61, "Diagnosis Procedure"](#).
 NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346444

1.CHECK DTC WITH "ABS ACTUATOR AND ELECTRIC UNIT"

Check "Self diagnostic result" with CONSULT-III. Refer to [BRC-96, "DTC No. Index"](#).

Is the inspection result normal?

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

2.CHECK A/T SHIFT SELECTOR POWER SUPPLY

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

(+)		(-)	Voltage (V) (Approx.)
A/T shift selector (detention switch)			
Connector	Terminal		
M137	10	Ground	Battery voltage

Is the inspection result normal?

B2602 SHIFT POSITION

[INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

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

3.CHECK A/T SHIFT SELECTOR POWER SUPPLY CIRCUIT

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

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

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

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

Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-85, "Removal and Installation"](#).
NO >> Repair or replace harness or connector.

4.CHECK A/T SHIFT SELECTOR CIRCUIT

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

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

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

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

Is the inspection result normal?

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

5.CHECK A/T SHIFT SELECTOR (DETENTION SWITCH)

Refer to [SEC-60, "Component Inspection"](#).

Is the inspection result normal?

- YES >> GO TO 6.
NO >> Replace A/T shift selector. Refer to [TM-158, "2WD : Removal and Installation"](#) (2WD) or [TM-161, "AWD : Removal and Installation"](#) (AWD).

6.CHECK INTERMITTENT INCIDENT

Refer to [GI-40, "Intermittent Incident"](#).

>> INSPECTION END

B2603 SHIFT POSITION STATUS

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2603 SHIFT POSITION STATUS

Description

INFOID:000000004346445

BCM confirms the shift position with the following 4 signals.

- Selector lever
- Transmission range switch
- P position signal from IPDM E/R (CAN)
- P position signal from TCM (CAN)

DTC Logic

INFOID:000000004346446

DTC DETECTION LOGIC

NOTE:

- If DTC B2603 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : DTC Logic"](#).
- If DTC B2603 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-33, "BCM : 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. <ul style="list-style-type: none">• Transmission range switch: approx. 0V• A/T shift selector (detention switch): approx. 0V	<ul style="list-style-type: none">• Harness or connector (A/T shift selector circuit is open or shorted.)• Harness or connectors (Transmission range switch circuit is open or shorted.)• A/T shift selector (detention switch)• Transmission range switch

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine under the following conditions and wait for at least 1 second.
 - 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-63, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346447

1.CHECK DTC WITH TCM

Check "Self diagnostic result" with CONSULT-III. Refer to [TM-110, "DTC Index"](#).

Is the inspection result normal?

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

2.CHECK TRANSMISSION RANGE SWITCH CIRCUIT

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

TCM		BCM		Continuity
Connector	Terminal	Connector	Terminal	
F51	9	M123	140	Existed

4. Check continuity between TCM harness connector and ground.

B2603 SHIFT POSITION STATUS

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

TCM		Ground	Continuity
Connector	Terminal		
F51	9		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connector.

3.CHECK A/T SHIFT SELECTOR POWER SUPPLY

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

(+)		(-)	Voltage (V) (Approx.)
A/T shift selector (detention switch)			
Connector	Terminal		
M137	10	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4.CHECK A/T SHIFT SELECTOR POWER SUPPLY CIRCUIT

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

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

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

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

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-85. "Removal and Installation"](#).

NO >> Repair or replace harness or connector.

5.CHECK A/T SHIFT SELECTOR CIRCUIT

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

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

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

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

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness or connector.

B2603 SHIFT POSITION STATUS

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

6.CHECK A/T SHIFT SELECTOR (DETENTION SWITCH)

Refer to [SEC-60. "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 7.

NO >> Replace A/T shift selector. Refer to [TM-158. "2WD : Removal and Installation"](#) (2WD) or [TM-161. "AWD : Removal and Installation"](#) (AWD).

7.CHECK INTERMITTENT INCIDENT

Refer to [GI-40. "Intermittent Incident"](#).

>> INSPECTION END

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SEC

B2604 PNP SWITCH

Description

INFOID:000000004346448

BCM confirms the shift position with the following 4 signals.

- Selector lever
- Transmission range switch
- P position signal from IPDM E/R (CAN)
- P position signal from TCM (CAN)

DTC Logic

INFOID:000000004346449

DTC DETECTION LOGIC

NOTE:

- If DTC B2604 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : DTC Logic"](#).
- If DTC B2604 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-33, "BCM : 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. <ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Harness or connectors (Transmission range switch circuit is open or shorted.) • Transmission range switch

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine under the following conditions and wait for at least 1 second.
 - 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-66, "Diagnosis Procedure"](#).

NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346450

1. CHECK DTC WITH TCM

Check "Self diagnostic result" with CONSULT-III. Refer to [TM-110, "DTC Index"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK TRANSMISSION RANGE SWITCH CIRCUIT

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

TCM		BCM		Continuity
Connector	Terminal	Connector	Terminal	
F51	9	M123	140	Existed

4. Check continuity between TCM harness connector and ground.

B2604 PNP SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

TCM		Ground	Continuity
Connector	Terminal		
F51	9		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connector.

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-40. "Intermittent Incident"](#).

>> INSPECTION END

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SEC

B2605 PNP SWITCH

Description

INFOID:000000004346451

BCM confirms the shift position with the following 4 signals.

- Selector lever
- Transmission range switch
- P position signal from IPDM E/R (CAN)
- P position signal from TCM (CAN)

DTC Logic

INFOID:000000004346452

DTC DETECTION LOGIC

NOTE:

- If DTC B2605 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : DTC Logic"](#).
- If DTC B2605 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-33, "BCM : 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 <ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Harness or connectors (Transmission range switch circuit is open or shorted.) • Transmission range switch • IPDM E/R

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions and wait for at least 1 second.
 - 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-68, "Diagnosis Procedure"](#).

NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346453

1. CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III. Refer to [SEC-191, "DTC Index"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK TRANSMISSION RANGE SWITCH CIRCUIT

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

TCM		BCM		Continuity
Connector	Terminal	Connector	Terminal	
F51	9	M123	140	Existed

4. Check continuity between TCM harness connector and ground.

B2605 PNP SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

TCM		Ground	Continuity
Connector	Terminal		
F51	9		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connector.

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-40. "Intermittent Incident"](#).

>> INSPECTION END

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SEC

B2606 STEERING LOCK RELAY

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2606 STEERING LOCK RELAY

Description

INFOID:000000004346454

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:000000004346455

DTC DETECTION LOGIC

NOTE:

- If DTC B2606 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : DTC Logic"](#).
- If DTC B2606 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-33, "BCM : 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. <ul style="list-style-type: none">• 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.
 - Selector lever is in the P or N position.
 - Do not depress brake pedal.
2. Steering is locked.
3. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-70, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346456

1.CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III. Refer to [SEC-191, "DTC Index"](#).

Is the inspection result normal?

- YES >> GO TO 2.
NO >> Replace IPDM E/R. Refer to [PCS-33, "Removal and Installation"](#).

2.CHECK INTERMITTENT INCIDENT

Refer to [GI-40, "Intermittent Incident"](#).

>> INSPECTION END

B2607 STEERING LOCK RELAY

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2607 STEERING LOCK RELAY

Description

INFOID:000000004346457

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:000000004346458

DTC DETECTION LOGIC

NOTE:

- If DTC B2607 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : DTC Logic"](#).
- If DTC B2607 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-33, "BCM : 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. <ul style="list-style-type: none">• Steering lock unit ON signal transmitted by IPDM E/R• The steering lock unit status feedback	<ul style="list-style-type: none">• 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.
 - Selector lever is in the P or N position.
 - Do not depress brake pedal.
2. Steering lock is locked.
3. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Go to [SEC-71, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346459

1.CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III. Refer to [SEC-191, "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 connector.
3. Check voltage between steering lock unit harness connector and ground.

(+)		(-)	Condition	Voltage (V) (Approx.)
Steering lock unit				
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.

B2607 STEERING LOCK RELAY

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

3. CHECK STEERING LOCK UNIT CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. 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	1	E5	11	Existed

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

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	1		Not existed

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-33, "Removal and Installation"](#).
NO >> Repair or replace harness or connector.

4. CHECK INTERMITTENT INCIDENT

Refer to [GI-40, "Intermittent Incident"](#).

>> INSPECTION END

B2608 STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2608 STARTER RELAY

Description

INFOID:000000004346460

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:000000004346461

DTC DETECTION LOGIC

NOTE:

- If DTC B2608 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : DTC Logic"](#).
- If DTC B2608 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-33, "BCM : 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-105, "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.	<ul style="list-style-type: none">• 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.
 - Selector lever is in the P or N position.
 - Do not depress brake pedal.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-73, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346462

1.CHECK BCM POWER SUPPLY CIRCUIT

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

(+)		(-)	Condition		Voltage (V) (Approx.)
BCM					
Connector	Terminal				
M121	52	Ground	Selector lever	N or P position	Battery voltage
				Other than above	0

Is the measurement value within the specification?

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

2.CHECK STARTER RELAY CIRCUIT

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

B2608 STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

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		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-33, "Removal and Installation"](#).

NO >> Repair or replace harness or connector.

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-40, "Intermittent Incident"](#).

>> INSPECTION END

B2609 STEERING STATUS

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2609 STEERING STATUS

Description

INFOID:000000004346463

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:000000004346464

DTC DETECTION LOGIC

NOTE:

- If DTC B2609 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : DTC Logic"](#).
- If DTC B2609 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-33, "BCM : 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.	<ul style="list-style-type: none">• 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.
 - Selector lever is in the P or N position.
 - Do not depress brake pedal.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-75, "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-75, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346465

1. INSPECTION START

Perform inspection in accordance with procedure that confirms DTC.

Which procedure confirms DTC?

- DTC confirmation procedure 1>>GO TO 2.
DTC confirmation procedure 2>>GO TO 6.

2.CHECK BCM OUTPUT SIGNAL

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

B2609 STEERING STATUS

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

(+)		(-)	Voltage (V) (Approx.)
Steering lock unit			
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.
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		Not existed

Is the inspection result normal?

YES >> GO TO 10.

NO >> Repair or replace harness or connector.

4.CHECK IPDM E/R OUTPUT SIGNAL

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

(+)		(-)	Voltage (V) (Approx.)
Steering lock unit			
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		Not existed

Is the inspection result normal?

YES >> GO TO 10.

B2609 STEERING STATUS

[INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

NO >> Repair or replace harness or connector.

6.CHECK BCM OUTPUT SIGNAL

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

(+)		(-)	Voltage (V) (Approx.)
Steering lock unit			
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.
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		Not existed

Is the inspection result normal?

YES >> GO TO 10.

NO >> Repair or replace harness or connector.

8.CHECK IPDM E/R OUTPUT SIGNAL

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

(+)		(-)	Voltage (V) (Approx.)
Steering lock unit			
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.
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.

B2609 STEERING STATUS

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	3		Not existed

Is the inspection result normal?

YES >> GO TO 10.

NO >> Repair or replace harness or connector.

10.CHECK INTERMITTENT INCIDENT

Refer to [GI-40. "Intermittent Incident"](#).

>> INSPECTION END

B260B STEERING LOCK UNIT

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B260B STEERING LOCK UNIT

Description

INFOID:0000000004346466

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

DTC Logic

INFOID:0000000004346467

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-79, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004346468

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-79, "DTC Logic"](#).

Is the DTC B260B displayed again?

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

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SEC

B260C STEERING LOCK UNIT

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B260C STEERING LOCK UNIT

Description

INFOID:0000000004346469

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

DTC Logic

INFOID:0000000004346470

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-80. "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004346471

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-80. "DTC Logic"](#).

Is the DTC B260C displayed again?

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

B260D STEERING LOCK UNIT

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B260D STEERING LOCK UNIT

Description

INFOID:0000000004346472

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

DTC Logic

INFOID:0000000004346473

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-81, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004346474

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-81, "DTC Logic"](#).

Is the DTC B260D displayed again?

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

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SEC

B260F ENGINE STATUS

Description

INFOID:0000000004346475

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

DTC Logic

INFOID:0000000004346476

DTC DETECTION LOGIC

NOTE:

- If DTC B260F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : DTC Logic"](#).
- If DTC B260F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-33, "BCM : 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.
 - Selector lever is in the P or N position.
 - Do not depress brake pedal.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-82, "Diagnosis Procedure"](#).
 NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004346477

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-82, "DTC Logic"](#).

Is the DTC B260F displayed again?

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

2.REPLACE ECM

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

>> INSPECTION END

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-40, "Intermittent Incident"](#).

>> INSPECTION END

B26E1 NO RECEPTION OF ENGINE STATUS SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B26E1 NO RECEPTION OF ENGINE STATUS SIGNAL

Description

INFOID:0000000004346478

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

DTC Logic

INFOID:0000000004346479

DTC DETECTION LOGIC

NOTE:

- If DTC B26E1 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : DTC Logic"](#).
- If DTC B26E1 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-33, "BCM : DTC Logic"](#).

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

- YES >> Go to [SEC-83, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004346480

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-83, "DTC Logic"](#).

Is the DTC B26E1 displayed again?

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

2.REPLACE ECM

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

>> INSPECTION END

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-40, "Intermittent Incident"](#).

>> INSPECTION END

B26E9 STEERING STATUS

Description

INFOID:000000004346481

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:000000004346482

DTC DETECTION LOGIC

NOTE:

- If DTC B26E9 is displayed with DTC B2609, first perform the trouble diagnosis for DTC B2609. Refer to [SEC-75, "DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26E9	S/L STATUS	BCM requests lock to steering lock unit, then steering lock unit transmits a recognitions signal to BCM, but steering lock unit remain unlock.	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 and wait for at least 1 second.
4. Turn ignition switch ON.
5. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to [SEC-84, "Diagnosis Procedure"](#).
 NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346483

1. INSPECTION START

1. Turn ignition switch ON.
2. Check "Self diagnostic result" with CONSULT-III.
3. Touch "ERASE".
4. Perform DTC Confirmation Procedure.
Refer to [SEC-83, "DTC Logic"](#).

Is the DTC B26E9 displayed again?

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

2. REPLACE STEERING LOCK UNIT

1. Replace steering lock unit.
2. Perform DTC confirmation procedure. Refer to [SEC-84, "DTC Logic"](#).

Is the DTC B26E9 displayed again?

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

3. CHECK INTERMITTENT INCIDENT

Refer to [GI-40, "Intermittent Incident"](#).

>> INSPECTION END

B26EA KEY REGISTRATION

Description

INFOID:000000004346484

When the registered Intelligent Key is carried, the door lock/unlock operation and the push-button ignition switch operation become possible.

DTC Logic

INFOID:000000004346485

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B26EA	KEY REGISTRATION	Intelligent Key is not registered successfully.	<ul style="list-style-type: none"> Improper registration operation Intelligent Key BCM

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

1. Perform initialization with CONSULT-III. Reregister all Intelligent Keys.
For initialization and registration of Intelligent Key. Refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Go to [SEC-85. "Diagnosis Procedure"](#)
 NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346486

1. PERFORM INITIALIZATION

1. Perform initialization with CONSULT-III. Reregister all Intelligent Keys.
For initialization and registration of Intelligent Key. Refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

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

2. REPLACE INTELLIGENT KEY

1. Replace Intelligent Key. Reregister all Intelligent Keys
2. Perform initialization with CONSULT-III. For initialization, refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".
3. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Replace BCM. Refer to [BCS-85. "Removal and Installation"](#).
 NO >> INSPECTION END

B2612 STEERING STATUS

Description

INFOID:000000004346487

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:000000004346488

DTC DETECTION LOGIC

NOTE:

- If DTC B2612 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : DTC Logic"](#).
- If DTC B2612 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-33, "BCM : 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 <ul style="list-style-type: none"> • Steering lock or unlock • Feedback of steering lock status from IPDM E/R (CAN) 	<ul style="list-style-type: none"> • 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.
 - Selector lever is in the P or N position.
 - Do not depress brake pedal.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000004346489

1. INSPECTION START

Perform inspection in accordance with procedure that confirms DTC.

Which procedure confirms DTC?

- DTC confirmation procedure 1>>GO TO 2.
 DTC confirmation procedure 2>>GO TO 6.

2. CHECK BCM OUTPUT SIGNAL

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

B2612 STEERING STATUS

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

(+)		(-)	Voltage (V) (Approx.)
Steering lock unit			
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.
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		Not existed

Is the inspection result normal?

YES >> GO TO 10.

NO >> Repair or replace harness or connector.

4.CHECK IPDM E/R OUTPUT SIGNAL

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

(+)		(-)	Voltage (V) (Approx.)
Steering lock unit			
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		Not existed

Is the inspection result normal?

YES >> GO TO 10.

B2612 STEERING STATUS

[INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

NO >> Repair or replace harness or connector.

6.CHECK BCM OUTPUT SIGNAL

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

(+)		(-)	Voltage (V) (Approx.)
Steering lock unit			
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.
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		Not existed

Is the inspection result normal?

YES >> GO TO 10.

NO >> Repair or replace harness or connector.

8.CHECK IPDM E/R OUTPUT SIGNAL

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

(+)		(-)	Voltage (V) (Approx.)
Steering lock unit			
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.
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.

B2612 STEERING STATUS

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	3		Not existed

Is the inspection result normal?

YES >> GO TO 10.

NO >> Repair or replace harness or connector.

10.CHECK INTERMITTENT INCIDENT

Refer to [GI-40. "Intermittent Incident"](#).

>> INSPECTION END

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SEC

B2617 STARTER RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2617 STARTER RELAY CIRCUIT

Description

INFOID:000000004346490

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:000000004346491

DTC DETECTION LOGIC

NOTE:

- If DTC B2617 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : DTC Logic"](#).
- If DTC B2617 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-33, "BCM : DTC Logic"](#).
- If DTC B2617 is displayed with DTC B2611, first perform the trouble diagnosis for DTC B2611. Refer to [SEC-90, "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-106, "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	<ul style="list-style-type: none">• 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.
 - Selector lever is in the P or N position.
 - Do not depress brake pedal.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Go to [SEC-90, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346492

1.CHECK STARTER RELAY

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

(+)		(-)	Condition		Voltage (V) (Approx.)
BCM					
Connector	Terminal				
M121	52	Ground	Selector lever	N or P position	Battery voltage
				Other than above	0

Is the measurement value within the specification.

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

2.CHECK STARTER RELAY CIRCUIT

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

B2617 STARTER RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

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		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-33, "Removal and Installation"](#).

NO >> Repair or replace harness or connector.

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-40, "Intermittent Incident"](#).

>> INSPECTION END

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SEC

B2619 BCM**Description**

INFOID:000000004346493

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:000000004346494

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.
 - Selector lever is in the P or N position.
 - Do not depress brake pedal.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-92. "Diagnosis Procedure"](#).
 NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346495

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-92. "DTC Logic"](#).

Is the DTC B2619 displayed again?

- YES >> Replace BCM. Refer to [BCS-85. "Removal and Installation"](#).
 NO >> INSPECTION END

B261A PUSH-BUTTON IGNITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B261A PUSH-BUTTON IGNITION SWITCH

Description

INFOID:000000004346496

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:000000004346497

DTC DETECTION LOGIC

NOTE:

- If DTC B261A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : DTC Logic"](#).
- If DTC B261A is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-33, "BCM : 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 <ul style="list-style-type: none">• 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) <ul style="list-style-type: none">• 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.
 - Selector lever is in the P or N position.
 - Do not depress brake pedal.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-93, "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.
 - Selector lever is in the P or N position.
 - Do not depress brake pedal.
3. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-93, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346498

1. INSPECTION START

Perform inspection in accordance with procedure that confirms DTC.

Which procedure confirms DTC?

- DTC confirmation procedure 1>>GO TO 2.
DTC confirmation procedure 2>>GO TO 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.

B261A PUSH-BUTTON IGNITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

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

(+)		(-)	Voltage (V) (Approx.)
Push-button ignition switch			
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

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

Push-button ignition switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
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		Not existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace 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.
3. Check voltage between push-button ignition switch harness connector and ground.

(+)		(-)	Voltage (V) (Approx.)
Push-button ignition switch			
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 CIRCUIT 2

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

Push-button ignition switch		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
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		Not existed

B261A PUSH-BUTTON IGNITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness or connector.

6.CHECK INTERMITTENT INCIDENT

Refer to [GI-40. "Intermittent Incident"](#).

>> INSPECTION END

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SEC

B261E VEHICLE TYPE

Description

INFOID:000000004346499

There are two types of vehicle.

- HEV
- Conventional

DTC Logic

INFOID:000000004346500

DTC DETECTION LOGIC

NOTE:

- If DTC B261E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : DTC Logic"](#).
- If DTC B261E is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to [SEC-33, "BCM : DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B261E	VEHICLE TYPE	Difference of BCM configuration	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-96, "Diagnosis Procedure"](#).
 NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346501

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 1st trip DTC B261E displayed again?

- YES >> Replace BCM. Refer to [BCS-85, "Removal and Installation"](#).
 NO >> INSPECTION END

B2108 STEERING LOCK RELAY

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2108 STEERING LOCK RELAY

Description

INFOID:000000004346502

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:000000004346503

DTC DETECTION LOGIC

NOTE:

If DTC B2108 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : 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

- Press the push-button ignition switch under the following conditions and wait for at least 1 second.
 - Selector lever is in the P or N position.
 - Do not depress brake pedal.
- Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-97, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346504

1.CHECK STEERING LOCK RELAY

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

(+)		(–)	Condition		Voltage (V) (Approx.)
IPDM E/R					
Connector	Terminal				
E5	11	Ground	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

Is the inspection normal?

- YES >> GO TO 2.
NO >> Replace IPDM E/R. Refer to [PCS-33, "Removal and Installation"](#).

2.CHECK INTERMITTENT INCIDENT

Refer to [GI-40, "Intermittent Incident"](#).

>> INSPECTION END

B2109 STEERING LOCK RELAY

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2109 STEERING LOCK RELAY

Description

INFOID:000000004346505

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:000000004346506

DTC DETECTION LOGIC

NOTE:

- If DTC B2109 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : 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.	<ul style="list-style-type: none">• 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.
 - Selector lever is in the P or N position.
 - Do not depress brake pedal.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-98, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346507

1.CHECK POWER SUPPLY CIRCUIT

Check IPDM E/R power supply circuit. Refer to [SEC-112, "IPDM E/R : Diagnosis Procedure"](#).

Is the circuit normal?

- YES >> GO TO 2.
NO >> Repair or replace 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-33, "Removal and Installation"](#).
NO-1 >> Check harness for open or short between IPDM E/R and battery
NO-2 >> Fuse

B210A STEERING LOCK CONDITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B210A STEERING LOCK CONDITION SWITCH

Description

INFOID:0000000004346508

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:0000000004346509

DTC DETECTION LOGIC

NOTE:

If DTC B210A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : DTC Logic"](#).

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210A	STRG LCK STATE SW	IPDM E/R detects the mismatch between steering condition switches 1 and 2 for 1 second	<ul style="list-style-type: none">• 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.
 - Selector lever is in the P or N position.
 - Do not depress brake pedal.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-99, "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-99, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004346510

1. INSPECTION START

Perform inspection in accordance with procedure that confirms DTC.

Which procedure confirms DTC?

- DTC confirmation procedure 1>>GO TO 2.
DTC confirmation procedure 2>>GO TO 6.

2.CHECK BCM OUTPUT SIGNAL

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

B210A STEERING LOCK CONDITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

(+)		(-)	Voltage (V) (Approx.)
Steering lock unit			
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.
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		Not existed

Is the inspection result normal?

YES >> GO TO 10.

NO >> Repair or replace harness or connector.

4.CHECK IPDM E/R OUTPUT SIGNAL

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

(+)		(-)	Voltage (V) (Approx.)
Steering lock unit			
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		Not existed

Is the inspection result normal?

YES >> GO TO 10.

B210A STEERING LOCK CONDITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

NO >> Repair or replace harness or connector.

6.CHECK BCM OUTPUT SIGNAL

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

(+)		(-)	Voltage (V) (Approx.)
Steering lock unit			
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.
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		Not existed

Is the inspection result normal?

YES >> GO TO 10.

NO >> Repair or replace harness or connector.

8.CHECK IPDM E/R OUTPUT SIGNAL

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

(+)		(-)	Voltage (V) (Approx.)
Steering lock unit			
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.
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.

B210A STEERING LOCK CONDITION SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Steering lock unit		Ground	Continuity
Connector	Terminal		
M40	3		Not existed

Is the inspection result normal?

YES >> GO TO 10.

NO >> Repair or replace harness or connector.

10.CHECK INTERMITTENT INCIDENT

Refer to [GI-40. "Intermittent Incident"](#).

>> INSPECTION END

B210B STARTER CONTROL RELAY

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B210B STARTER CONTROL RELAY

Description

INFOID:0000000004346511

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:0000000004346512

DTC DETECTION LOGIC

NOTE:

If DTC B210B is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : 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. <ul style="list-style-type: none">Starter control relay ON/OFF signal from BCMTransmission range switch input signal	IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- Turn the power supply position to start under the following conditions and wait for at least 1 second.
 - Selector lever is in the P or N position.
 - Do not depress brake pedal.
- Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-103, "Diagnosis Procedure"](#).
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004346513

1.INSPECTION START

- Turn ignition switch ON.
- Check "Self diagnostic result" for IPDM E/R with CONSULT-III.
- Touch "ERASE".
- Perform DTC Confirmation Procedure.**
See [SEC-103, "DTC Logic"](#).

Is the DTC B210B displayed again?

- YES >> Replace IPDM E/R. Refer [PCS-33, "Removal and Installation"](#).
NO >> INSPECTION END

B210C STARTER CONTROL RELAY

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B210C STARTER CONTROL RELAY

Description

INFOID:000000004346514

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:000000004346515

DTC DETECTION LOGIC

NOTE:

- If DTC B210C is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : 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. <ul style="list-style-type: none">• Starter control relay ON/OFF signal from BCM• Transmission range switch input signal	<ul style="list-style-type: none">• 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.
 - Selector lever is in the P or N position.
 - Do not depress brake pedal.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

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

Diagnosis Procedure

INFOID:000000004346516

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-104, "DTC Logic"](#).

Is the DTC B210C displayed again?

- YES >> Replace IPDM E/R. Refer to [PCS-33, "Removal and Installation"](#).
NO >> INSPECTION END

B210D STARTER RELAY

Description

INFOID:000000004346517

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:000000004346518

DTC DETECTION LOGIC

NOTE:

- If DTC B210D is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : DTC Logic"](#).
- If DTC B210D is displayed with DTC B2617, first perform the trouble diagnosis for DTC B2617. Refer to [SEC-90, "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. <ul style="list-style-type: none"> • Starter control relay ON/OFF signal from BCM • Transmission range 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.
 - Selector lever is in the P or N position.
 - Do not depress brake pedal.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Go to [SEC-105, "Diagnosis Procedure"](#).
 NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346519

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

Is the DTC B210D displayed again?

- YES >> Replace IPDM E/R. Refer to [PCS-33, "Removal and Installation"](#).
 NO >> INSPECTION END

B210E STARTER RELAY

Description

INFOID:000000004346520

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:000000004346521

DTC DETECTION LOGIC

NOTE:

- If DTC B210E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : DTC Logic"](#).
- If DTC B210E is displayed with DTC B2110 for IPDM E/R, first perform the trouble diagnosis for DTC B2110. Refer to [SEC-106, "DTC Logic"](#).
- If DTC B210E is displayed with DTC B2617 for BCM, first perform the trouble diagnosis for DTC B2617. Refer to [SEC-90, "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. <ul style="list-style-type: none"> • Starter control relay ON/OFF signal from BCM • Transmission range switch input 	<ul style="list-style-type: none"> • 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.
 - Selector lever is in the P or N position.
 - Do not depress brake pedal.
2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Go to [SEC-106, "Diagnosis Procedure"](#).
 NO >> INSPECTION END

Diagnosis Procedure

INFOID:000000004346522

1.CHECK STARTER RELAY OUTPUT SIGNAL

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

(+) BCM connector		(-)	Condition			Voltage (V) (Approx.)
Connector	Terminal		Ignition switch	Brake pedal	Selector lever	
M121	52	Ground	ON	Depressed	P or N	Battery voltage
					Other than above	0

Is the inspection result normal?

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

2.CHECK STARTER RELAY OUTPUT SIGNAL CIRCUIT

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

B210E STARTER RELAY

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

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		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-33, "Removal and Installation"](#).

NO >> Repair or replace harness or connector.

3.CHECK STARTER RELAY 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. Refer to [PCS-26, "Wiring Diagram - IPDM E/R -"](#).

(+) IPDM E/R		(-)	Voltage (V) (Approx.)
Connector	Terminal		
E5	36	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-33, "Removal and Installation"](#).

NO >> Check harness for open or short between IPDM E/R and battery.

SEC

B210F PNP/CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B210F PNP/CLUTCH INTERLOCK SWITCH

Description

INFOID:000000004346523

IPDM E/R confirms the shift position with the following signals.

- Transmission range switch
- Shift position signal from BCM (CAN)

DTC Logic

INFOID:000000004346524

DTC DETECTION LOGIC

NOTE:

If DTC B210F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : 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. <ul style="list-style-type: none">• Transmission range switch input signal• Shift position signal from BCM (CAN)	<ul style="list-style-type: none">• Harness or connectors (Transmission range switch circuit is open or shorted)• Transmission range switch

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions and wait for at least 1 second.
 - Selector lever is in the P or N position.
 - Do not depress brake 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:000000004346525

1.CHECK DTC WITH BCM

Check "Self diagnostic result" with CONSULT-III. Refer to [SEC-176, "DTC Index"](#).

Is the inspection result normal?

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

2.CHECK TRANSMISSION RANGE SWITCH INPUT SIGNAL

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

(+)		(-)	Condition		Voltage (V) (Approx.)
IPDM E/R					
Connector	Terminal				
E5	30	Ground	Selector lever	P or N	Battery voltage
				Other than above	0

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-33, "Removal and Installation"](#).
NO >> GO TO 3.

3.CHECK TRANSMISSION RANGE SWITCH CIRCUIT

1. Turn ignition switch OFF.

B210F PNP/CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

2. Disconnect TCM connector.
3. Check continuity between IPDM E/R harness connector and TCM harness connector.

IPDM E/R		TCM		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		Not existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness or connector.

4.CHECK INTERMITTENT INCIDENT

Refer to [GI-40. "Intermittent Incident"](#).

>> INSPECTION END

SEC

B2110 PNP/CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

B2110 PNP/CLUTCH INTERLOCK SWITCH

Description

INFOID:000000004346526

IPDM E/R confirms the shift position with the following signals.

- Transmission range switch
- Shift position signal from BCM (CAN)

DTC Logic

INFOID:000000004346527

DTC DETECTION LOGIC

NOTE:

If DTC B2110 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to [SEC-31, "BCM : 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. <ul style="list-style-type: none">• Transmission range switch input signal• Shift position signal from BCM (CAN)	<ul style="list-style-type: none">• Harness or connectors (Transmission range switch circuit is open or shorted)• Transmission range switch• IPDM E/R• BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn the ignition switch ON under the following conditions and wait for at least 1 second.
 - Selector lever is in the P or N position.
 - Do not depress brake 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:000000004346528

1.CHECK DTC WITH TCM

Check "Self diagnostic result" with CONSULT-III. Refer to [TM-110, "DTC Index"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CHECK TRANSMISSION RANGE SWITCH INPUT SIGNAL

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

(+)		(-)	Condition		Voltage (V) (Approx.)
IPDM E/R					
Connector	Terminal				
E5	30	Ground	Selector lever	P or N	Battery voltage
				Other than above	0

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-33, "Removal and Installation"](#).

NO >> GO TO 3.

B2110 PNP/CLUTCH INTERLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

3. CHECK TRANSMISSION RANGE SWITCH CIRCUIT

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

IPDM E/R		TCM		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		Not existed

Is the inspection result normal?

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

4. CHECK INTERMITTENT INCIDENT

Refer to [GI-40. "Intermittent Incident"](#).

>> INSPECTION END

A
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SEC

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM : Diagnosis Procedure

INFOID:000000004346529

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.

(+)		(-)	Voltage (V) (Approx.)
BCM			
Connector	Terminal		
M118	1	Ground	Battery voltage
M119	11		
M123	116		

Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair or replace 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 or replace harness or connector.

IPDM E/R

IPDM E/R : Diagnosis Procedure

INFOID:000000004346530

1.CHECK FUSES AND FUSIBLE LINK

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

Signal name	Fuses and fusible link No.
Battery power supply	48
	50
	51

Is the fuse fusing?

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

- 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.

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

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.

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SEC

HOOD SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

HOOD SWITCH

Description

INFOID:0000000004346531

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:0000000004346532

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-114, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000004346533

1.CHECK HOOD SWITCH POWER SUPPLY

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

(+)		(−)	Voltage (V) (Approx.)
Hood switch			
Connector	Terminal		
E30	2	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK HOOD SWITCH CIRCUIT

1. Disconnect IPDM E/R 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		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-33, "Removal and Installation"](#).

NO >> Repair or replace harness.

3.CHECK HOOD SWITCH GROUND CIRCUIT

Check continuity between hood switch harness connector and ground.

HOOD SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

Hood switch		Ground	Continuity
Connector	Terminal		
E30	1		Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4.CHECK HOOD SWITCH

Refer to [SEC-115, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace hood lock (RH). Refer to [DLK-245, "Removal and Installation"](#).

5.CHECK INTERMITTENT INCIDENT

Refer to [GI-40, "Intermittent Incident"](#).

>> INSPECTION END

Component Inspection

INFOID:000000004346534

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	Close	Not existed
			Open	Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace hood lock (RH). Refer to [DLK-245, "Removal and Installation"](#).

SEC

HEADLAMP

Description

INFOID:000000004346535

Headlamp lighting when vehicle security system is alarm phase.

Component Function Check

INFOID:000000004346536

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-116, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000004346537

1.CHECK HEADLAMP OPERATION

Refer to [SEC-116, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> repair or replace the malfunctioning parts.

2.CHECK INTERMITTENT INCIDENT

Refer to [GI-40, "Intermittent Incident"](#).

>> INSPECTION END

SECURITY INDICATOR LAMP

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

SECURITY INDICATOR LAMP

Description

INFOID:000000004346538

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

Component Function Check

INFOID:000000004346539

1.CHECK FUNCTION

1. Perform "THEFT IND" in the "ACTIVE TEST" mode with CONSULT-III.
2. Check security indicator lamp operation.

Test item		Description	
THEFT IND	ON	Security indicator lamp	Illuminate
	OFF		Not illuminate

Is the inspection result normal?

YES >> INSPECTION END

NO >> Go to [SEC-117, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000004346540

1.CHECK DTC WITH "UNIFIED METER AND A/C AMP."

Perform "Self Diagnostic Result" for unified meter and A/C amp. Refer to [MWI-100, "DTC Index"](#).

Is the inspection result is normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CHECK INTERMITTENT INCIDENT

Refer to [GI-40, "Intermittent Incident"](#).

>> INSPECTION END

SEC

KEY WARNING LAMP

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

KEY WARNING LAMP

Description

INFOID:0000000004346541

Performs operation method guide and warning together with buzzer.

Component Function Check

INFOID:0000000004346542

1.CHECK FUNCTION

Check the operation with "INDICATOR" in "Active Test" mode with CONSULT-III.

Test item	Condition	
INDICATOR	KEY ON	Key warning lamp illuminates
	KEY IND	Key warning lamp flashes

Is the inspection result normal?

YES >> Key warning lamp in combination meter is OK.

NO >> Refer to [SEC-118, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000004346543

1.CHECK KEY WARNING LAMP

Refer to [MWI-38, "Diagnosis Description"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

2.CHECK INTERMITTENT INCIDENT

Refer to [GI-40, "Intermittent Incident"](#).

>> INSPECTION END

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

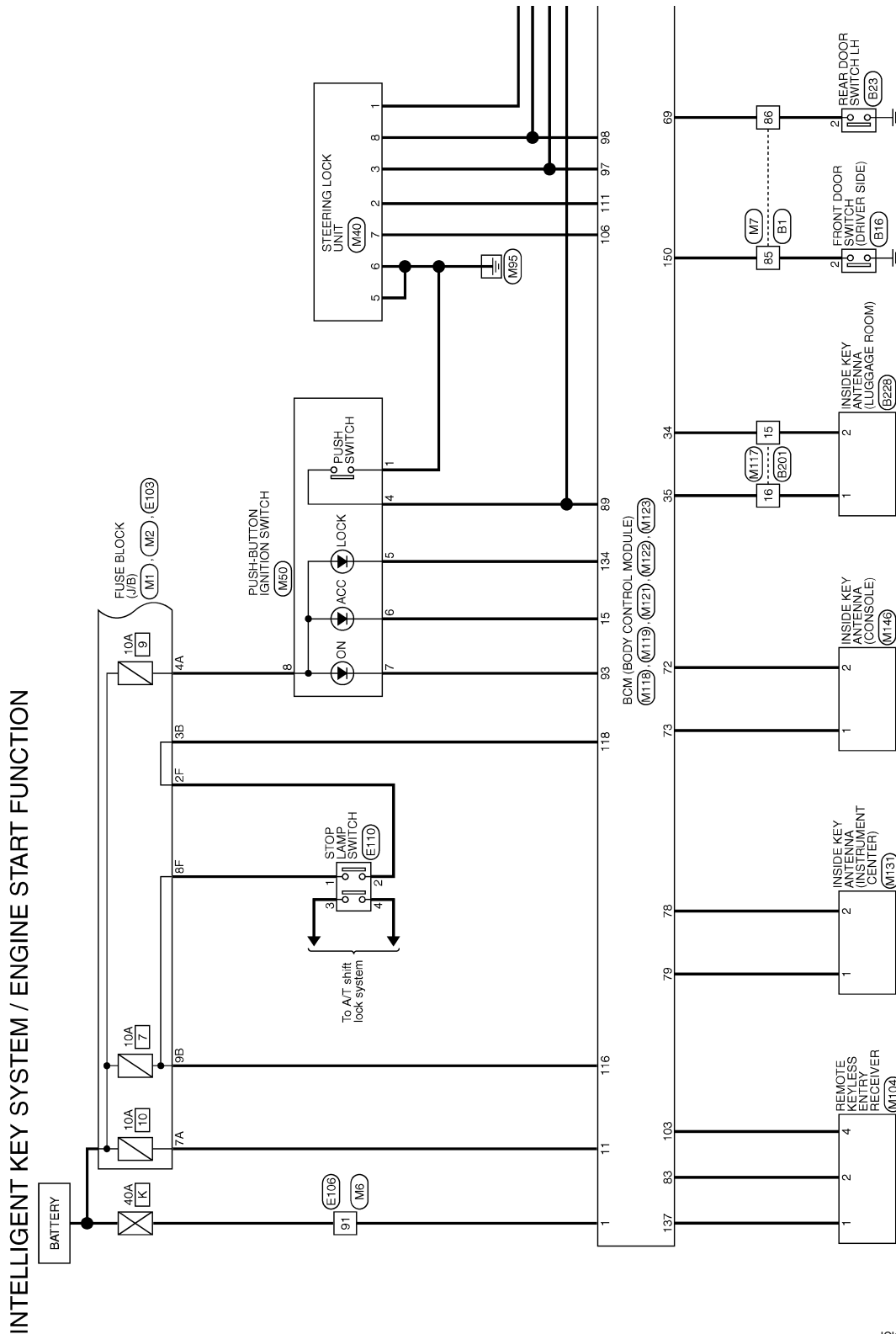
< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

Wiring Diagram - INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION -

INFOID:000000004346544



*: This connector is not shown in "Harness Layout".

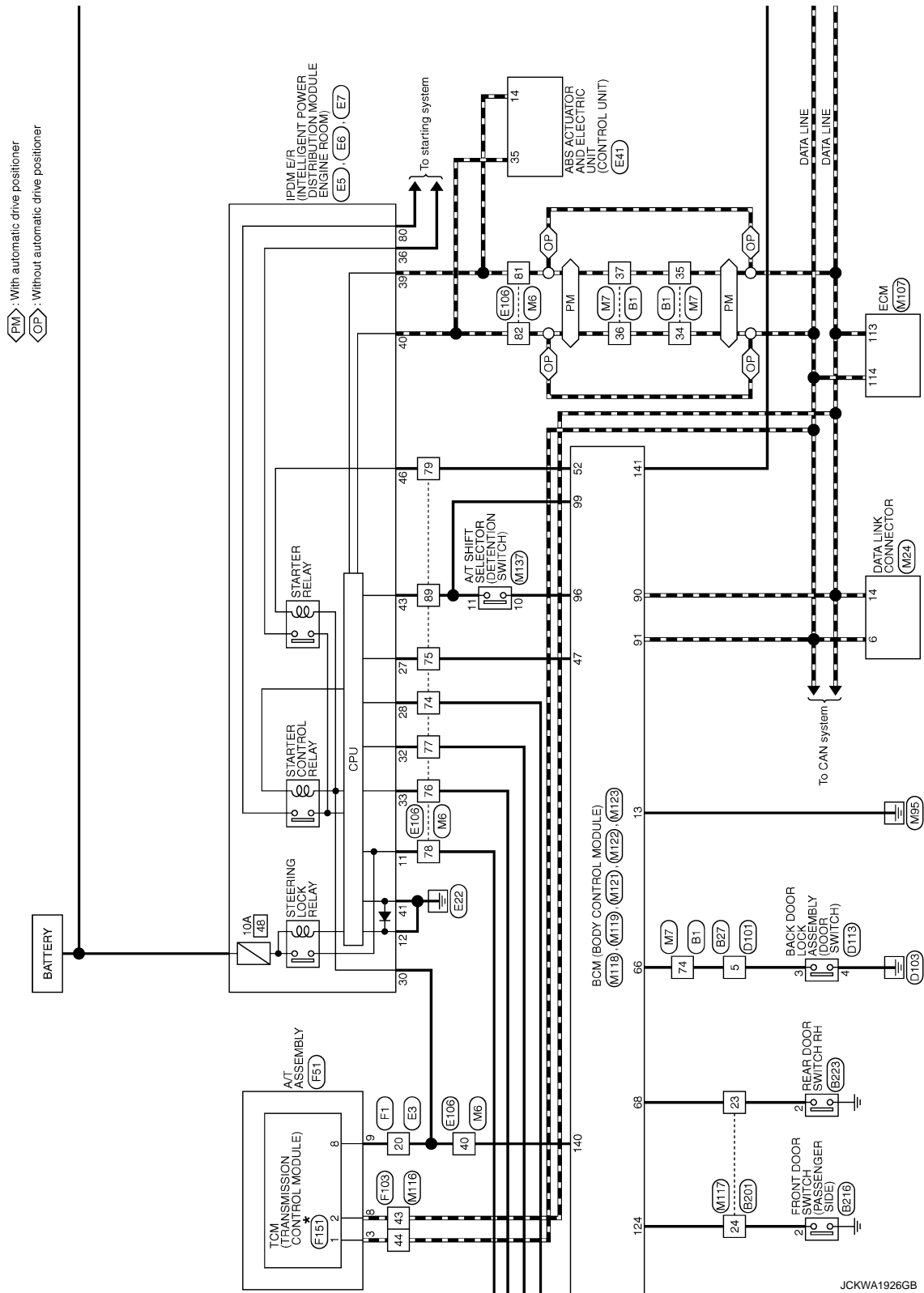
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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

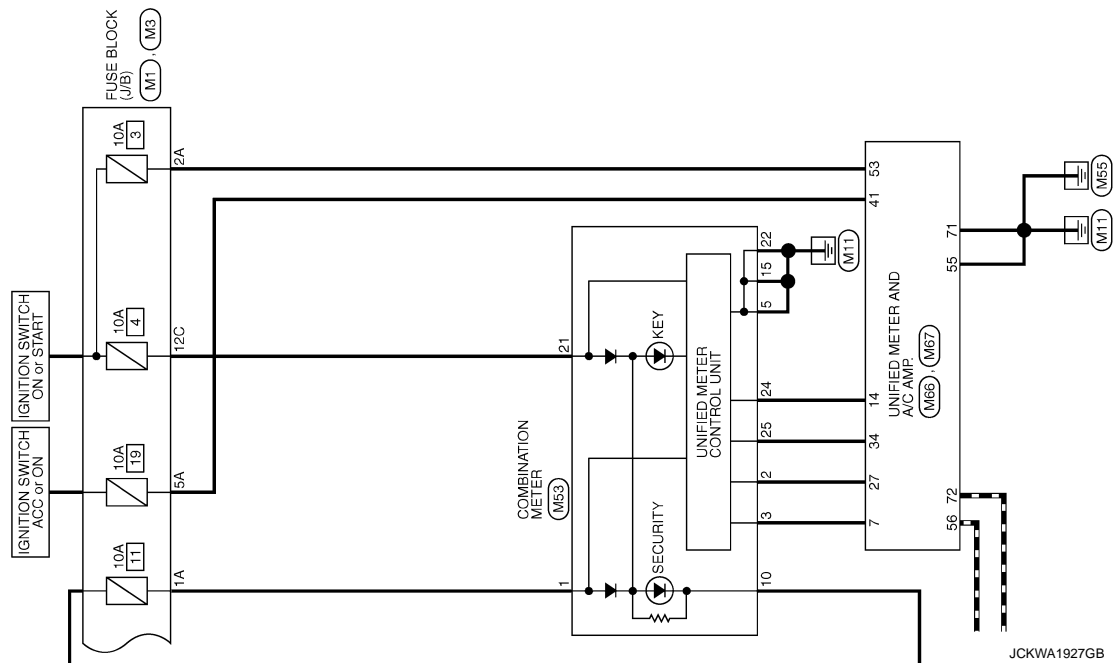


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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]



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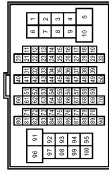
INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

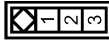
INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH00FW-CS16-TM4



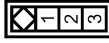
Terminal No.	Color of Wire	Signal Name [Specification]
34	L	-
35	P	-
36	L	-
37	P	-
74	L	-
85	V	-
86	LG	-

Connector No.	B16
Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)
Connector Type	A03FW



Terminal No.	Color of Wire	Signal Name [Specification]
2	V	-

Connector No.	B23
Connector Name	REAR DOOR SWITCH LH
Connector Type	A03FW



Terminal No.	Color of Wire	Signal Name [Specification]
2	LG	-

Connector No.	B27
Connector Name	WIRE TO WIRE
Connector Type	M06MW-LG



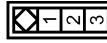
Terminal No.	Color of Wire	Signal Name [Specification]
5	L	-

Connector No.	B201
Connector Name	WIRE TO WIRE
Connector Type	TH00FW-CS16-TM4



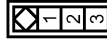
Terminal No.	Color of Wire	Signal Name [Specification]
15	P	-
16	L	-
23	BR	-
24	GR	-

Connector No.	B216
Connector Name	FRONT DOOR SWITCH (PASSENGER SIDE)
Connector Type	A03FW



Terminal No.	Color of Wire	Signal Name [Specification]
2	GR	-

Connector No.	B23
Connector Name	REAR DOOR SWITCH RH
Connector Type	A03FW



Terminal No.	Color of Wire	Signal Name [Specification]
2	BR	-

Connector No.	B228
Connector Name	INSIDE KEY ANTENNA (LUGGAGE ROOM)
Connector Type	PK02FGY



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

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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Type	M08FW-LC



3	2	1
6	5	4

Terminal No.	Color of Wire	Signal Name [Specification]
5	V	-

Connector No.	D113
Connector Name	BACK DOOR LOCK ASSEMBLY
Connector Type	NS04FW-CS



4	3	2	1
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Terminal No.	Color of Wire	Signal Name [Specification]
3	V	-
4	B	-

Connector No.	E3
Connector Name	WIRE TO WIRE
Connector Type	SA436MB-RS10-SJZZ



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

Terminal No.	Color of Wire	Signal Name [Specification]
20	GR	-

Connector No.	E5
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4-1V



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

Terminal No.	Color of Wire	Signal Name [Specification]
11	BR	-
12	B/W	-
27	O	-
28	L	-
30	GR	-
32	L	-
33	P	-
35	G	-

Connector No.	E6
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH08FW-NH



42	41	40	39
46	45	44	43

Terminal No.	Color of Wire	Signal Name [Specification]
39	P	-
40	L	-
41	B/W	-
43	SB	-
46	R	-

Connector No.	E7
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4



53	54	55	56	57	58
59	60	61	62	63	64
65	66	67	68	69	70
71	72	73	74	75	76
77	78	79	80	81	82

Terminal No.	Color of Wire	Signal Name [Specification]
80	W	-

Connector No.	E41
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type	BA44ZFB-AH24-LH



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
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Terminal No.	Color of Wire	Signal Name [Specification]
14	P	CAN-L
35	L	CAN-H

Connector No.	E103
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FW-CS



7F	6F	5F	4F
16F	15F	14F	13F
12F	11F	10F	9F
8F	7F	6F	5F

Terminal No.	Color of Wire	Signal Name [Specification]
2F	W	-
8F	L	-

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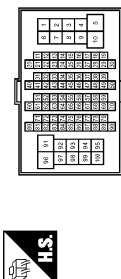
INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-GS16-TM4



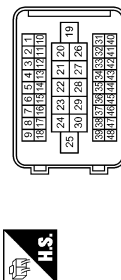
Terminal No.	Color of Wire	Signal Name [Specification]
40	GR	-
74	L	-
75	O	-
76	P	-
77	L	-
78	BR	-
79	R	-
81	P	-
82	L	-
89	SB	-
91	W	-

Connector No.	E110
Connector Name	STOP LAMP SWITCH
Connector Type	MD4FW-LC



Terminal No.	Color of Wire	Signal Name [Specification]
1	L	-
2	W	-
3	G	-
4	BR	-

Connector No.	F1
Connector Name	WIRE TO WIRE
Connector Type	SA438FB-RS10-SJZZ



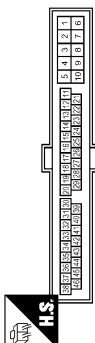
Terminal No.	Color of Wire	Signal Name [Specification]
20	GR	-

Connector No.	F51
Connector Name	A/T ASSEMBLY
Connector Type	RK10FG-DGY

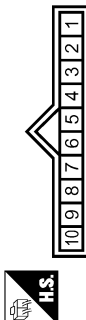


Terminal No.	Color of Wire	Signal Name [Specification]
3	L	-
8	P	-
9	GR	-

Connector No.	F103
Connector Name	WIRE TO WIRE
Connector Type	TK38FW-NS10



Connector No.	F151
Connector Name	TOM (TRANSMISSION CONTROL MODULE)
Connector Type	SP10FBGY



Terminal No.	Color of Wire	Signal Name [Specification]
43	P	-
44	L	-

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS38FW-M2



INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FW-CS



5C4C	8C2C1G
12C11C	9C8C7C6C

Terminal No.	Color of Wire	Signal Name [Specification]
12C	O	-

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH60MW-CS(E-TM)



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000
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Terminal No.	Color of Wire	Signal Name [Specification]
40	GR	-
74	BR	-
75	Y	-
76	P	-
77	L	-
78	O	-
79	SB	-
81	P	-
82	L	-
89	SB	-
91	W	-

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH60MW-CS(E-TM)



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	
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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

Connector No.	M67
Connector Name	UNIFIED METER AND A/C AMP.
Connector Type	TH32FW-NH



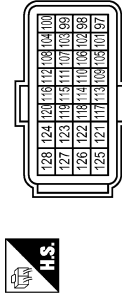
Terminal No.	Color of Wire	Signal Name [Specification]
41	V	ACC POWER SUPPLY
53	G	IGNITION POWER SUPPLY
55	B	GROUND
56	L	CAN-H
71	B	GROUND
72	P	CAN-L

Connector No.	M104
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Type	JA804EB



Terminal No.	Color of Wire	Signal Name [Specification]
1	O	GND
2	Y	SIGNAL OUTPUT
4	LG	BATTERY

Connector No.	M107
Connector Name	ECM
Connector Type	RH24FGY-RZ3-R-LH-Z



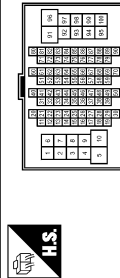
Terminal No.	Color of Wire	Signal Name [Specification]
113	P	VEHCAN-LI
114	L	VEHCAN-HI

Connector No.	M116
Connector Name	WIRE TO WIRE
Connector Type	TK38MW-NS10



Terminal No.	Color of Wire	Signal Name [Specification]
43	P	-
44	L	-

Connector No.	M117
Connector Name	WIRE TO WIRE
Connector Type	TH38MW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
15	SB	-
16	V	-
23	BR	-
24	LG	-

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	MG3FB-LC



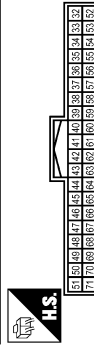
Terminal No.	Color of Wire	Signal Name [Specification]
1	W	BAT (F/L)

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	Y	ACC IND

Connector No.	M121
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FGY-NH



Terminal No.	Color of Wire	Signal Name [Specification]
34	SB	LUGGAGE ROOM AMT-
35	V	LUGGAGE ROOM AMT+
47	Y	IGN RELAY (IPDM E/R) CONT
52	SB	STARTER RELAY CONT
66	R	BACK DOOR SW
68	BR	REAR RH DOOR SW
69	R	REAR LH DOOR SW

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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

INTELLIGENT KEY SYSTEM / ENGINE START FUNCTION

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH

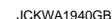


91	90	89	88	87	86	85	84	83	82	81	80	79	78	77	76	75	74	73	72
111	110	109	108	107	106	105	104	103	102	101	100	99	98	97	96	95	94	93	92

[INTELLIGENT KEY SYSTEM]

INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS

INFOID:0000000004346545



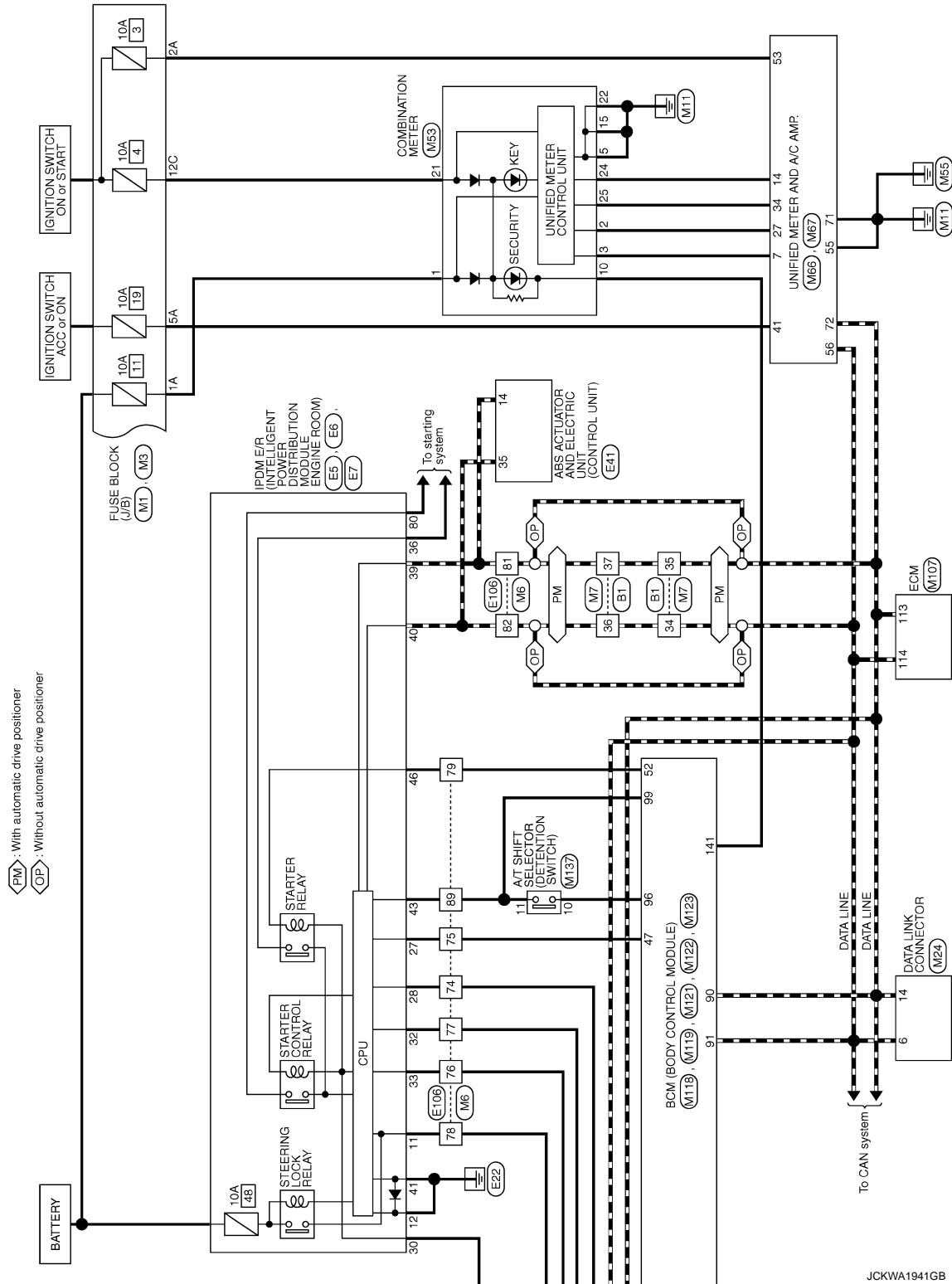
✪✪ : This connector is not shown in "Harness Layout".

2008/08/28

INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]



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SEC

INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

INFINITI VEHICLE IMMOBILIZER SYSTEM

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH08FW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
34	L	-
35	P	-
36	L	-
37	P	-
74	L	-
85	V	-
86	LG	-

Connector No.	B16
Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)
Connector Type	A03FW



Terminal No.	Color of Wire	Signal Name [Specification]
2	V	-

Connector No.	B23
Connector Name	REAR DOOR SWITCH LH
Connector Type	A03FW



Terminal No.	Color of Wire	Signal Name [Specification]
2	LG	-

Connector No.	B27
Connector Name	WIRE TO WIRE
Connector Type	M06MW-LG



Terminal No.	Color of Wire	Signal Name [Specification]
5	L	-

Connector No.	B201
Connector Name	WIRE TO WIRE
Connector Type	TH08FW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
23	BR	-
24	GR	-

Connector No.	B216
Connector Name	FRONT DOOR SWITCH (PASSENGER SIDE)
Connector Type	A03FW



Terminal No.	Color of Wire	Signal Name [Specification]
2	GR	-

Connector No.	B23
Connector Name	REAR DOOR SWITCH RH
Connector Type	A03FW



Terminal No.	Color of Wire	Signal Name [Specification]
2	BR	-

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Type	M06FW-LG



Terminal No.	Color of Wire	Signal Name [Specification]
5	V	-

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INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

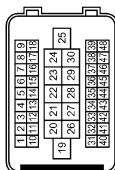
INFINITI VEHICLE IMMOBILIZER SYSTEM

Connector No.	D113
Connector Name	BACK DOOR LOCK ASSEMBLY
Connector Type	NS04FW-CS



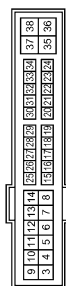
Terminal No.	Color of Wire	Signal Name [Specification]
3	V	-
4	B	-

Connector No.	E3
Connector Name	WIRE TO WIRE
Connector Type	SXA38MB-RS (0-SJ22)



Terminal No.	Color of Wire	Signal Name [Specification]
20	GR	-

Connector No.	E3
Connector Name	IPDM E/R INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)
Connector Type	TH20FW-CS (2-M4-1V)



Terminal No.	Color of Wire	Signal Name [Specification]
11	BR	-
12	B/W	-
27	O	-
28	L	-
30	GR	-
32	L	-
33	P	-
36	G	-

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	R	-

Connector No.	E7
Connector Name	IPDM E/R INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)
Connector Type	TH20FW-CS (2-M4)



Terminal No.	Color of Wire	Signal Name [Specification]
80	W	-

Connector No.	E41
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type	BA442FB-AH24-LH



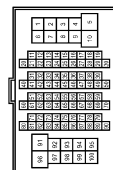
Terminal No.	Color of Wire	Signal Name [Specification]
14	P	CAN-L
35	L	CAN-H

Connector No.	E103
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
2F	W	-
8F	L	-

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH08FW-CS (6-7M4)



Terminal No.	Color of Wire	Signal Name [Specification]
40	GR	-
74	L	-
75	O	-
76	P	-
77	L	-
78	BR	-
79	P	-
81	P	-
82	L	-
89	SB	-
91	W	-

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INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

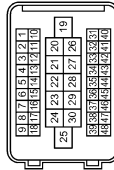
INFINITI VEHICLE IMMOBILIZER SYSTEM

Connector No.	E110
Connector Name	STOP LAMP SWITCH
Connector Type	M04FW-LC



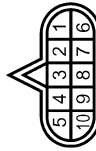
Terminal No.	Color of Wire	Signal Name [Specification]
1	L	-
2	W	-
3	G	-
4	BR	-

Connector No.	F1
Connector Name	WIRE TO WIRE
Connector Type	SAA38EB-FSD-SLJZ



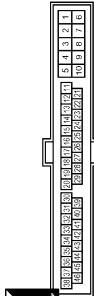
Terminal No.	Color of Wire	Signal Name [Specification]
20	GR	-

Connector No.	F51
Connector Name	A/T ASSEMBLY
Connector Type	BK10FG-DGY



Terminal No.	Color of Wire	Signal Name [Specification]
3	L	-
8	P	-
9	GR	-

Connector No.	F103
Connector Name	WIRE TO WIRE
Connector Type	TK38FW-NS/D



Terminal No.	Color of Wire	Signal Name [Specification]
43	P	-
44	L	-

Connector No.	F151
Connector Name	TOM (TRANSMISSION CONTROL MODULE)
Connector Type	SP10FBGY



Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	CAN-H
2	L/Y	CAN-L
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	GR	-
2A	G	-
4A	P	-
5A	V	-
7A	R	-

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	O	-

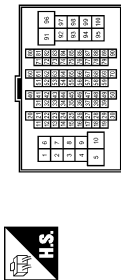
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< DTC/CIRCUIT DIAGNOSIS >

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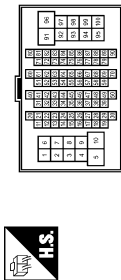
INFINITI VEHICLE IMMOBILIZER SYSTEM

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH60MW-CS16-TM4



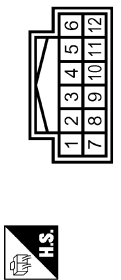
Terminal No.	Color of Wire	Signal Name [Specification]
40	GR	-
74	BR	-
75	Y	-
76	P	-
77	L	-
78	O	-
79	SB	-
81	P	-
82	L	-
89	SB	-
91	W	-

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH60MW-CS16-TM4



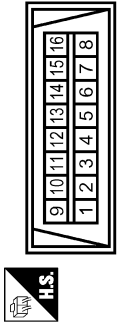
Terminal No.	Color of Wire	Signal Name [Specification]
34	L	-
35	P	-
36	L	-
37	P	-
74	R	-
85	LG	-
86	R	-

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



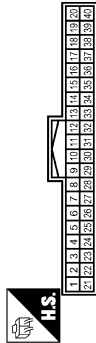
Terminal No.	Color of Wire	Signal Name [Specification]
1	O	S/L 12V (MECHANICAL)
2	Y	S/L (K LINE)
3	L	S/L CONDLT LONI
5	B	GND
6	B	GND
7	W	S/L 12V (CPU)
8	P	S/L CONDLT LON2

Connector No.	M50
Connector Name	PUSH-BUTTON IGNITION SWITCH
Connector Type	TK08FBR



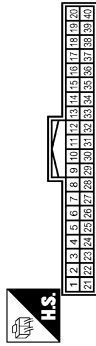
Terminal No.	Color of Wire	Signal Name [Specification]
1	B	-
4	BR	-
5	GR	-
6	Y	-
7	V	-
8	P	-

Connector No.	M53
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
1	GR	BAT
2	LG	COMM (METER->AMP.)
3	GR	COMM (AMP->METER)
5	B	GND
10	G	SECURITY
15	B	GND
21	O	IGN
22	B	GND
24	BR	COMM (LGD->AMP.)
25	Y	COMM (AMP->LGD)

Connector No.	M55
Connector Name	UNIFIED METER AND A/C AMP.
Connector Type	TH40FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
7	GR	COMMUNICATION SIGNAL (AMP->METER)
14	BR	COMMUNICATION SIGNAL (LGD->AMP.)
27	LG	COMMUNICATION SIGNAL (METER->AMP.)
34	Y	COMMUNICATION SIGNAL (AMP->LGD)

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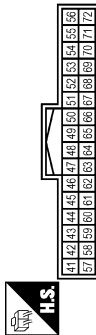
INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

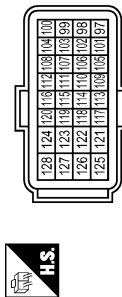
INFINITI VEHICLE IMMOBILIZER SYSTEM

Connector No.	M67
Connector Name	UNIFIED METER AND A/C AMP.
Connector Type	TH32FW-NH



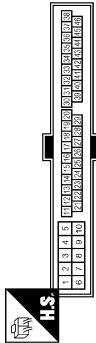
Terminal No.	Color of Wire	Signal Name [Specification]
41	V	ACC POWER SUPPLY
53	G	IGNITION POWER SUPPLY
55	B	GROUND
56	L	CAN-H
71	B	GROUND
72	P	CAN-L

Connector No.	M107
Connector Name	ECM
Connector Type	RH24FGY-R28-R-LH-Z



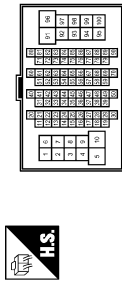
Terminal No.	Color of Wire	Signal Name [Specification]
113	P	VEH CAN-L
114	L	VEH CAN-H

Connector No.	M116
Connector Name	WIRE TO WIRE
Connector Type	TK33MW-NS/D



Terminal No.	Color of Wire	Signal Name [Specification]
43	P	-
44	L	-

Connector No.	M117
Connector Name	WIRE TO WIRE
Connector Type	TH60MW-GS/6-TM4



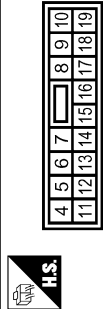
Terminal No.	Color of Wire	Signal Name [Specification]
23	BR	-
24	LG	-

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	M03FE-LC



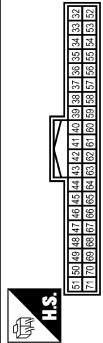
Terminal No.	Color of Wire	Signal Name [Specification]
1	W	BAT (F/L)

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	Y	ACC IND

Connector No.	M121
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FGY-NH



Terminal No.	Color of Wire	Signal Name [Specification]
47	Y	IGN RELAY (PDM E/R) CONT
52	SB	STARTER RELAY CONT
66	R	BACK DOOR SW
68	BR	REAR RH DOOR SW
69	R	REAR LH DOOR SW

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INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

INFINITI VEHICLE IMMOBILIZER SYSTEM

Connector No.	M122	BCM (BODY CONTROL MODULE)
Connector Name	TH40FB-NH	
Connector Type		

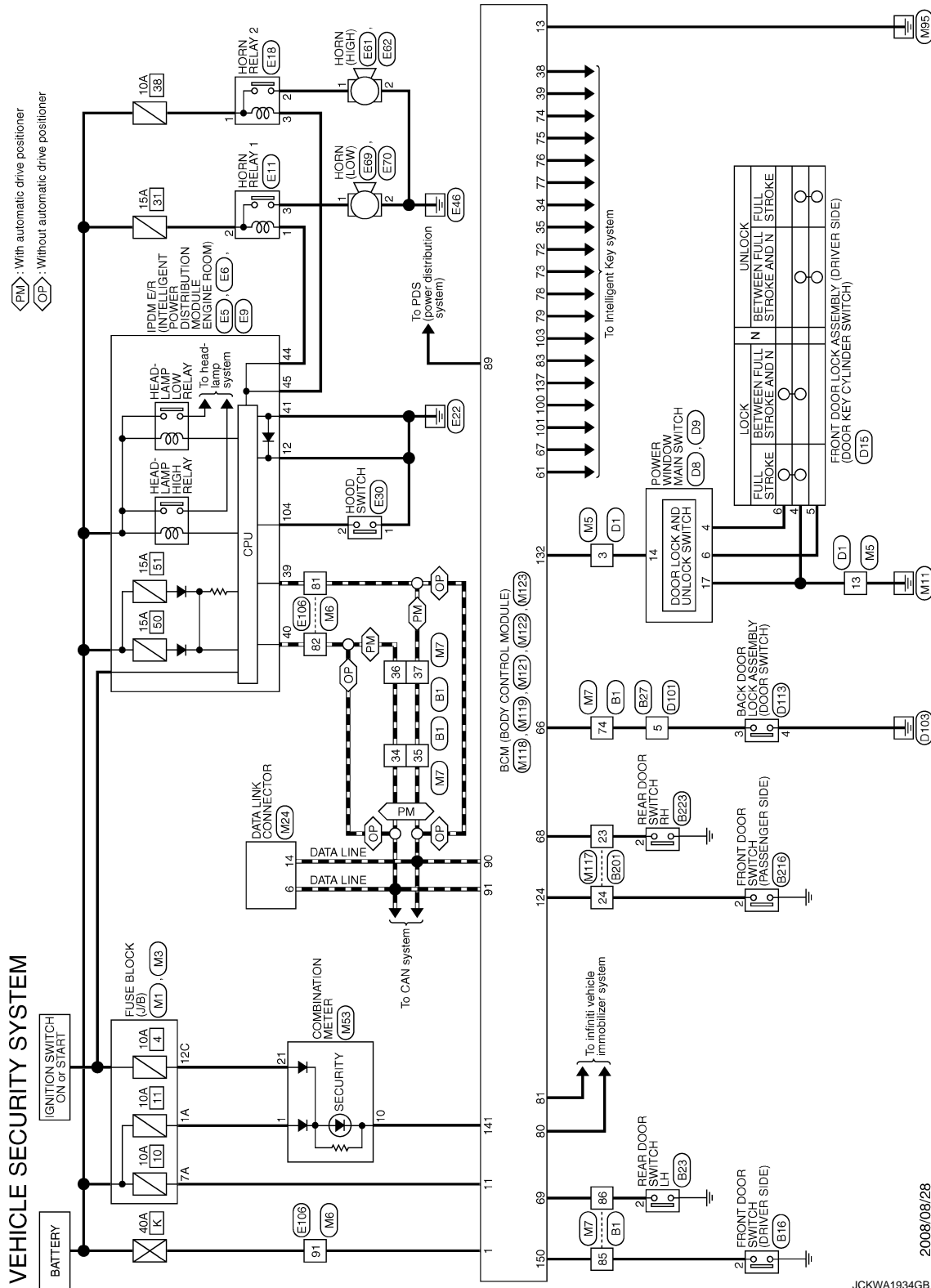


91	90	89	88	87	86	85	84	83	82	81	80	79	78	77	76	75	74	73	72
111	110	109	108	107	106	105	104	103	102	101	100	99	98	97	96	95	94	93	92

VEHICLE SECURITY SYSTEM

Wiring Diagram - VEHICLE SECURITY SYSTEM -

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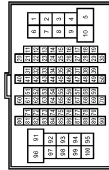
VEHICLE SECURITY SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

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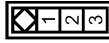
VEHICLE SECURITY SYSTEM

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH40FW-CS16-TM4



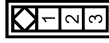
Terminal No.	Color of Wire	Signal Name [Specification]
34	L	-
35	P	-
36	L	-
37	P	-
74	L	-
85	V	-
86	LG	-

Connector No.	B16
Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)
Connector Type	A03FW



Terminal No.	Color of Wire	Signal Name [Specification]
2	V	-

Connector No.	B23
Connector Name	REAR DOOR SWITCH LH
Connector Type	A03FW



Terminal No.	Color of Wire	Signal Name [Specification]
2	LG	-

Connector No.	B27
Connector Name	WIRE TO WIRE
Connector Type	M06MW-LC



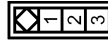
Terminal No.	Color of Wire	Signal Name [Specification]
5	L	-

Connector No.	B201
Connector Name	WIRE TO WIRE
Connector Type	TH40FW-CS16-TM4



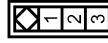
Terminal No.	Color of Wire	Signal Name [Specification]
23	BR	-
24	GR	-

Connector No.	B216
Connector Name	FRONT DOOR SWITCH (PASSENGER SIDE)
Connector Type	A03FW



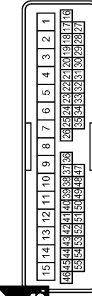
Terminal No.	Color of Wire	Signal Name [Specification]
2	GR	-

Connector No.	B223
Connector Name	REAR DOOR SWITCH RH
Connector Type	A03FW



Terminal No.	Color of Wire	Signal Name [Specification]
2	BR	-

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Type	TH40FW-CS15



Terminal No.	Color of Wire	Signal Name [Specification]
3	V	-
13	B	-

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VEHICLE SECURITY SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

VEHICLE SECURITY SYSTEM

Connector No.	D8
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS16FW-CS



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

Terminal No.	Color of Wire	Signal Name [Specification]
4	V	-
6	Y	-
14	V	-

Connector No.	D9
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS03FW-CS



17	18	19
----	----	----

Terminal No.	Color of Wire	Signal Name [Specification]
17	B	-

Connector No.	D15
Connector Name	FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE)
Connector Type	ED06GY-RS



1	2	3	4	5	6
---	---	---	---	---	---

Terminal No.	Color of Wire	Signal Name [Specification]
4	B	-
5	Y	-
6	V	-

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Type	MG0FW-LG



3	2	1
6	5	4

Terminal No.	Color of Wire	Signal Name [Specification]
5	V	-

Connector No.	D113
Connector Name	BACK DOOR LOCK ASSEMBLY
Connector Type	NS04FW-CS



4	3	2	1
---	---	---	---

Terminal No.	Color of Wire	Signal Name [Specification]
3	V	-
4	B	-

Connector No.	E5
Connector Name	IPDM E/R INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)
Connector Type	TH20PW-CS12-M4-1V



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

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	TH06FW-NH



42	41	40	39
46	45	44	43

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	TH10FW-NH



98	97	96	95	94	93	92	91
106	105	104	103	102	101	100	99

Terminal No.	Color of Wire	Signal Name [Specification]
104	LG	-

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VEHICLE SECURITY SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

VEHICLE SECURITY SYSTEM

Connector No.	E11
Connector Name	HORN RELAY 1
Connector Type	-



Terminal No.	Color of Wire	Signal Name [Specification]
1	LG	-
2	LG	-
3	G	-

Connector No.	E1B
Connector Name	HORN RELAY 2
Connector Type	M03FW-R-LG



Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	-
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.	E6B
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	TH06FW-CSI6-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
81	P	-
91	L	-
	W	-

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VEHICLE SECURITY SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

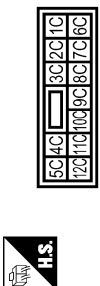
VEHICLE SECURITY SYSTEM

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS06FW-M2



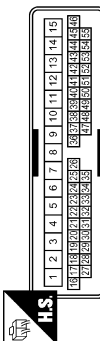
Terminal No.	Color of Wire	Signal Name [Specification]
1A	GR	-
7A	R	-

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FW-CS



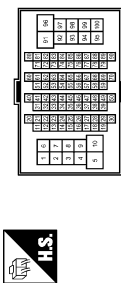
Terminal No.	Color of Wire	Signal Name [Specification]
12C	O	-

Connector No.	M5
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS15



Terminal No.	Color of Wire	Signal Name [Specification]
3	V	-
13	B	-

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH60MW-CS16-TM4



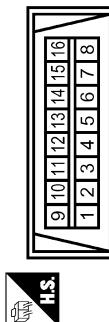
Terminal No.	Color of Wire	Signal Name [Specification]
81	P	-
82	L	-
91	W	-

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH60MW-CS16-TM4



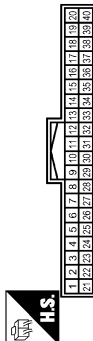
Terminal No.	Color of Wire	Signal Name [Specification]
34	L	-
35	P	-
36	L	-
37	P	-
74	R	-
85	LG	-
86	R	-

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.	M83
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
1	GR	BAT
10	G	SECURITY
21	O	IGN

Connector No.	M117
Connector Name	WIRE TO WIRE
Connector Type	TH60MW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
23	BR	-
24	LG	-

JCKWA1938GB

[INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	M03FB-LC



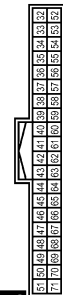
Terminal No.	Color of Wire	Signal Name [Specification]
1	W	BAT (F/L)

Connector No.	M1119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-CS



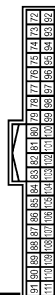
Terminal No.	Color of Wire	Signal Name [Specification]
11	R	BAT (FUSE)
13	B	GND

Connector No.	M121
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FGY-NH



Terminal No.	Color of Wire	Signal Name (Specification)
34	WB	LUGGAGE ROOM ANT-
35	V	LUGGAGE ROOM ANT+
38	B	BACK DOOR ANT-
39	W	BACK DOOR ANT+
61	W	BACK DOOR OPENER REQUEST SW
66	R	BACK DOOR SW
67	GR	BACK DOOR OPENER SW
68	B	REAR RH DOOR SW
69	R	REAR LH DOOR SW

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40TB-NH



Terminal No.	Color of Wire	Signal Name [Specification]
72	R	ROOM ANT2-
73	G	ROOM ANT2+
74	SB	PASSENGER DOOR ANT+
75	GR	PASSENGER DOOR ANT+
76	V	DRIVER DOOR ANT-
77	LG	DRIVER DOOR ANT+
78	Y	ROOM ANT1-
79	BR	ROOM ANT1+
80	GR	IMMOBIL ANTENNA CONTROL
81	W	IMMOBIL ANTENNA SIGNAL
82

89	BR	PUSH SW
90	P	CAN-L
91	L	CAN-H
100	G	PASSENGER DOOR REQUEST SW
101	SB	DRIVER DOOR REQUEST SW
103	LG	KEYLESS ENTRY RECEIVER POWER SUPPLY

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH



Terminal No.	Color of Wire	Signal Name [Specification]
124	LG	PASSENGER DOOR SW
132	V	POWER WINDOW SW COMM
137	O	RECEIVER/SENSOR GND
141	G	SECURITY INDICATOR OUTPUT
150	LG	DRIVER DOOR SW

JCKWA1939GB

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000004904268

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
RR WIPER ON	Other than rear wiper switch ON	Off
	Rear wiper switch ON	On
RR WIPER INT	Other than rear wiper switch INT	Off
	Rear wiper switch INT	On
RR WASHER SW	Rear washer switch OFF	Off
	Rear washer switch ON	On
RR WIPER STOP	Rear wiper is in STOP position	Off
	Rear wiper is not in STOP position	On
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

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

Monitor Item	Condition	Value/Status
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	Rear RH door closed	Off
	Rear RH door opened	On
DOOR SW-RL	Rear LH door closed	Off
	Rear LH door opened	On
DOOR SW-BK	Back door closed	Off
	Back door opened	On
CDL LOCK SW	Other than power door lock switch LOCK	Off
	Power door lock switch LOCK	On
CDL UNLOCK SW	Other than power door lock switch UNLOCK	Off
	Power door lock switch UNLOCK	On
KEY CYL LK-SW	Other than driver door key cylinder LOCK position	Off
	Driver door key cylinder LOCK position	On
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK position	Off
	Driver door key cylinder UNLOCK position	On
KEY CYL SW-TR	NOTE: The item is indicated, but not monitored.	Off
HAZARD SW	Hazard switch is OFF	Off
	Hazard switch is ON	On
REAR DEF SW	NOTE: The item is indicated, but not monitored.	Off
TR CANCEL SW	NOTE: The item is indicated, but not monitored.	Off
TR/BD OPEN SW	Back door opener switch OFF	Off
	While the back door opener switch is turned ON	On
TRNK/HAT MNTR	NOTE: The item is indicated, but not monitored.	Off
RKE-LOCK	LOCK button of the key is not pressed	Off
	LOCK button of the key is pressed	On
RKE-UNLOCK	UNLOCK button of the key is not pressed	Off
	UNLOCK button of the key is pressed	On
RKE-TR/BD	NOTE: The item is indicated, but not monitored.	Off
RKE-PANIC	PANIC button of the key is not pressed	Off
	PANIC button of the key is pressed	On
RKE-P/W OPEN	UNLOCK button of the key is not pressed	Off
	UNLOCK button of the key is pressed and held	On
RKE-MODE CHG	LOCK/UNLOCK button of the key is not pressed and held simultaneously	Off
	LOCK/UNLOCK button of the key is pressed and held simultaneously	On

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

Monitor Item	Condition	Value/Status
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 -RR	NOTE: The item is indicated, but not monitored.	Off
REQ SW -RL	NOTE: The item is indicated, but not monitored.	Off
REQ SW -BD/TR	Back door request switch is not pressed	Off
	Back door request switch is pressed	On
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	NOTE: The item is indicated, but not monitored.	Off
CLUCH SW	NOTE: The item is indicated, but not monitored.	Off
BRAKE SW 1	The brake pedal is depressed when No. 7 fuse is blown	Off
	The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is normal	On
BRAKE SW 2	The brake pedal is not depressed	Off
	The brake pedal is depressed	On
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 unlocked	Off
	Steering is locked	On
S/L -UNLOCK	Steering is locked	Off
	Steering is unlocked	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 any position other than P	Off
	Selector lever in P position	On
SFT PN -IPDM	Selector lever in any position other than P and N	Off
	Selector lever in P or N position	On

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

Monitor Item	Condition	Value/Status	
SFT P -MET	Selector lever in any position other than P	Off	A
	Selector lever in P position	On	
SFT N -MET	Selector lever in any position other than N	Off	B
	Selector lever in N position	On	
ENGINE STATE	Engine stopped	Stop	C
	While the engine stalls	Stall	
	At engine cranking	Crank	
	Engine running	Run	D
S/L LOCK-IPDM	Steering is unlocked	Off	
	Steering is locked	On	
S/L UNLK-IPDM	Steering is locked	Off	E
	Steering is unlocked	On	
S/L RELAY-REQ	Steering lock system is not the LOCK condition and the changing condition from LOCK to UNLOCK.	Off	F
	Steering lock system is the LOCK condition or the changing condition from LOCK to UNLOCK.	On	
VEH SPEED 1	While driving	Equivalent to speedometer reading	G
VEH SPEED 2	While driving	Equivalent to speedometer reading	
DOOR STAT-DR	Driver door is locked	LOCK	H
	Wait with selective UNLOCK operation (5 seconds)	READY	
	Driver door is unlocked	UNLOCK	
DOOR STAT-AS	Passenger door is locked	LOCK	I
	Wait with selective UNLOCK operation (5 seconds)	READY	
	Passenger door is unlocked	UNLOCK	J
ID OK FLAG	Steering is locked	Reset	
	Steering is unlocked	Set	
PRMT ENG STRT	The engine start is prohibited	Reset	SEC
	The engine start is permitted	Set	
PRMT RKE STRT	NOTE: The item is indicated, but not monitored.	Reset	L
KEY SW -SLOT	The key is not inserted into key slot	Off	
	The key is inserted into key slot	On	M
RKE OPE COUN1	During the operation of the key	Operation frequency of the key	
RKE OPE COUN2	NOTE: The item is indicated, but not monitored.	—	N
CONFIRM 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	O
CONFIRM ID4	The key ID that the key slot receives does not accord with the fourth key ID registered to BCM.	Yet	P
	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	

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

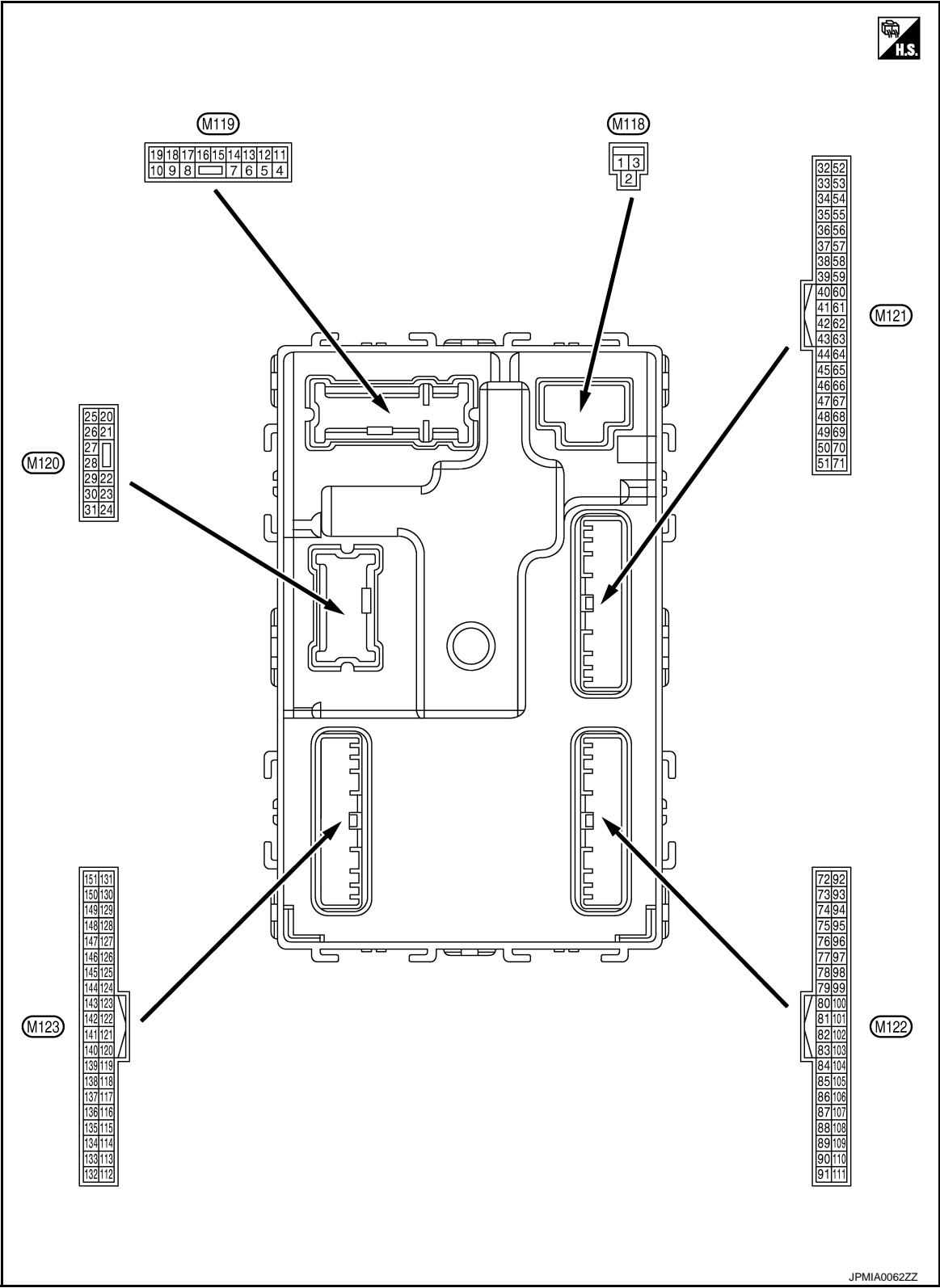
Monitor Item	Condition	Value/Status
CONFIRM ID2	The key ID that the key slot receives does not accord with the second key ID registered to BCM.	Yet
	The key ID that the key slot receives accords with the second key ID registered to BCM.	Done
CONFIRM ID1	The key ID that the key slot receives does not accord with the first key ID registered to BCM.	Yet
	The key ID that the key slot receives accords with the first key ID registered to BCM.	Done
TP 4	The ID of fourth key is not registered to BCM	Yet
	The ID of fourth key is registered to BCM	Done
TP 3	The ID of third key is not registered to BCM	Yet
	The ID of third key is registered to BCM	Done
TP 2	The ID of second key is not registered to BCM	Yet
	The ID of second key is registered to BCM	Done
TP 1	The ID of first key is not registered to BCM	Yet
	The ID of first key is registered to BCM	Done
AIR PRESS FL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear LH tire
ID REGST FL1	ID of front LH tire transmitter is registered	Done
	ID of front LH tire transmitter is not registered	Yet
ID REGST FR1	ID of front RH tire transmitter is registered	Done
	ID of front RH tire transmitter is not registered	Yet
ID REGST RR1	ID of rear RH tire transmitter is registered	Done
	ID of rear RH tire transmitter is not registered	Yet
ID REGST RL1	ID of rear LH tire transmitter is registered	Done
	ID of rear LH tire transmitter is not registered	Yet
WARNING LAMP	Tire pressure indicator OFF	Off
	Tire pressure indicator ON	On
BUZZER	Tire pressure warning alarm is not sounding	Off
	Tire pressure warning alarm is sounding	On

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

TERMINAL LAYOUT

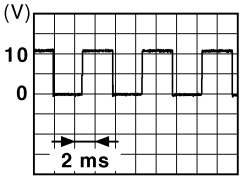


PHYSICAL VALUES

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

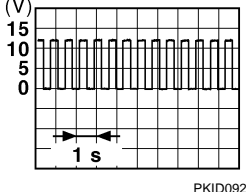
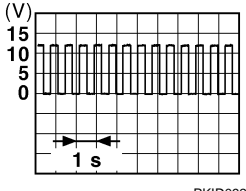
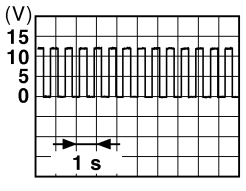
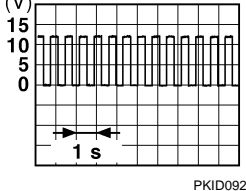
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
1 (W)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (Y)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF		Battery voltage
3 (O)	Ground	P/W power supply (RAP)	Output	Ignition switch ON		Battery voltage
4 (LG)	Ground	Interior room lamp power supply	Output	Interior room lamp battery saver is activated. (Cuts the interior room lamp power supply)		0 V
				Interior room lamp battery saver is not activated. (Outputs the interior room lamp power supply)		Battery voltage
5 (L)	Ground	Passenger door UN- LOCK	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	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	UNLOCK (Actuator is activated)	Battery voltage
					Other than UNLOCK (Actuator is not activated)	0 V
10 (BR)	Ground	Rear RH door and rear LH door UN- LOCK	Output	Rear RH door and rear LH door	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 brighten- ing/dimming level is in the neutral position 
15 (Y)	Ground	ACC indicator lamp	Output	Ignition switch	OFF or ON	Battery voltage
					ACC	0 V

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
17 (W)	Ground	Turn signal RH (Front)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	
18 (O)	Ground	Turn signal LH (Front)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	
19 (V)	Ground	Room lamp timer control	Output	Interior room lamp	OFF	Battery voltage
					ON	0 V
20 (V)	Ground	Turn signal RH (Rear)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	
23 (G)	Ground	Back door open	Output	Back door	OPEN (Back door opener actuator is activated)	Battery voltage
					Other than OPEN (Back door opener actuator is not activated)	0 V
25 (G)	Ground	Turn signal LH (Rear)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	
26 (G)	Ground	Rear wiper	Output	Rear wiper	OFF (Stopped)	0 V
					ON (Operated)	Battery voltage

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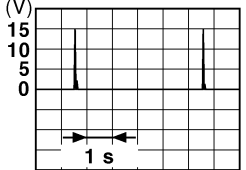
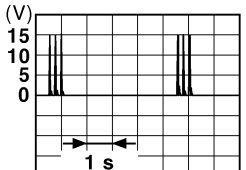
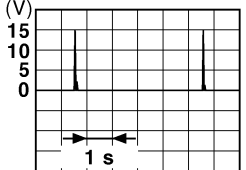
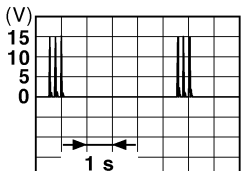
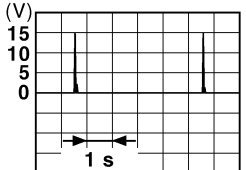
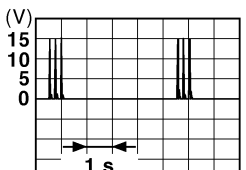
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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

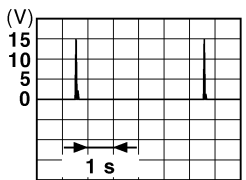
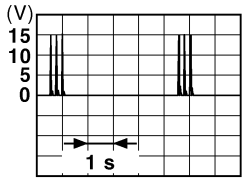
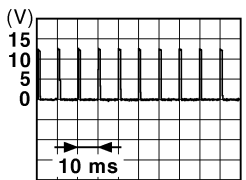
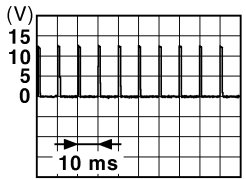
[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
34 (SB)	Ground	Luggage room antenna (-)	Output	Ignition switch OFF	 <p>JMKIA0062GB</p>
				When Intelligent Key is not in the passenger compartment	 <p>JMKIA0063GB</p>
35 (V)	Ground	Luggage room antenna (+)	Output	Ignition switch OFF	 <p>JMKIA0062GB</p>
				When Intelligent Key is not in the passenger compartment	 <p>JMKIA0063GB</p>
38 (B)	Ground	Back door antenna (-)	Output	When the back door opener request switch is operated with ignition switch OFF	 <p>JMKIA0062GB</p>
				When Intelligent Key is not in the antenna detection area	 <p>JMKIA0063GB</p>

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
39 (W)	Ground	Back door antenna (+)	Output	When the back door opener re- quest switch is operated with ig- nition 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
52 (SB)	Ground	Starter relay control	Output	Ignition switch ON	When selector lever is in P or N position	Battery voltage
					When selector lever is not in P or N position	0 V
61 (W)	Ground	Back door opener re- quest switch	Input	Back door opener request switch	ON (Pressed)	0 V
					OFF (Not pressed)	 JPMIA0016GB 1.0 V
64 (V)	Ground	Intelligent Key warn- ing buzzer (Engine room)	Output	Intelligent Key warning buzzer (Engine room)	Sounding	0 V
					Not sounding	Battery voltage
65 (O)	Ground	Rear wiper stop posi- tion	Input	Rear wiper	In stop position	 JPMIA0016GB 1.0 V
					Not in stop position	0 V

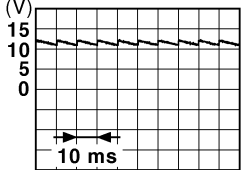
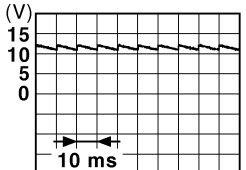
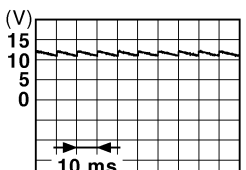
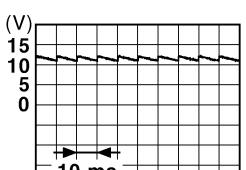
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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
66 (R)	Ground	Back door switch	Input	Back door switch	OFF (Door close)	 11.8 V
					ON (Door open)	0 V
67 (G)	Ground	Back door opener switch	Input	Back door opener switch	Pressed	0 V
					Not pressed	 11.8 V
68 (BR)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (Door close)	 11.8 V
					ON (Door open)	0 V
69 (R)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (Door close)	 11.8 V
					ON (Door open)	0 V

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
72 (R)	Ground	Room antenna 2 (-) (Center console)	Output	Ignition switch OFF	<p>JMKIA0062GB</p>
				When Intelligent Key is not in the passenger compart- ment	<p>JMKIA0063GB</p>
73 (G)	Ground	Room antenna 2 (+) (Center console)	Output	Ignition switch OFF	<p>JMKIA0062GB</p>
				When Intelligent Key is not in the passenger compart- ment	<p>JMKIA0063GB</p>
74 (SB)	Ground	Passenger door an- tenna (-)	Output	When the pas- senger door re- quest switch is operated with ig- nition switch OFF	<p>JMKIA0062GB</p>
				When Intelligent Key is not in the antenna detection area	<p>JMKIA0063GB</p>

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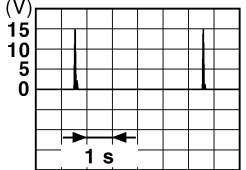
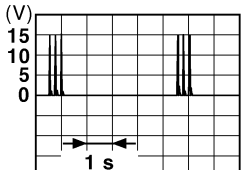
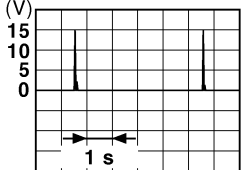
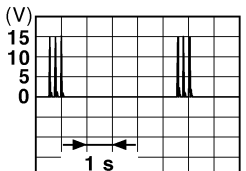
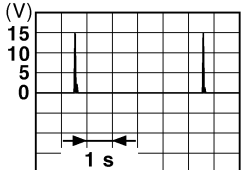
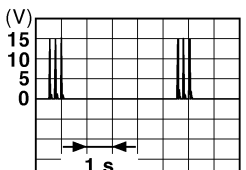
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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

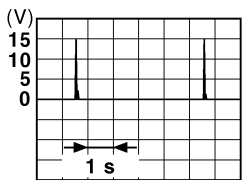
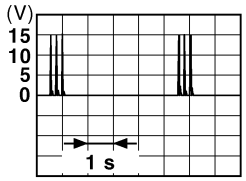
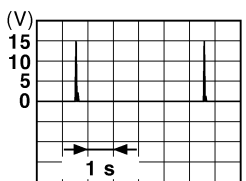
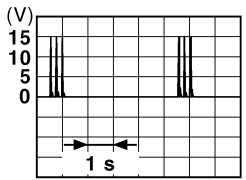
[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
75 (GR)	Ground	Passenger door antenna (+)	Output	When the passenger door request switch is operated with ignition switch OFF	 <p>JMKIA0062GB</p>
				When Intelligent Key is not in the antenna detection area	 <p>JMKIA0063GB</p>
76 (V)	Ground	Driver door antenna (-)	Output	When the driver door request switch is operated with ignition switch OFF	 <p>JMKIA0062GB</p>
				When Intelligent Key is not in the antenna detection area	 <p>JMKIA0063GB</p>
77 (LG)	Ground	Driver door antenna (+)	Output	When the driver door request switch is operated with ignition switch OFF	 <p>JMKIA0062GB</p>
				When Intelligent Key is not in the antenna detection area	 <p>JMKIA0063GB</p>

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
78 (Y)	Ground	Room antenna 1 (-) (Instrument panel)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compart- ment	 JMKIA0063GB
79 (BR)	Ground	Room antenna 1 (+) (Instrument panel)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compart- ment	 JMKIA0063GB
80 (GR)	Ground	NATS antenna amp (Built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the 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 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

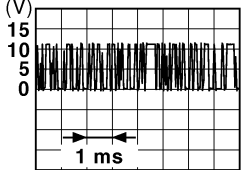
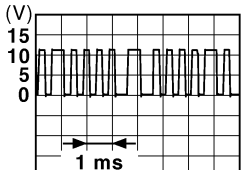

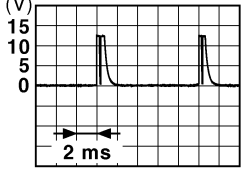

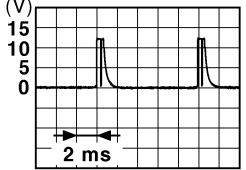
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BCM (BODY CONTROL MODULE)

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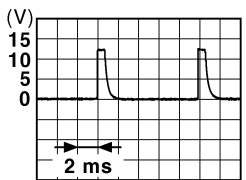
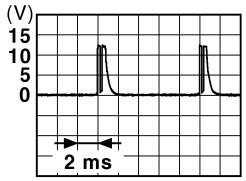
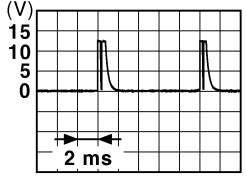
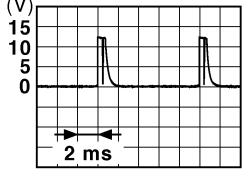
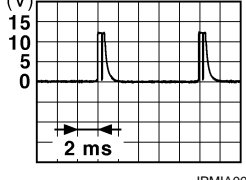
[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
83 (Y)	Ground	Remote keyless entry receiver communica- tion	Input/ Output	During waiting	 <p>JMKIA0064GB</p>
				When operating either button on the key	 <p>JMKIA0065GB</p>
87 (BR)	Ground	Combination switch INPUT 5	Input	Combination switch	
				All switches OFF (Wiper intermittent dial 4)	 <p>JPMIA0041GB</p> <p>1.4 V</p>
				Front fog lamp switch ON (Wiper intermittent dial 4)	 <p>JPMIA0037GB</p> <p>1.3 V</p>
				Rear wiper switch ON (Wiper intermittent dial 4)	 <p>JPMIA0039GB</p> <p>1.3 V</p>
				Any of the conditions below with all switches OFF <ul style="list-style-type: none"> • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7 	 <p>JPMIA0040GB</p> <p>1.3 V</p>

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
88 (V)	Ground	Combination switch INPUT 3	Input	Combination switch	All switches OFF (Wiper intermittent dial 4)  1.4 V
					Lighting switch HI (Wiper intermittent dial 4)  1.3 V
					Lighting switch 2ND (Wiper intermittent dial 4)  1.3 V
					Rear washer switch ON (Wiper intermittent dial 4)  1.3 V
					Any of the conditions below with all switches OFF <ul style="list-style-type: none"> • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3  1.3 V
89 (BR)	Ground	Push-button ignition switch (Push switch)	Input	Push-button igni- tion switch (push switch)	Pressed 0 V Not pressed Battery voltage
90 (P)	Ground	CAN-L	Input/ Output	—	—
91 (L)	Ground	CAN-H	Input/ Output	—	—

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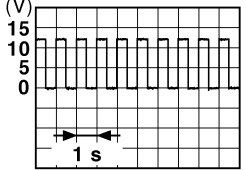
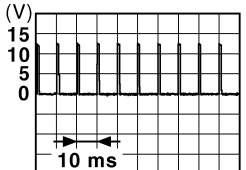
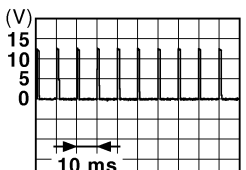
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BCM (BODY CONTROL MODULE)

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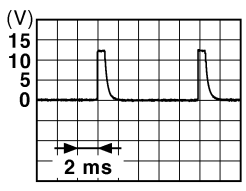
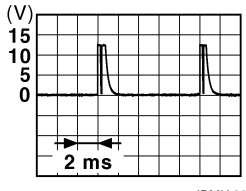
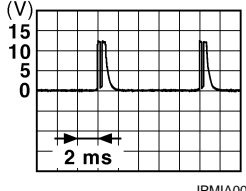
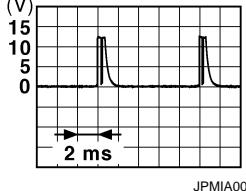
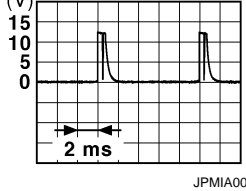
[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
92 (LG)	Ground	Key slot illumination	Output	Key slot illumination	OFF	0 V
					Blinking	 <p>JPMIA0015GB</p> <p>6.5 V</p>
					ON	Battery voltage
93 (V)	Ground	ON indicator lamp	Output	Ignition switch	OFF or ACC	Battery voltage
					ON	0 V
94 (Y)	Ground	Puddle lamp control	Output	Puddle lamp	OFF	Battery voltage
					ON	0 V
95 (O)	Ground	ACC relay control	Output	Ignition switch	OFF	0 V
					ACC or ON	Battery voltage
96 (GR)	Ground	A/T shift selector (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	Input	Selector lever	P position	0 V
					Any position other than P	Battery voltage
100 (G)	Ground	Passenger door request switch	Input	Passenger door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	 <p>JPMIA0016GB</p> <p>1.0 V</p>
101 (SB)	Ground	Driver door request switch	Input	Driver door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	 <p>JPMIA0016GB</p> <p>1.0 V</p>
102 (O)	Ground	Blower fan motor relay control	Output	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
103 (LG)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OFF		Battery voltage
106 (W)	Ground	Steering lock unit power supply	Output	Ignition switch	OFF or ACC	Battery voltage
					ON	0 V
107 (LG)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermittent dial 4)	All switches OFF	 <p>JPMIA0041GB 1.4 V</p>
					Turn signal switch LH	 <p>JPMIA0037GB 1.3 V</p>
					Turn signal switch RH	 <p>JPMIA0036GB 1.3 V</p>
					Front wiper switch LO	 <p>JPMIA0038GB 1.3 V</p>
					Front washer switch ON	 <p>JPMIA0039GB 1.3 V</p>

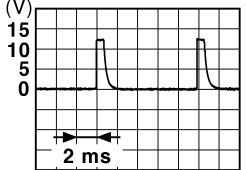
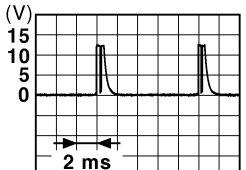
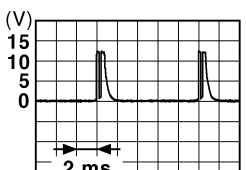
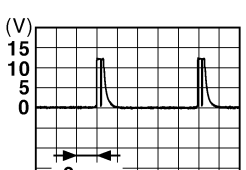
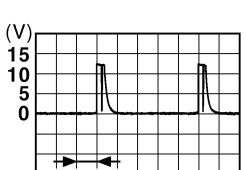
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BCM (BODY CONTROL MODULE)

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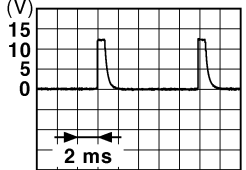
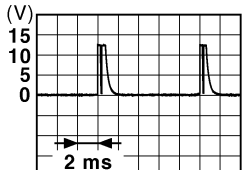

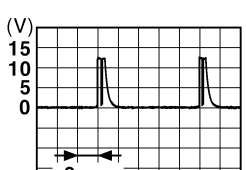

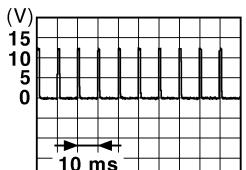
[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
108 (R)	Ground	Combination switch INPUT 4	Input	Combination switch	<p>All switches OFF (Wiper intermittent dial 4)</p>  <p>JPMIA0041GB</p> <p>1.4 V</p>
					<p>Lighting switch AUTO (Wiper intermittent dial 4)</p>  <p>JPMIA0038GB</p> <p>1.3 V</p>
					<p>Lighting switch 1ST (Wiper intermittent dial 4)</p>  <p>JPMIA0036GB</p> <p>1.3 V</p>
					<p>Rear wiper switch INT (Wiper intermittent dial 4)</p>  <p>JPMIA0040GB</p> <p>1.3 V</p>
					<p>Any of the conditions below with all switches OFF</p> <ul style="list-style-type: none"> • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6  <p>JPMIA0039GB</p> <p>1.3 V</p>

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
109 (Y)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	<p>All switches OFF</p>  <p>1.4 V</p>
					<p>Lighting switch PASS</p>  <p>1.3 V</p>
					<p>Lighting switch 2ND</p>  <p>1.3 V</p>
					<p>Front wiper switch INT</p>  <p>1.3 V</p>
					<p>Front wiper switch HI</p>  <p>1.3 V</p>
110 (G)	Ground	Hazard switch	Input	Hazard switch	<p>ON</p> <p>0 V</p>
				OFF	 <p>1.1 V</p>

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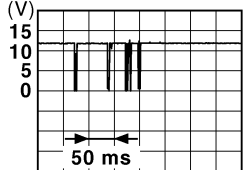
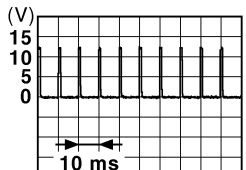
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BCM (BODY CONTROL MODULE)

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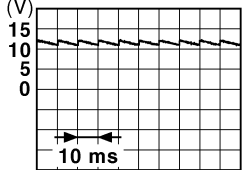
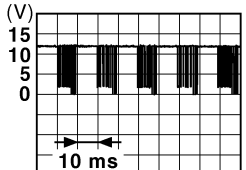
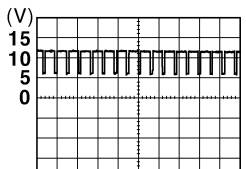
[INTELLIGENT KEY SYSTEM]

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 UN- LOCK	Battery voltage	
					15 seconds or later after UNLOCK	0 V	
113 (P)	Ground	Optical sensor	Input	Ignition switch ON	When bright outside of the vehicle	Close to 5 V	
					When dark outside of the vehicle	Close to 0 V	
116 (SB)	Ground	Stop lamp switch 1	Input	—		Battery voltage	
118 (P)	Ground	Stop lamp switch 2 (Without ICC)	Input	Stop lamp switch	OFF (Brake pedal is not depressed)	0 V	
					ON (Brake pedal is de- pressed)	Battery voltage	
		Stop lamp switch 2 (With ICC)		Stop lamp switch OFF (Brake pedal is not de- pressed) and ICC brake hold relay OFF		0 V	
				Stop lamp switch ON (Brake pedal is de- pressed) or ICC brake hold relay ON		Battery voltage	
119 (SB)	Ground	Front door lock as- sembly driver side (Unlock sensor)	Input	Driver door	LOCK status (Unlock sensor switch OFF)	 JPMIA0012GB 1.1 V	
					UNLOCK status (Unlock switch sensor ON)	0 V	
121 (BR)	Ground	Key slot switch	Input	When the key is inserted into key slot		Battery voltage	
				When the key is not inserted into key slot		0 V	
123 (W)	Ground	IGN feedback	Input	Ignition switch	OFF or ACC	0 V	
					ON	Battery voltage	

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
124 (LG)	Ground	Passenger door switch	Input	Passenger door switch	OFF (Door close)	 11.8 V
					ON (Door open)	0 V
132 (V)	Ground	Power window switch communication	Input/ Output	Ignition switch ON		 10.2 V
				Ignition switch OFF or ACC		Battery voltage
133 (W)	Ground	Push-button ignition switch illumination	Output	Push-button igni- tion switch illumi- nation	ON (Tail lamps OFF)	9.5 V
					ON (Tail lamps ON)	NOTE: The pulse width of this wave is varied by the illumination bright- ening/dimming level. 
					OFF	0 V
134 (GR)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	OFF	Battery voltage
					ON	0 V
137 (O)	Ground	Receiver and sensor ground	Input	Ignition switch ON		0 V
138 (Y)	Ground	Receiver and sensor power supply	Output	Ignition switch	OFF	0 V
					ACC or ON	5.0 V

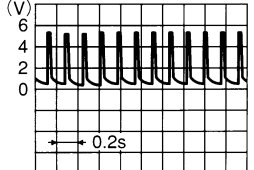

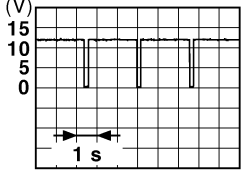
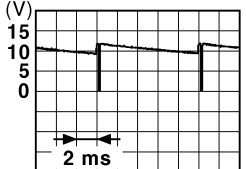
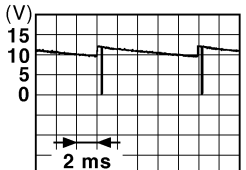
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SEC

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

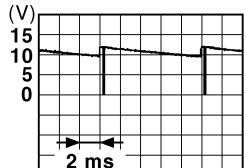
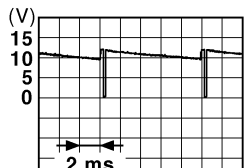
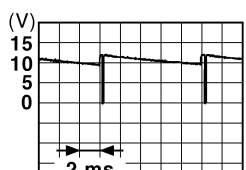
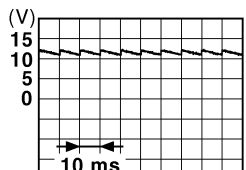
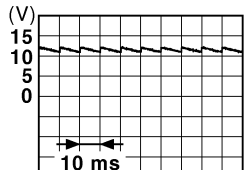
[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
139 (L)	Ground	Tire pressure receiver communication	Input/ Output	Ignition switch ON	Standby state	 OCC3881D
					When receiving the signal from the transmitter	 OCC3880D
140 (GR)	Ground	Selector lever P/N position	Input	Selector lever	P or N position	Battery voltage
					Except P and N positions	0 V
141 (G)	Ground	Security indicator	Output	Security indicator	ON	0 V
					Blinking	 JPMIA0014GB 11.3 V
					OFF	Battery voltage
142 (O)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermittent dial 4)	All switches OFF	0 V
					Lighting switch 1ST	 JPMIA0031GB 10.7 V
					Lighting switch HI	
					Lighting switch 2ND	
					Turn signal switch RH	
143 (P)	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switches OFF (Wiper intermittent dial 4)	0 V
					Front wiper switch HI (Wiper intermittent dial 4)	 JPMIA0032GB 10.7 V
					Rear wiper switch INT (Wiper intermittent dial 4)	
					Any of the conditions below with all switches OFF <ul style="list-style-type: none"> Wiper intermittent dial 1 Wiper intermittent dial 2 Wiper intermittent dial 3 Wiper intermittent dial 6 Wiper intermittent dial 7 	

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
144 (G)	Ground	Combination switch OUTPUT 2	Output	Combination switch	All switches OFF (Wiper intermittent dial 4)	0 V
					Front washer switch ON (Wiper intermittent dial 4)	 10.7 V
					Rear wiper switch ON (Wiper intermittent dial 4)	
					Rear washer switch ON (Wiper intermittent dial 4)	
					Any of the conditions below with all switches OFF <ul style="list-style-type: none">• Wiper intermittent dial 1• Wiper intermittent dial 5• Wiper intermittent dial 6	
145 (L)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper intermit- tent dial 4)	All switches OFF	0 V
					Front wiper switch INT	 10.7 V
					Front wiper switch LO	
					Lighting switch AUTO	
146 (SB)	Ground	Combination switch OUTPUT 4	Output	Combination switch (Wiper intermit- tent dial 4)	All switches OFF	0 V
					Front fog lamp switch ON	 10.7 V
					Lighting switch 2ND	
					Lighting switch PASS	
					Turn signal switch LH	
149 (W)	Ground	Tire pressure warn- ing check switch	Input	Ignition switch ON	 11.8 V	
150 (LG)	Ground	Driver door switch	Input	Driver door switch	OFF (Door close)	 11.8 V
					ON (Door open)	
151 (G)	Ground	Rear window defog- ger relay control	Output	Rear window de- fogger	Active	0 V
					Not activated	Battery voltage

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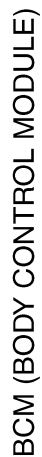
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[INTELLIGENT KEY SYSTEM]

Wiring Diagram - BCM -

2008/08/28

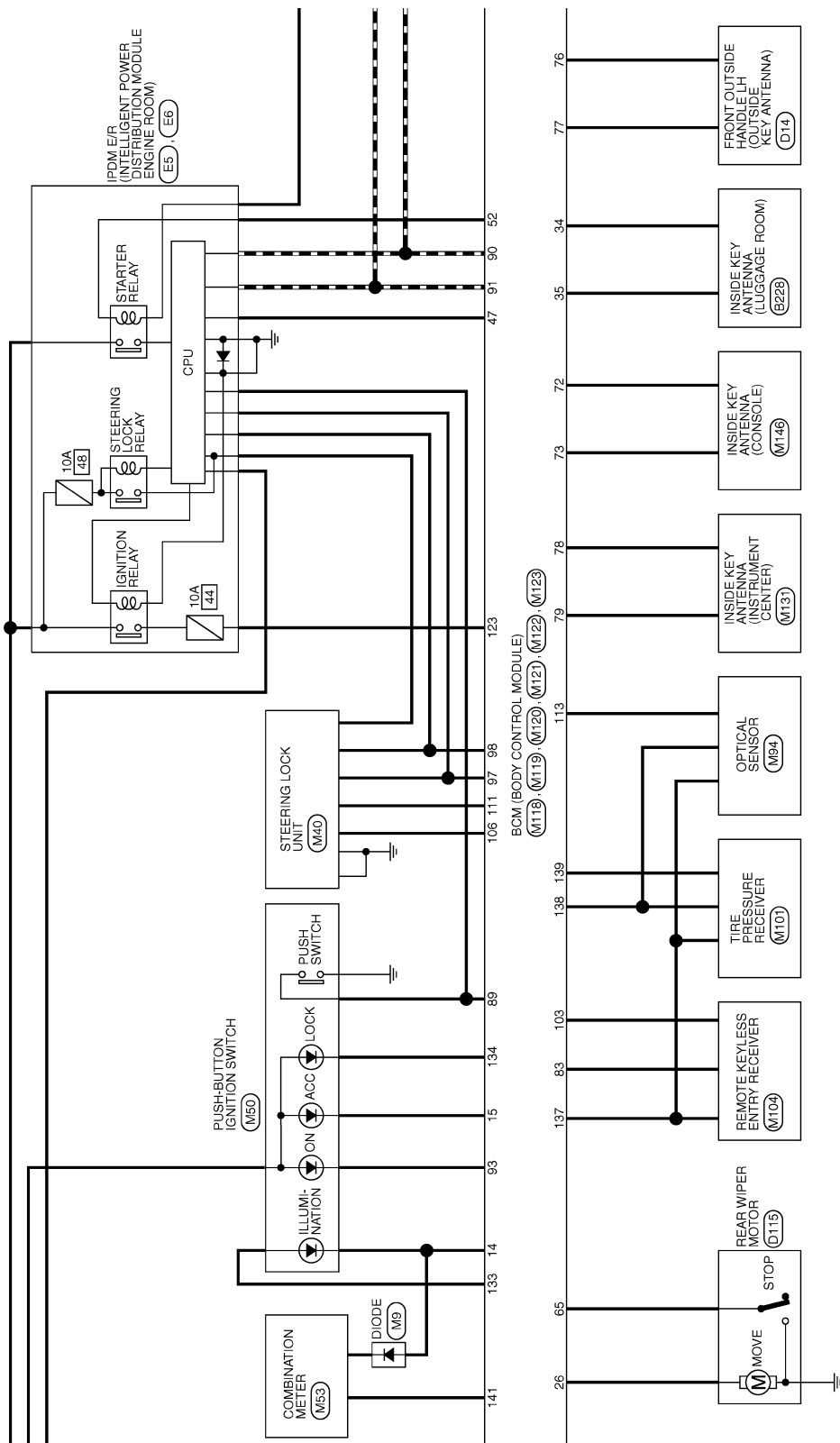
JCMWA3119GB



BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]



★: This connector is not shown in "Harness Layout".

JCMWA3120GB

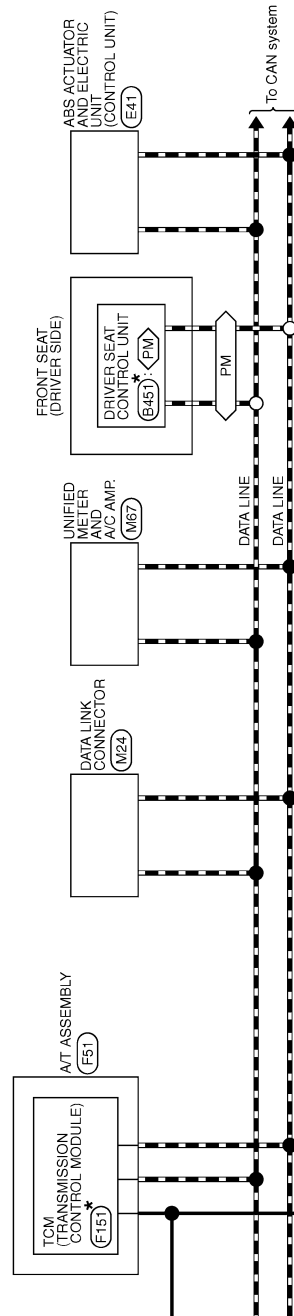
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BCM (BODY CONTROL MODULE)

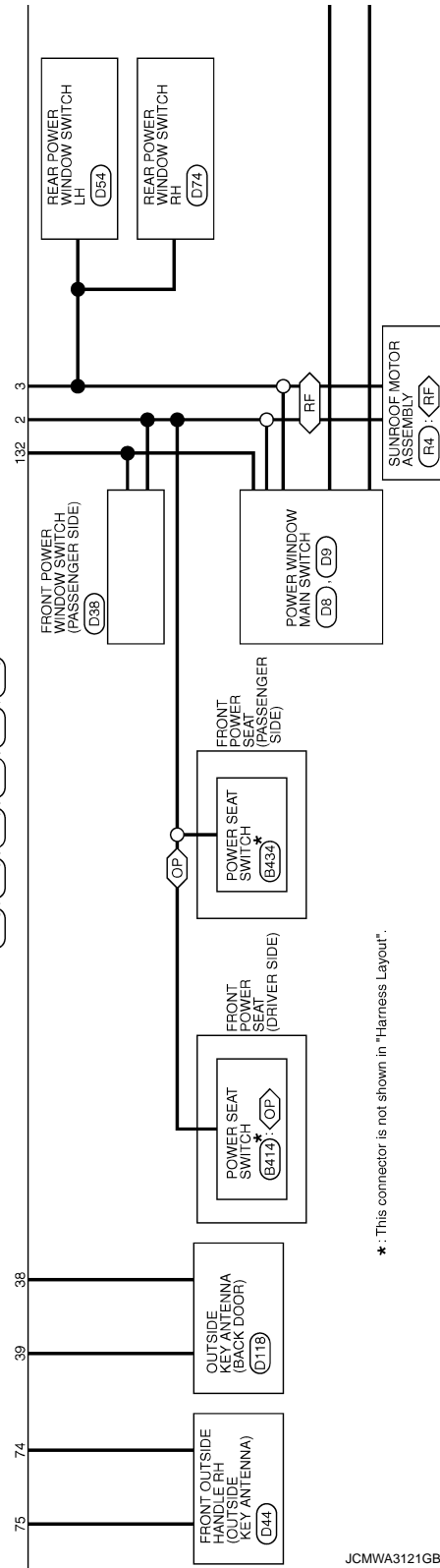
< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

RF : With sunroof
 PM : With automatic drive positioner
 OP : Without automatic drive positioner



BCM (BODY CONTROL MODULE)
(M119) (M120) (M121) (M122) (M123)



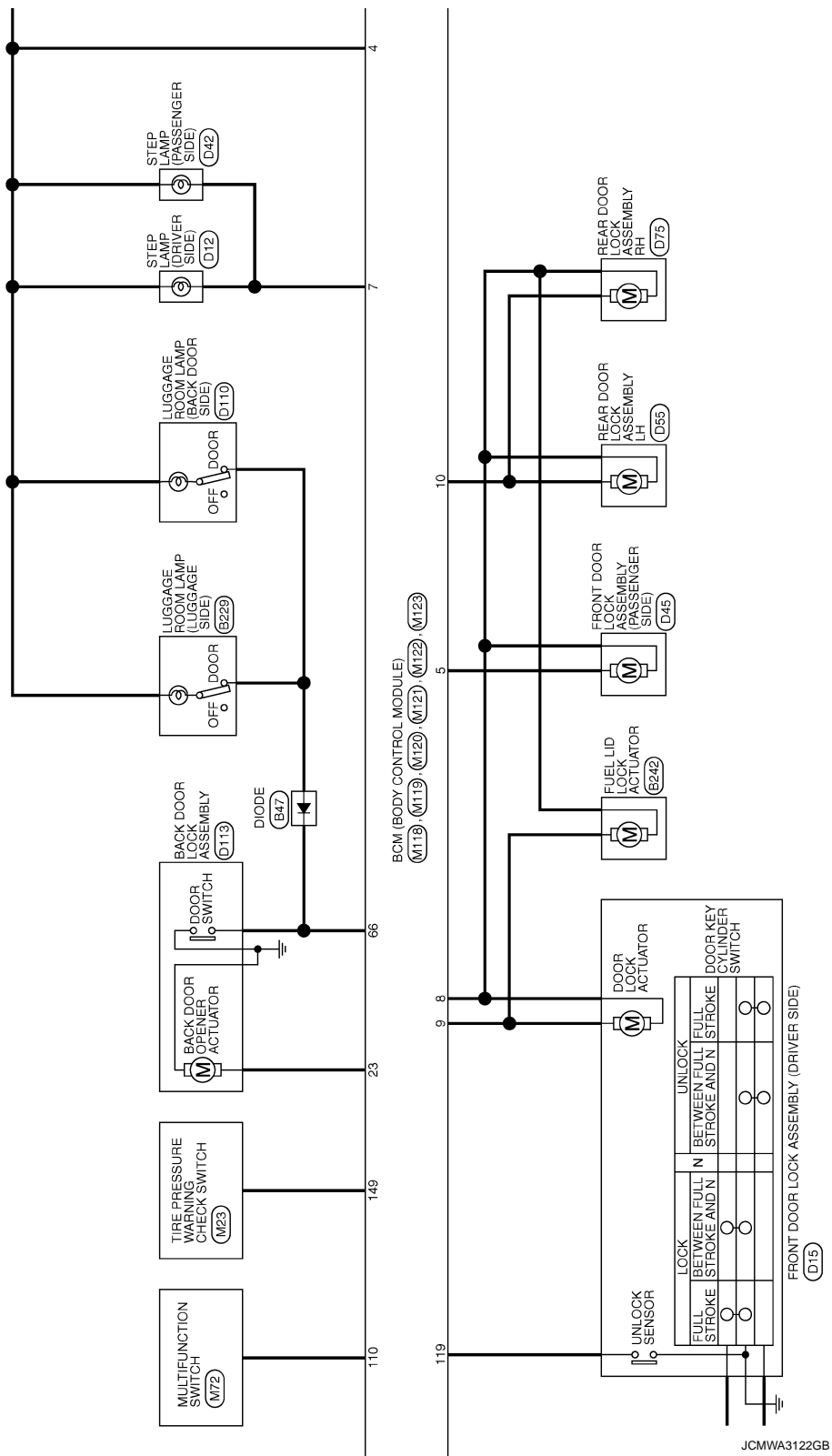
★ : This connector is not shown in "Harness Layout".

JCMWA3121GB

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]



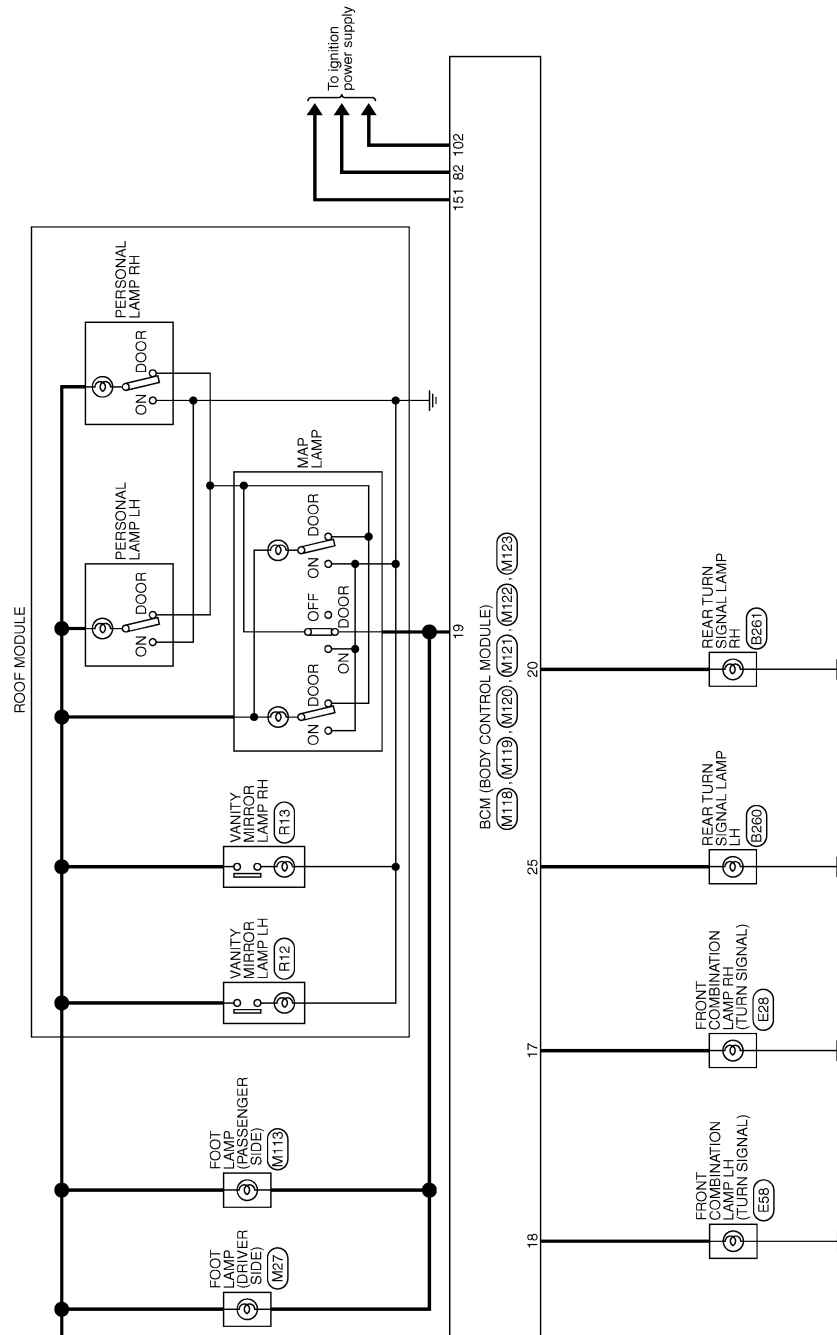
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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]



JCMWA3123GB

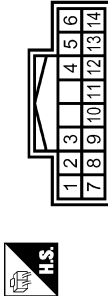
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

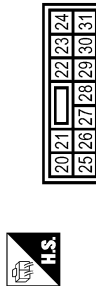
BCM (BODY CONTROL MODULE)

Connector No.	M33
Connector Name	COMBINATION SWITCH
Connector Type	TH16FW-NH



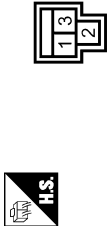
Terminal No.	Color of Wire	Signal Name [Specification]
2	SB	OUTPUT 4
5	L	OUTPUT 3
7	V	INPUT 3
8	O	OUTPUT 5
9	Y	INPUT 2
10	R	INPUT 4
11	LG	INPUT 1
12	P	OUTPUT 1
13	BR	INPUT 5
14	G	OUTPUT 2

Connector No.	M120
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS12FW-CS



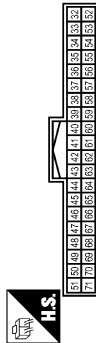
Terminal No.	Color of Wire	Signal Name [Specification]
20	V	TURN SIGNAL RH (REAR)
23	G	BACK DOOR OPEN OUTPUT
25	G	TURN SIGNAL LH (REAR)
26	G	REAR WIPER OUTPUT

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	M03FB-LC



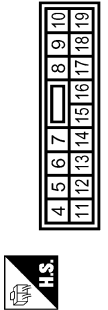
Terminal No.	Color of Wire	Signal Name [Specification]
1	W	BAT (E/L)
2	Y	POWER WINDOW POWER SUPPLY(BAT)
3	O	POWER WINDOW POWER SUPPLY(RAP)

Connector No.	M121
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FY-NH



Terminal No.	Color of Wire	Signal Name [Specification]
34	SB	LUGGAGE ROOM ANT-
35	V	LUGGAGE ROOM ANT+
38	B	BACK DOOR ANT-
39	W	BACK DOOR ANT+
47	Y	IGN RELAY (IPDM E/R) CONT
52	SB	STARTER RELAY CONT
61	W	BACK DOOR OPENER REQUEST SW
64	V	KEY WARN BUZZER (ENG ROOM)
65	O	REAR WIPER STOP POSITION
66	R	BACK DOOR SW
67	GR	BACK DOOR OPENER SW

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
4	LG	INTERIOR ROOM LAMP POWER SUPPLY
5	L	PASSENGER DOOR UNLOCK OUTPUT
7	Y	STEP LAMP OUTPUT
8	V	ALL DOOR FUEL LID LOCK OUTPUT
9	G	DRIVER DOOR FUEL LID UNLOCK OUTPUT
10	R	REAR DOOR UNLOCK OUTPUT
11	BR	BAT (FUSE)
13	B	GND
14	W	PUSH-BUTTON IGNITION SW ILL GND
15	Y	ACC IND
17	W	TURN SIGNAL RH (FRONT)

68	BR	REAR RH DOOR SW
69	R	REAR LH DOOR SW

JCMWA3124GB

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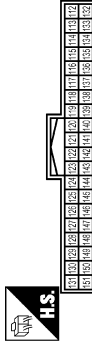
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

138	Y	RECEIVER/SENSOR POWER SUPPLY
139	L	TIRE PRESSURE RECEIVER COMM
140	GR	SHIFT N/P
141	G	SECURITY INDICATOR OUTPUT
142	O	COMBI SW OUTPUT 5
143	P	COMBI SW OUTPUT 1
144	G	COMBI SW OUTPUT 2
145	L	COMBI SW OUTPUT 3
146	SB	COMBI SW OUTPUT 4
149	W	TIRE PRESS WARNING CHECK SW
150	LG	DRIVER DOOR SW
151	G	REAR WINDOW DEFROGGER RELAY CONT

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH

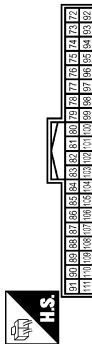


Terminal No.	Color of Wire	Signal Name [Specification]
113	P	OPTICAL SENSOR
116	SB	STOP LAMP SW 1
118	P	STOP LAMP SW 2
119	SB	DR DOOR UNLOCK SENSOR
121	BR	KEY SLOT SW
123	W	IGN F/B
124	LG	PASSENGER DOOR SW
132	V	POWER WINDOW SW COMM
133	W	PUSH-BUTTON IGNITION SW ILL POWER
134	GR	LOCK IND
137	O	RECEIVER/SENSOR GND

83	Y	KEYLESS ENTRY RECEIVER COMM
87	BR	COMBI SW INPUT 5
88	V	COMBI SW INPUT 3
89	BR	PUSH SW
90	P	CAN-L
91	L	CAN-H
92	LG	KEY SLOT ILL
93	V	IGN IND
94	Y	PUDDLE LAMP CONT
95	O	ACC RELAY CONT
96	GR	A/T SHIFT SELECTOR POWER SUPPLY
97	L	S/L CONDITION 1
98	P	S/L CONDITION 2
99	R	SHIFT P
100	G	PASSENGER DOOR REQUEST SW
101	SB	DRIVER DOOR REQUEST SW
102	O	BLOWER FAN MOTOR RELAY CONT
103	LG	KEYLESS ENTRY RECEIVER POWER SUPPLY
106	W	S/L UNIT POWER SUPPLY
107	LG	COMBI SW INPUT 1
108	R	COMBI SW INPUT 4
109	Y	COMBI SW INPUT 2
110	G	HAZARD SW
111	Y	S/L UNIT COMM

BCM (BODY CONTROL MODULE)

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	PASSENGER DOOR ANT-
75	GR	PASSENGER DOOR ANT+
76	V	DRIVER DOOR ANT-
77	LG	DRIVER DOOR ANT+
78	Y	ROOM ANT1-
79	BR	ROOM ANT1+
80	GR	IMMOBI ANTENNA CONTROL
81	W	IMMOBI ANTENNA SIGNAL
82	R	IGN RELAY (F/B) CONT

JCMWA3125GB

Fail-safe

INFOID:000000004904270

FAIL-SAFE CONTROL BY DTC

BCM performs fail-safe control when any DTC are detected.

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

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 ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI SCANNING	Inhibit engine cranking	Ignition switch ON → OFF
B2557: VEHICLE SPEED	Inhibit steering lock	When normal vehicle speed signals are 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 becomes consistent <ul style="list-style-type: none"> Starter control relay signal Starter relay status signal
B2601: SHIFT POSITION	Inhibit steering lock	500 ms after the following signal reception status becomes consistent <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> Ignition switch is in the ON position Selector lever P position switch signal: Except P position (battery voltage) Vehicle speed: 4 km/h (2.5 MPH) or more
B2603: SHIFT POSI STATUS	Inhibit steering lock	500 ms after the following BCM recognition conditions are fulfilled <ul style="list-style-type: none"> 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 are fulfilled <ul style="list-style-type: none"> Status 1 <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> 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 are fulfilled <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> 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 becomes consistent <ul style="list-style-type: none"> Steering lock relay signal (Request signal) Steering lock relay signal (Condition signal)

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

Display contents of CONSULT	Fail-safe	Cancellation
B2607: S/L RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status becomes consistent <ul style="list-style-type: none"> Steering lock relay signal (Request signal) Steering lock relay signal (Condition signal)
B2608: STARTER RELAY	Inhibit engine cranking	500 ms after the following signal communication status becomes consistent <ul style="list-style-type: none"> Starter motor relay control signal Starter relay status signal (CAN)
B2609: S/L STATUS	<ul style="list-style-type: none"> Inhibit engine cranking Inhibit steering lock 	When the following steering lock conditions agree <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> 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 are fulfilled <ul style="list-style-type: none"> Power position changes to ACC Receives engine status signal (CAN)
B2612: S/L STATUS	<ul style="list-style-type: none"> Inhibit engine cranking Inhibit steering lock 	When any of the following conditions are fulfilled <ul style="list-style-type: none"> 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
B26E9: S/L STATUS	<ul style="list-style-type: none"> Inhibit engine cranking Inhibit steering lock 	When BCM transmits the LOCK request signal to steering lock unit, and receives LOCK response signal from steering lock unit, the following conditions are fulfilled <ul style="list-style-type: none"> Steering condition No. 1 signal: LOCK (0 V) Steering condition No. 2 signal: LOCK (Battery voltage)

HIGH FLASHER OPERATION

BCM detects the turn signal lamp circuit status by the current value.

BCM increases the turn signal lamp blinking speed if the bulb or harness open is detected with the turn signal lamp operating.

NOTE:

The blinking speed is normal while activating the hazard warning lamp.

REAR WIPER MOTOR PROTECTION

BCM detects the rear wiper stopping position according to the rear wiper stop position signal.

When the rear wiper stop position signal does not change for more than 5 seconds while driving the rear wiper, BCM stops power supply to protect the rear wiper motor.

Condition of cancellation

1. More than 1 minute is passed after the rear wiper stops.
2. Turn rear wiper switch OFF.
3. Operate the rear wiper switch or rear washer switch.

DTC Inspection Priority Chart

INFOID:000000004904271

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

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

Priority	DTC	
1	B2562: LOW VOLTAGE	A
2	<ul style="list-style-type: none"> U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN) 	B
3	<ul style="list-style-type: none"> B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM B2195: ANTI SCANNING 	C
4	<ul style="list-style-type: none"> 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 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 B26E9: S/L STATUS B26EA: KEY REGISTRATION C1729: VHCL SPEED SIG ERR U0415: VEHICLE SPEED SIG 	D
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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

Priority	DTC
5	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • B2621: INSIDE ANTENNA • B2622: INSIDE ANTENNA • B2623: INSIDE ANTENNA

DTC Index

INFOID:000000004904272

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. For details of Freeze Frame Data, refer to [BCS-16. "COMMON ITEM : CONSULT-III Function \(BCM - COMMON ITEM\)".](#)

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	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-37
U1010: CONTROL UNIT (CAN)	—	—	—	—	BCS-38
U0415: VEHICLE SPEED SIG	—	—	—	—	BCS-39
B2013: ID DISCORD BCM-S/L	×	×	—	—	SEC-48
B2014: CHAIN OF S/L-BCM	×	×	—	—	SEC-49
B2190: NATS ANTENNA AMP	×	—	—	—	SEC-41
B2191: DIFFERENCE OF KEY	×	—	—	—	SEC-44
B2192: ID DISCORD BCM-ECM	×	—	—	—	SEC-45
B2193: CHAIN OF BCM-ECM	×	—	—	—	SEC-46
B2195: ANTI SCANNING	×	—	—	—	SEC-47
B2553: IGNITION RELAY	—	×	—	—	PCS-49

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2555: STOP LAMP	—	×	—	—	SEC-52
B2556: PUSH-BTN IGN SW	—	×	×	—	SEC-54
B2557: VEHICLE SPEED	×	×	×	—	SEC-56
B2560: STARTER CONT RELAY	×	×	×	—	SEC-57
B2562: LOW VOLTAGE	—	×	—	—	BCS-40
B2601: SHIFT POSITION	×	×	×	—	SEC-58
B2602: SHIFT POSITION	×	×	×	—	SEC-61
B2603: SHIFT POSI STATUS	×	×	×	—	SEC-63
B2604: PNP SW	×	×	×	—	SEC-66
B2605: PNP SW	×	×	×	—	SEC-68
B2606: S/L RELAY	×	×	×	—	SEC-70
B2607: S/L RELAY	×	×	×	—	SEC-71
B2608: STARTER RELAY	×	×	×	—	SEC-73
B2609: S/L STATUS	×	×	×	—	SEC-75
B260A: IGNITION RELAY	×	×	×	—	PCS-51
B260B: STEERING LOCK UNIT	—	×	×	—	SEC-79
B260C: STEERING LOCK UNIT	—	×	×	—	SEC-80
B260D: STEERING LOCK UNIT	—	×	×	—	SEC-81
B260F: ENG STATE SIG LOST	×	×	×	—	SEC-82
B2612: S/L STATUS	×	×	×	—	SEC-86
B2614: ACC RELAY CIRC	—	×	×	—	PCS-53
B2615: BLOWER RELAY CIRC	—	×	×	—	PCS-56
B2616: IGN RELAY CIRC	—	×	×	—	PCS-59
B2617: STARTER RELAY CIRC	×	×	×	—	SEC-90
B2618: BCM	×	×	×	—	PCS-62
B2619: BCM	×	×	×	—	SEC-92
B261A: PUSH-BTN IGN SW	—	×	×	—	SEC-93
B261E: VEHICLE TYPE	×	×	× (Turn ON for 15 seconds)	—	SEC-96
B2621: INSIDE ANTENNA	—	×	—	—	DLK-59
B2622: INSIDE ANTENNA	—	×	—	—	DLK-61
B2623: INSIDE ANTENNA	—	×	—	—	DLK-63
B26E1: ENG STATE NO RES	×	×	×	—	SEC-83
B26E9: S/L STATUS	×	×	× (Turn ON for 15 seconds)	—	SEC-84
B26EA: KEY REGISTRATION	—	×	× (Turn ON for 15 seconds)	—	SEC-85
C1704: LOW PRESSURE FL	—	—	—	×	WT-17
C1705: LOW PRESSURE FR	—	—	—	×	
C1706: LOW PRESSURE RR	—	—	—	×	
C1707: LOW PRESSURE RL	—	—	—	×	

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
C1708: [NO DATA] FL	—	—	—	×	WT-19
C1709: [NO DATA] FR	—	—	—	×	
C1710: [NO DATA] RR	—	—	—	×	
C1711: [NO DATA] RL	—	—	—	×	
C1712: [CHECKSUM ERR] FL	—	—	—	×	WT-22
C1713: [CHECKSUM ERR] FR	—	—	—	×	
C1714: [CHECKSUM ERR] RR	—	—	—	×	
C1715: [CHECKSUM ERR] RL	—	—	—	×	
C1716: [PRESSDATA ERR] FL	—	—	—	×	WT-25
C1717: [PRESSDATA ERR] FR	—	—	—	×	
C1718: [PRESSDATA ERR] RR	—	—	—	×	
C1719: [PRESSDATA ERR] RL	—	—	—	×	
C1720: [CODE ERR] FL	—	—	—	×	WT-27
C1721: [CODE ERR] FR	—	—	—	×	
C1722: [CODE ERR] RR	—	—	—	×	
C1723: [CODE ERR] RL	—	—	—	×	
C1724: [BATT VOLT LOW] FL	—	—	—	×	WT-30
C1725: [BATT VOLT LOW] FR	—	—	—	×	
C1726: [BATT VOLT LOW] RR	—	—	—	×	
C1727: [BATT VOLT LOW] RL	—	—	—	×	
C1729: VHCL SPEED SIG ERR	—	—	—	×	WT-33
C1734: CONTROL UNIT	—	—	—	×	WT-34

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

Reference Value

INFOID:000000004904299

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
		<ul style="list-style-type: none"> 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	Selector lever in any position other than P or N	Off
		Selector lever in P or N position	On
ST RLY CONT	Ignition switch ON		Off
	At engine cranking		On
IHBT RLY -REQ	Ignition switch ON		Off
	At engine cranking		On

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
< ECU DIAGNOSIS INFORMATION > [INTELLIGENT KEY SYSTEM]

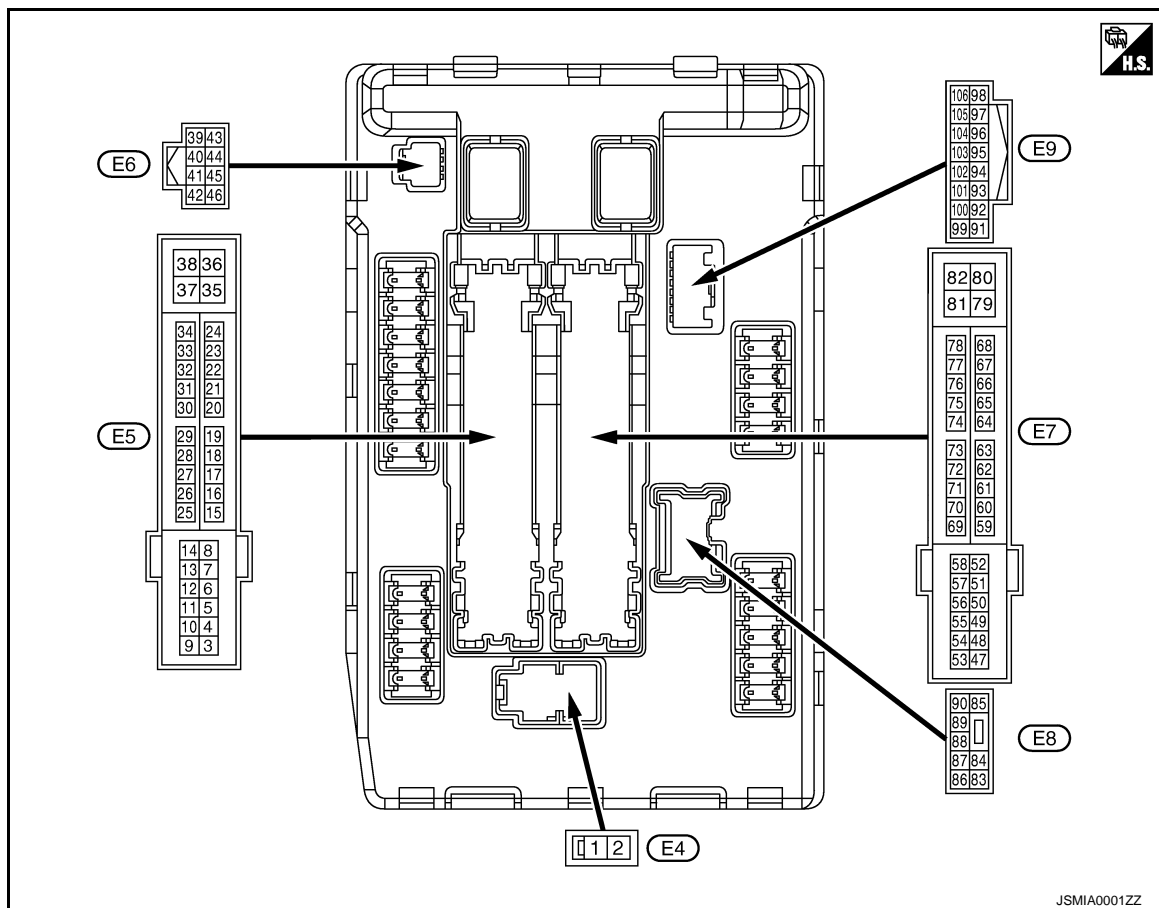
Monitor Item	Condition		Value/Status
ST/INHI RLY	Ignition switch ON		Off
	At engine cranking		INHI ON → ST ON
	The status of starter relay or starter control relay cannot be recognized by the battery voltage malfunction, etc. when the starter relay is ON and the starter control relay is OFF		UNKWN
DETENT SW	Ignition switch ON	<ul style="list-style-type: none"> Press the selector button with selector lever in P position Selector lever in any position other than P 	Off
	Release the selector button with selector lever in P position		On
S/L RLY -REQ	None of the conditions below are present		Off
	<ul style="list-style-type: none"> 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 		On
S/L STATE	Steering lock is activated		LOCK
	Steering lock is deactivated		UNLOCK
	[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
	<ul style="list-style-type: none"> 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

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

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

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 & interior lamps	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 open- ing the driver door	Battery voltage
				Ignition switch LOCK	Press the push-button ig- nition switch	Battery voltage
				Ignition switch ACC or ON		0 V
12 (B/W)	Ground	Ground	—	Ignition switch ON		0 V

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

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	—	Signal name	Input/ Output			
13 (SB)	Ground	Fuel pump power supply	Output	Approximately 1 second or more after turning the ignition switch ON		0 V
				<ul style="list-style-type: none"> 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* (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	Ignition switch ON	Selector lever in any position other than P or N	0 V
					Selector lever P or N	Battery voltage
32 (L)	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 (SB)	Ground	Control device (Detention switch)	Input	Ignition switch ON	<ul style="list-style-type: none"> Press the selector button (Selector lever P) Selector lever in any position other than P 	Battery voltage
					Release the selector button (selector lever P)	0 V
44 (W)	Ground	Horn relay control	Input	The horn is deactivated		Battery voltage
				The horn is activated		0 V
45 (G)	Ground	Anti theft horn relay control	Input	The horn is deactivated		Battery voltage
				The horn is activated		0 V

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

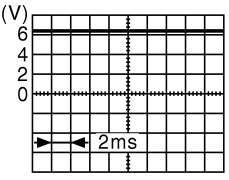
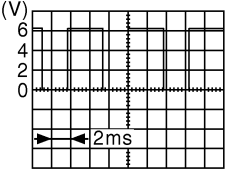
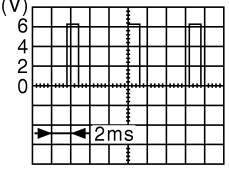
< ECU DIAGNOSIS INFORMATION > [INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
46 (R)	Ground	Starter relay control	Input	Ignition switch ON	Selector lever in any position other than P or N	0 V
					Selector lever P or N	Battery voltage
48 (L)	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 (R)	Ground	ECM relay power supply	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		0 V
				<ul style="list-style-type: none"> Ignition switch ON Ignition switch OFF (For a few seconds after turning ignition switch OFF) 		Battery voltage
51 (G)	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
				<ul style="list-style-type: none"> Ignition switch ON Ignition switch OFF (For a few seconds after turning ignition switch OFF) 		Battery voltage
54 (LG)	Ground	Throttle control motor relay power supply	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		0 V
				<ul style="list-style-type: none"> Ignition switch ON Ignition switch OFF (For a few seconds after turning ignition switch OFF) 		Battery voltage
55 (BR)	Ground	ECM power supply	Output	Ignition switch OFF		Battery voltage
56 (V)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
57 (SB)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
58 (P)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
69 (W)	Ground	ECM relay control	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		Battery voltage
				<ul style="list-style-type: none"> Ignition switch ON Ignition switch OFF (For a few seconds after turning ignition switch OFF) 		0 – 1.5 V
70 (O)	Ground	Throttle control motor relay control	Output	Ignition switch ON → OFF		0 – 1.0 V ↓ Battery voltage ↓ 0 V
				Ignition switch ON		0 – 1.0 V

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

< ECU DIAGNOSIS INFORMATION > [INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
74 (P)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
75 (Y)	Ground	Oil pressure switch	Input	Ignition switch ON	Engine stopped	0 V
					Engine running	Battery voltage
76 (V)	Ground	Power generation command signal	Output	Ignition switch ON		 <p style="text-align: right;">JPMIA0001GB</p> <p style="text-align: center;">6.3 V</p>
				40% is set on "ACTIVE TEST", "ALTERNATOR DUTY" of "ENGINE"		 <p style="text-align: right;">JPMIA0002GB</p> <p style="text-align: center;">3.8 V</p>
				80% is set on "ACTIVE TEST", "ALTERNATOR DUTY" of "ENGINE"		 <p style="text-align: right;">JPMIA0003GB</p> <p style="text-align: center;">1.4 V</p>
77 (L)	Ground	Fuel pump relay control	Output	<ul style="list-style-type: none"> 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 (O)	Ground	Headlamp LO (RH)	Output	Ignition switch ON	Lighting switch OFF	0 V
					Lighting switch 2ND	Battery voltage
84 (V)	Ground	Headlamp LO (LH)	Output	Ignition switch ON	Lighting switch OFF	0 V
					Lighting switch 2ND	Battery voltage
86 (W)	Ground	Front fog lamp (RH)	Output	Lighting switch 2ND	Front fog lamp switch OFF	0 V
					<ul style="list-style-type: none"> Front fog lamp switch ON Daytime running light activated (Only for Canada) 	Battery voltage

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

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
87 (L)	Ground	Front fog lamp (LH)	Output	Lighting switch 2ND	Front fog lamp switch OFF	0 V
					<ul style="list-style-type: none"> Front fog lamp switch ON Daytime running light activated (Only for Canada) 	Battery voltage
88 (GR)	Ground	Washer pump power supply	Output	Ignition switch ON		Battery voltage
89 (BR)	Ground	Headlamp HI (RH)	Output	Ignition switch ON	Lighting switch OFF	0 V
					<ul style="list-style-type: none"> Lighting switch HI Lighting switch PASS 	Battery voltage
90 (P)	Ground	Headlamp HI (LH)	Output	Ignition switch ON	Lighting switch OFF	0 V
					<ul style="list-style-type: none"> Lighting switch HI Lighting switch PASS 	Battery voltage
91 (P)	Ground	Parking lamp (RH)	Output	Ignition switch ON	Lighting switch OFF	0 V
					Lighting switch 1ST	Battery voltage
92 (O)	Ground	Parking lamp (LH)	Output	Ignition switch ON	Lighting switch OFF	0 V
					Lighting switch 1ST	Battery voltage
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

*: Only for the models with ICC system

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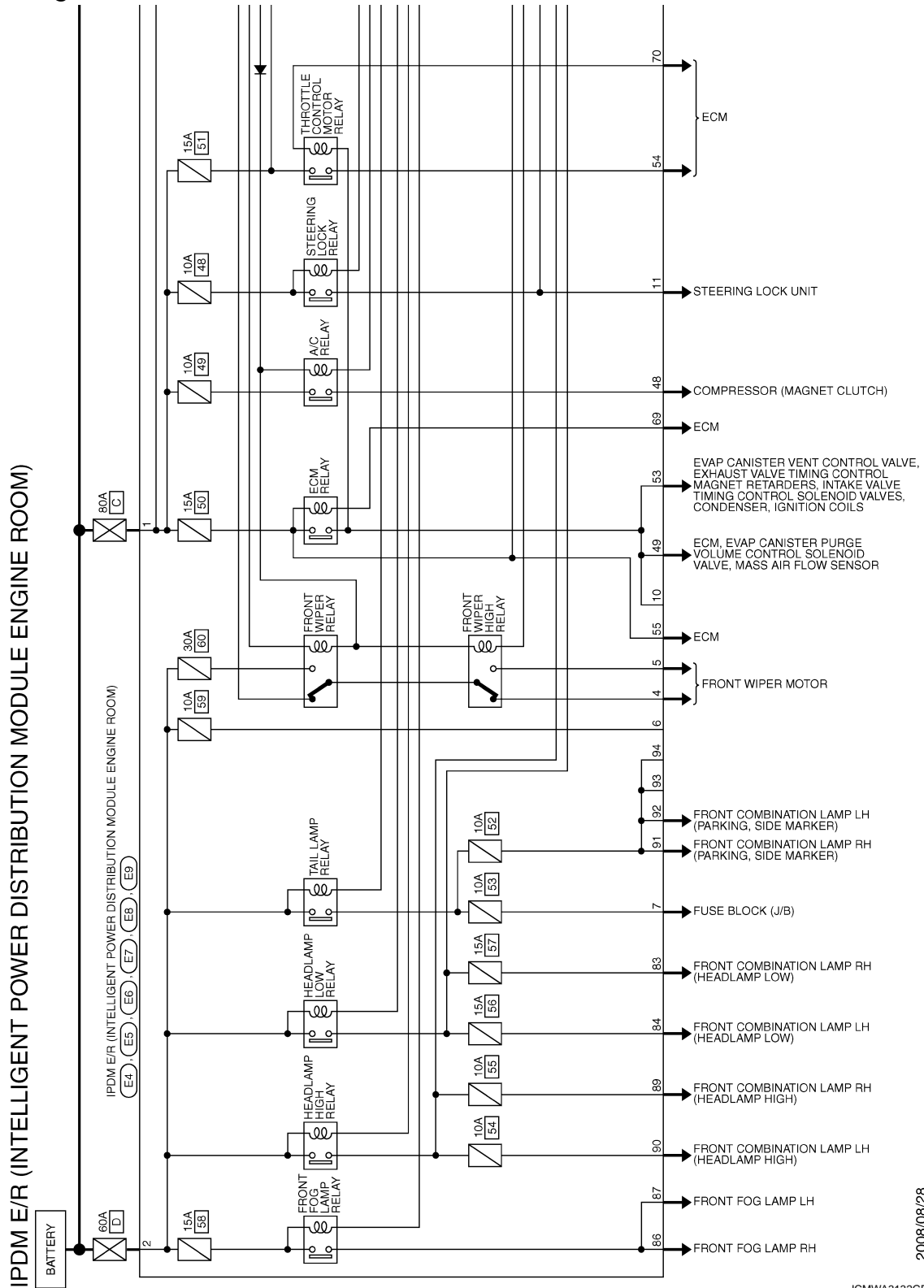
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS INFORMATION >

[INTELLIGENT KEY SYSTEM]

Wiring Diagram - IPDM E/R -

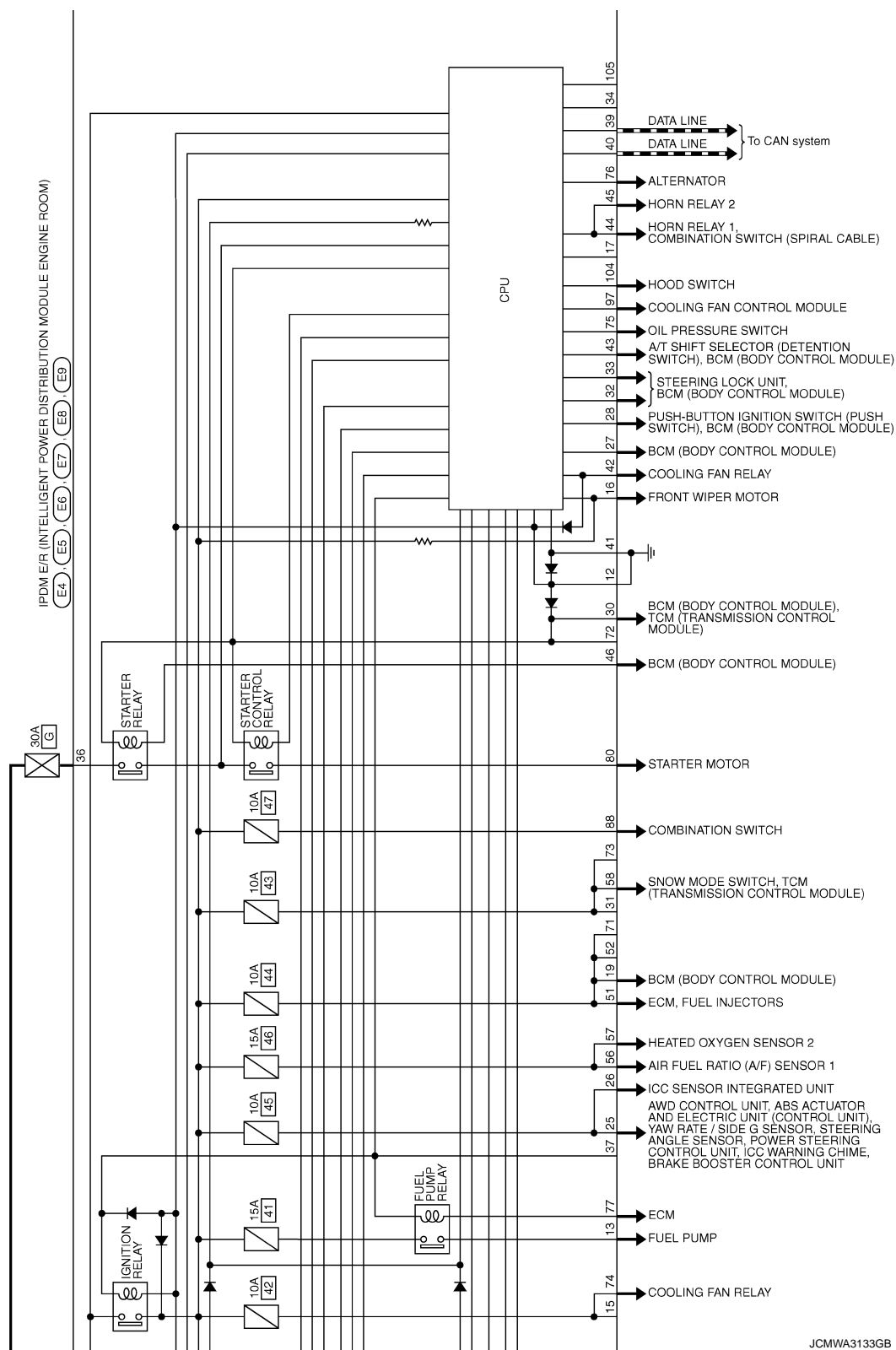
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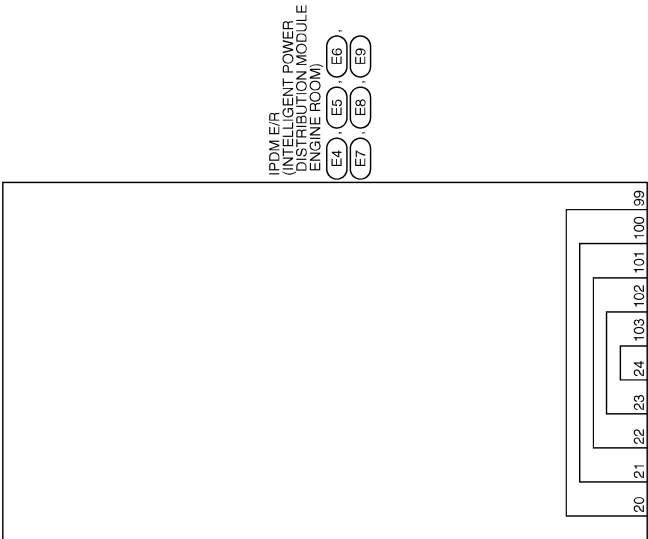
2008/08/28

JCMWA3132GB

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) < ECU DIAGNOSIS INFORMATION > [INTELLIGENT KEY SYSTEM]



JCMWA3133GB



JCMWA3134GB

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

Connector No.	E4
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	L02FB-MC



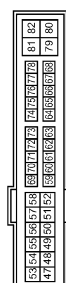
Terminal No.	Color of Wire	Signal Name [Specification]
1	W	-
2	L	-

Connector No.	E5
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4-TV



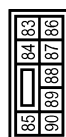
Terminal No.	Color of Wire	Signal Name [Specification]
4	V	-
5	L	-
7	R	-
11	BR	-
12	B/W	-
13	SB	-
16	LG	-
19	W	-
25	G	-
26	R	-
27	O	-

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]
48	L	-
49	R	-
51	G	-
53	W	-
54	LG	-
55	BR	-
56	V	-
57	SB	-
58	P	-
59	W	-
70	O	-

Connector No.	E8
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	NS38FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
83	O	-
84	V	-
86	W	-
87	L	-
88	GR	-
89	BR	-
90	P	-

28	L	-
30	GR	-
32	L	-
33	P	-
36	G	-

Connector No.	E6
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH48FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
39	P	-
40	L	-
41	B/W	-
42	Y	-
43	SB	-
44	W	-
45	G	-
46	R	-

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]
91	P	-
92	O	-
97	V	-
104	LG	-

Fail-safe

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

JCMWA3135GB

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

< ECU DIAGNOSIS INFORMATION > [INTELLIGENT KEY SYSTEM]

Control part	Fail-safe operation
Cooling fan	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> Parking lamps License plate lamps Side maker lamps Illuminations Tail lamps 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 relay 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.

Voltage judgment		IPDM E/R judgment	Operation
Ignition relay contact side	Ignition relay excitation coil side		
ON	ON	Ignition relay ON normal	—
OFF	OFF	Ignition relay OFF normal	—
ON	OFF	Ignition relay ON stuck	<ul style="list-style-type: none"> Detects DTC "B2098: IGN RELAY ON" Turns ON the tail lamp relay for 10 minutes
OFF	ON	Ignition relay OFF stuck	Detects DTC "B2099: IGN RELAY OFF"

FRONT WIPER CONTROL

IPDM E/R detects front wiper stop position by a front wiper stop position signal.

When a front wiper stop position 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.

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

< ECU DIAGNOSIS INFORMATION > [INTELLIGENT KEY SYSTEM]

Ignition switch	Front wiper switch	Front wiper stop position signal
ON	OFF	The front wiper stop position signal (stop position) cannot be input for 10 seconds.
	ON	The front wiper stop position 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:000000004904302

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	Reference
No DTC is detected. further testing may be required.	—	—
U1000: CAN COMM CIRCUIT	×	PCS-15
B2098: IGN RELAY ON	×	PCS-16
B2099: IGN RELAY OFF	—	PCS-17
B2108: STRG LCK RELAY ON	—	SEC-97
B2109: STRG LCK RELAY OFF	—	SEC-98
B210A: STRG LCK STATE SW	—	SEC-99
B210B: START CONT RLY ON	—	SEC-103
B210C: START CONT RLY OFF	—	SEC-104
B210D: STARTER RELAY ON	—	SEC-105
B210E: STARTER RELAY OFF	—	SEC-106
B210F: INTRLCK/PNP SW ON	—	SEC-108
B2110: INTRLCK/PNP SW OFF	—	SEC-110

SYMPTOM DIAGNOSIS

ENGINE DOES NOT START WITH INTELLIGENT KEY

Description

INFOID:000000004346557

- 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:000000004346558

1.PERFORM WORK SUPPORT

Perform “INSIDE ANT DIAGNOSIS” on Work Support of “INTELLIGENT KEY”.

Refer to [SEC-25, "INTELLIGENT KEY : CONSULT-III Function \(BCM - INTELLIGENT KEY\)"](#).

>> GO TO 2.

2.PERFORM SELF DIAGNOSTIC RESULT

Perform “BCM” Self Diagnostic Result.

Is DTC detected?

YES >> Refer to [DLK-59, "DTC Logic"](#) (instrument center), [DLK-61, "DTC Logic"](#) (console) or [DLK-63, "DTC Logic"](#) (luggage room).

NO >> GO TO 3.

3.CHECK PUSH-BUTTON IGNITION SWITCH

Check push-button ignition switch.

Refer to [PCS-66, "Component Function Check"](#).

Is the inspection normal?

YES >> GO TO 4.

NO >> Repair or replace malfunctioning parts.

4.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection normal?

YES >> Check intermittent incident. Refer to [GI-40, "Intermittent Incident"](#).

NO >> GO TO 1.

STEERING DOES NOT LOCK

< SYMPTOM DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

STEERING DOES NOT LOCK

Description

INFOID:0000000004346559

If door switch is malfunctioning, BCM cannot lock the steering. If BCM does not detect DTC, steering lock unit is normal.

Diagnosis Procedure

INFOID:0000000004346560

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 [GI-40. "Intermittent Incident"](#).

NO >> GO TO 1.

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SEC

ENGINE DOES NOT START WHEN INTELLIGENT KEY IS INSERTED INTO KEY SLOT

< SYMPTOM DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

ENGINE DOES NOT START WHEN INTELLIGENT KEY IS INSERTED INTO KEY SLOT

Description

INFOID:000000004346561

- 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.

Diagnosis Procedure

INFOID:000000004346562

1.PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Reregister 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 reregistered Intelligent Key?

YES >> INSPECTION END

NO >> GO TO 2.

2.CHECK KEY SLOT

Check key slot.

Refer to [DLK-99, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-40, "Intermittent Incident"](#).

NO >> GO TO 1.

SECURITY INDICATOR LAMP DOES NOT TURN ON OR BLINK

< SYMPTOM DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

SECURITY INDICATOR LAMP DOES NOT TURN ON OR BLINK

Description

INFOID:000000004346563

- 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:000000004346564

1.CHECK SECURITY INDICATOR LAMP

Check security indicator lamp.

Refer to [SEC-117, "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-40, "Intermittent Incident"](#).

NO >> GO TO 1.

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SEC

VEHICLE SECURITY SYSTEM CAN NOT BE SET

< SYMPTOM DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

VEHICLE SECURITY SYSTEM CAN NOT BE SET INTELLIGENT KEY

INTELLIGENT KEY : Description

INFOID:000000004346565

Armed phase is not activated when door is locked using Intelligent Key.

NOTE:

Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.

CONDITION OF VEHICLE (OPERATING CONDITION)

Confirm the setting of "SECURITY ALARM SET" in "WORK SUPPORT" in "THEFT ALM" using CONSULT-III.

INTELLIGENT KEY : Diagnosis Procedure

INFOID:000000004346566

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

Lock/unlock door with Intelligent Key.

Refer to [DLK-28, "REMOTE KEYLESS ENTRY FUNCTION : System Description"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check Intelligent Key system (remote keyless entry function). Refer to [DLK-177, "Diagnosis Procedure"](#).

2.CHECK HOOD SWITCH

Check hood switch.

Refer to [SEC-114, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-40, "Intermittent Incident"](#).

NO >> GO TO 1.

DOOR REQUEST SWITCH

DOOR REQUEST SWITCH : Description

INFOID:000000004346567

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

NOTE:

Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.

CONDITION OF VEHICLE (OPERATING CONDITION)

Confirm the setting of "SECURITY ALARM SET" in "WORK SUPPORT" in "THEFT ALM" using CONSULT-III.

DOOR REQUEST SWITCH : Diagnosis Procedure

INFOID:000000004346568

1.CHECK INTELLIGENT KEY SYSTEM (DOOR LOCK FUNCTION)

Lock/unlock door with door request switch.

Refer to [DLK-19, "DOOR LOCK FUNCTION : System Description"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check Intelligent Key system (door lock function). Refer to [DLK-174, "ALL DOOR : Diagnosis Procedure"](#).

2.CHECK HOOD SWITCH

VEHICLE SECURITY SYSTEM CAN NOT BE SET

[INTELLIGENT KEY SYSTEM]

< SYMPTOM DIAGNOSIS >

Check hood switch.

Refer to [SEC-114, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-40, "Intermittent Incident"](#).

NO >> GO TO 1.

DOOR KEY CYLINDER

DOOR KEY CYLINDER : Description

INFOID:0000000004346569

Armed phase is not activated when door is locked using mechanical key.

NOTE:

Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.

CONDITION OF VEHICLE (OPERATING CONDITION)

Confirm the setting of "SECURITY ALARM SET" in "WORK SUPPORT" in "THEFT ALM" using CONSULT-III.

DOOR KEY CYLINDER : Diagnosis Procedure

INFOID:0000000004346570

1.CHECK POWER DOOR LOCK SYSTEM

Lock/unlock door with mechanical key.

Refer to [DLK-11, "System Description"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check power door lock system. Refer to [DLK-173, "Diagnosis Procedure"](#).

2.CHECK HOOD SWITCH

Check hood switch.

Refer to [SEC-114, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-40, "Intermittent Incident"](#).

NO >> GO TO 1.

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SEC

VEHICLE SECURITY ALARM DOES NOT ACTIVATE

< SYMPTOM DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

VEHICLE SECURITY ALARM DOES NOT ACTIVATE

Description

INFOID:000000004346571

Before performing the diagnosis in the following table, check "Work Flow". Refer to [SEC-5. "Work Flow"](#).

Diagnosis Procedure

INFOID:000000004346572

1.CHECK DOOR SWITCH

Check door switch.

Refer to [DLK-66. "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the malfunctioning door switch

2.CHECK HOOD SWITCH

Check hood switch.

Refer to [SEC-114. "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace the malfunctioning door switch

3.CHECK HEADLAMP ALARM

Check headlamp operation.

Refer to [SEC-116. "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace malfunctioning parts.

4.CHECK HORN

Check horn.

Refer to [DLK-103. "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-40. "Intermittent Incident"](#).

NO >> GO TO 1.

VEHICLE SECURITY SYSTEM CAN NOT CANCELED

< SYMPTOM DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

VEHICLE SECURITY SYSTEM CAN NOT CANCELED INTELLIGENT KEY

INTELLIGENT KEY : Description

INFOID:000000004346573

Before performing the diagnosis in the following table, check "Work Flow". Refer to [SEC-5, "Work Flow"](#).

INTELLIGENT KEY : Diagnosis Procedure

INFOID:000000004346574

1.CHECK INTELLIGENT KEY

Check Intelligent Key.

Refer to [DLK-97, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CHECK INTELLIGENT KEY SYSTEM

Check Intelligent Key system.

Refer to [SEC-9, "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-40, "Intermittent Incident"](#).

NO >> GO TO 1.

DOOR REQUEST SWITCH

DOOR REQUEST SWITCH : Description

INFOID:000000004346575

Before performing the diagnosis in the following table, check "Work Flow". Refer to [SEC-5, "Work Flow"](#).

DOOR REQUEST SWITCH : Diagnosis Procedure

INFOID:000000004346576

1.CHECK DOOR REQUEST SWITCH

Check door request switch.

Refer to [DLK-86, "Component Function Check"](#).

Is the inspection normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CHECK INTELLIGENT KEY SYSTEM

Check Intelligent Key system.

Refer to [DLK-15, "INTELLIGENT KEY SYSTEM : System Description"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Refer to [DLK-7, "Work Flow"](#).

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-40, "Intermittent Incident"](#).

NO >> GO TO 1.

DOOR KEY CYLINDER

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SEC

VEHICLE SECURITY SYSTEM CAN NOT CANCELED

< SYMPTOM DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

DOOR KEY CYLINDER : Description

INFOID:000000004346577

Before performing the diagnosis in the following table, check "Work Flow". Refer to [SEC-5, "Work Flow"](#).

DOOR KEY CYLINDER : Diagnosis Procedure

INFOID:000000004346578

1.CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch.

Refer to [DLK-79, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CHECK INTELLIGENT KEY SYSTEM

Check power door lock system.

Refer to [DLK-15, "INTELLIGENT KEY SYSTEM : System Description"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Refer to [DLK-7, "Work Flow"](#).

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-40, "Intermittent Incident"](#).

NO >> GO TO 1.

INTELLIGENT KEY INSERT INFORMATION DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

INTELLIGENT KEY INSERT INFORMATION DOES NOT OPERATE

Description

INFOID:000000004346579

Intelligent Key insert information does not operate when push-button ignition switch is operated while Intelligent Key is not inside vehicle.

NOTE:

Warning functions operating condition is extremely complicated. During operation confirmation reconfirm the list above twice in order to ensure proper operation. Refer to [DLK-39, "WARNING FUNCTION : System Description"](#).

Diagnosis Procedure

INFOID:000000004346580

1.CHECK POWER POSITION

Check if ignition switch position is changing or not.

Does ignition switch position change?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK PUSH-BUTTON IGNITION SWITCH

Check push-button ignition switch.

Refer to [PCS-66, "Component Function Check"](#).

Is the inspection result normal?

YES >> Check BCM for DTC. Refer to [SEC-176, "DTC Index"](#).

NO >> Repair or replace the malfunctioning parts.

3.CHECK DOOR SWITCH

Check door switch.

Refer to [DLK-66, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunctioning parts.

4.CHECK KEY SLOT

Check key slot.

Refer to [DLK-99, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace the malfunctioning parts.

5.CHECK COMBINATION METER DISPLAY

Check combination meter display.

Refer to [DLK-105, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace the malfunctioning parts.

6.CHECK KEY SLOT INDICATOR

Check key slot indicator.

Refer to [DLK-101, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace the malfunctioning parts.

7.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

INTELLIGENT KEY INSERT INFORMATION DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[INTELLIGENT KEY SYSTEM]

YES >> Check intermittent incident. Refer to [GI-40, "Intermittent Incident"](#).
NO >> GO TO 1.

PRECAUTION

PRECAUTIONS

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

INFOID:000000004346581

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

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, 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 AIR BAG".
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

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

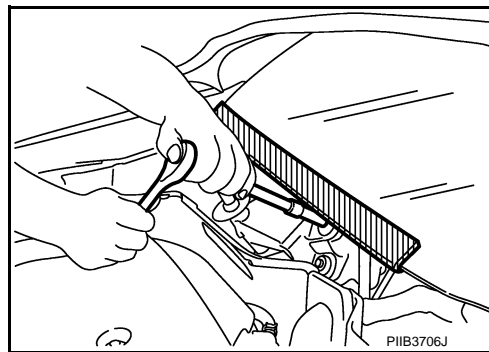
WARNING:

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

Precaution for Procedure without Cowl Top Cover

INFOID:000000004346582

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



Precaution Necessary for Steering Wheel Rotation after Battery Disconnect

INFOID:000000004346583

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.

For vehicle with steering lock unit, if the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.

PRECAUTIONS

< PRECAUTION >

[INTELLIGENT KEY SYSTEM]

If turning the steering wheel is required with the battery disconnected or discharged, follow the operation 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. 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.

REMOVAL AND INSTALLATION

KEY SLOT

Exploded View

INFOID:000000004346584

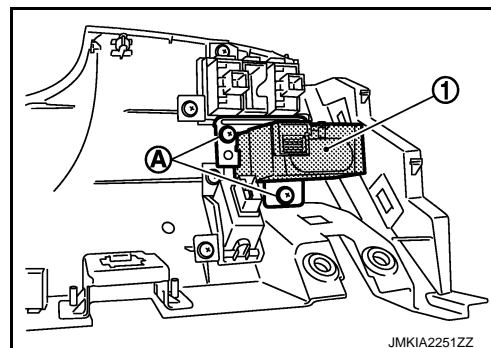
Refer to [IP-12, "Exploded View"](#).

Removal and Installation

INFOID:000000004346585

REMOVAL

1. Remove the instrument driver lower panel. Refer to [IP-13, "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.



INSTALLATION

Install in the reverse order of removal.

SEC

PUSH-BUTTON IGNITION SWITCH

< REMOVAL AND INSTALLATION >

[INTELLIGENT KEY SYSTEM]

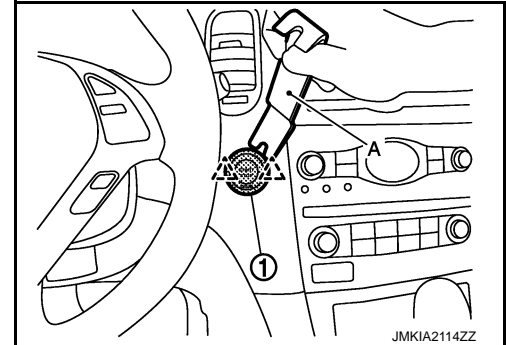
PUSH-BUTTON IGNITION SWITCH

Removal and Installation

INFOID:000000004346586

REMOVAL

Remove the push-button ignition switch fixing pawl using a remover tool (A), and then remove push-button ignition switch (1).



INSTALLATION

Install in the reverse order of removal.