SECURITY CONTROL SYSTEM

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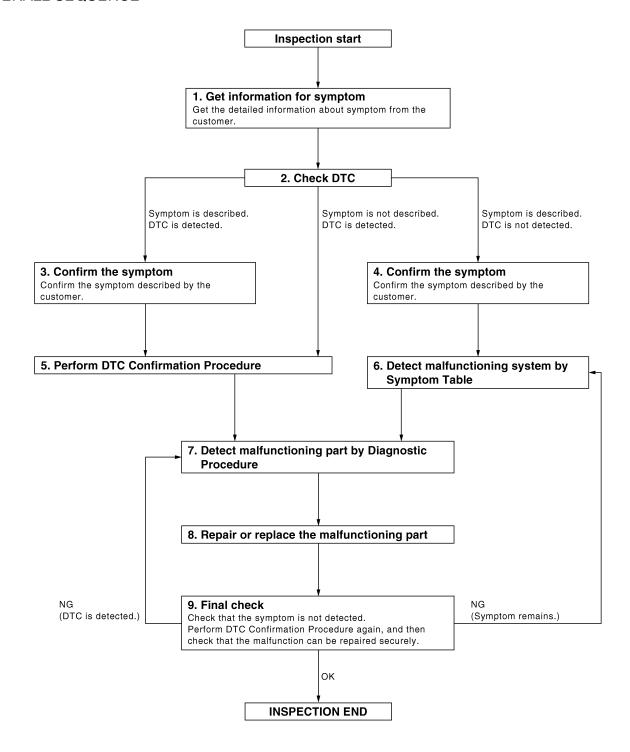
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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

OVERALL SEQUENCE



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DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[WITH 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

- Check DTC for Intelligent Key unit and BCM.
- Perform the following procedure if DTC is displayed.
- Erase DTC.
- Study the relationship between the cause detected by DTC and the symptom described by the customer.
- Check related service bulletins for information.

Is any symptom described and any DTC detected?

Symptom is described, DTC is displayed>>GO TO 3.

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

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

3.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

Connect CONSULT-III to the vehicle in "DATA MONITOR" mode and check real-time diagnosis results.

Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 5.

4. CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

Connect CONSULT-III to the vehicle in "DATA MONITOR" mode and check real-time diagnosis results.

Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 6. 5 . PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again. If two or more DTCs are detected, refer to SEC-125, "DTC Inspection Priority Chart" (Intelligent Key unit) SEC-104, "DTC Inspection Priority Chart" (BCM) and determine trouble diagnosis order.

Is DTC detected?

YES >> GO TO 7.

>> Refer to GI-41, "Intermittent Incident". NO

O.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

Detect malfunctioning system according to Symptom Table based on the confirmed symptom in step 4.

7. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

NOTE:

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

>> GO TO 8.

>> GO TO 7.

f 8.REPAIR OR REPLACE THE MALFUNCTIONING PART

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

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DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[WITH INTELLIGENT KEY SYSTEM]

>> GO TO 9.

9. FINAL CHECK

When DTC was detected in step 9, perform DTC Confirmation Procedure or Component Function Check again, and then check that the malfunctions have been fully repaired.

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

Are all malfunctions corrected?

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

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[WITH INTELLIGENT KEY SYSTEM]

INSPECTION AND ADJUSTMENT ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description

INFOID:0000000004230988

Perform the system initialization when replacing BCM, ECM, Intelligent Key unit or steering lock unit with a used parts or registering an additional Intelligent Key or mechanical key.

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement INFOID:0000000004230989

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Refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

ECM RE-COMMUNICATING FUNCTION

ECM RE-COMMUNICATING FUNCTION: Description

INFOID:0000000004230990

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:0000000004230991

1.PERFORM ECM RE-COMMUNICATING FUNCTION

- 1 Install ECM.
- Using a registered key (*2), turn ignition switch to "ON". *2: To perform this step, use the key that has been used before performing ECM replacement.
- Maintain ignition switch in "ON" position for at least 5 seconds.
- 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. SEC

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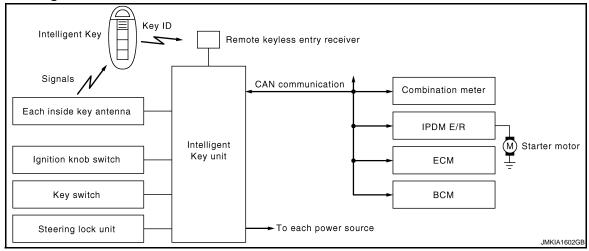
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FUNCTION DIAGNOSIS

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

System Diagram

INFOID:0000000004230992



System Description

INFOID:0000000004230993

INPUT/OUTPUT SIGNAL CHART

Intelligent Key Unit

	Switch/Input signal	Input signal to Intelligent Key unit	Intelligent Key unit function	Actuator/Output signal	
	Key switch	Mechanical key (insert/remove)	Engine start function	KEY warning lamp/buzzer	
	Ignition knob switch	Ignition knob (press/release)		Steering lock unit Starter relay request (to IPDM E/	
	Steering lock unit	Steering lock (lock/unlock)		R) • Inside key antenna (Instrument center, centels, rear	
	Inside key antenna (Instrument center, console, rear seat)	Intelligent Key (inside antenna detection area or not.)		(Instrument center, console, rear seat)	
IPD	DM E/R				
	Switch/Input signal	Input signal to IPDM E/R	IPDM E/R function	Actuator/Output signal	
	Park/neutral position switch	P, N range	Engine start function	Starter relay Starter motor	
вс	М				
	Switch/Input signal	Input signal to BCM	BCM function	Actuator/Output signal	
	Key switch	Mechanical key (insert/remove)	Engine start function	Inside key antenna (Instrument center, console, rear seat)	

SYSTEM DESCRIPTION

The engine start function of Intelligent Key system is a system that makes it possible to start and stop the
engine without using the key. It verifies the electronic ID using two-way communications when pressing the
ignition knob 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 SYSTEM/ENGINE START FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

- Intelligent Key has 2 IDs (for Intelligent Key and for NVIS/NATS). It can perform the door lock/unlock operation and the engine start 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
 mechanical key set in the Intelligent Key to the ignition key cylinder. At that time, perform the NVIS/NATS ID
 verification. If it is used when the Intelligent Key is carried, perform the Intelligent Key ID verification.
- If the ID is successfully verified, and when the ignition knob switch is pressed, steering lock will be released and initiating the engine will be possible.
- The door lock/unlock operation can be performed when the Intelligent Key battery is discharged, by operating the driver door key cylinder using the mechanical key set in the Intelligent Key.
- Up to 4 Intelligent Keys can be registered (Including the standard Intelligent Key) on request from the owner.
 NOTE:
- Refer to <u>SEC-15, "System Description"</u> for any functions other than engine start function of Intelligent Key system.

PRECAUTIONS FOR INTELLIGENT KEY SYSTEM

In the Intelligent Key system of model S35, the transponder [the chip for NVIS/NATS ID verification]
is integrated into the Intelligent Key. (For the conventional models, it is integrated into the mechanical key.) Therefore, the mechanical key cannot perform the ID verification, and thus it cannot start
the engine. Instead, the NVIS/NATS ID verification can be performed by inserting the mechanical key
into the key cylinder, and then it can start the engine.

OPERATION WHEN INTELLIGENT KEY IS CARRIED

- 1. When the ignition knob switch is ON, and Intelligent Key unit is transmit the request signal to the Intelligent Key.
- 2. The Intelligent Key receives the request signal and transmits the Intelligent Key ID signal to the Intelligent Key unit.
- 3. The Intelligent Key unit receives the Intelligent Key ID signal and verifies it with the registered ID.
- Intelligent Key unit transmits the steering lock/unlock signal to steering lock unit and turn on the key warning lamp (green) if the verification results are OK. (The detail of key warning lamp operation, refer to <u>DLK-34</u>, "WARNING FUNCTION: System <u>Description</u>")
- 5. Release of the steering lock.
- 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.
- IPDM E/R turns the starter control relay ON when receiving the starter request signal.
- 8. When shift position is in P or N position, battery power is supplied through the starter relay and operate the starter motor and to start the cranking. CAUTION:

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

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 MECHANICAL KEY IS USED

When the Intelligent Key battery is discharged, performs the NVIS/NATS ID verification between the integrated transponder and BCM by inserting the mechanical key into the key cylinder, and then the engine can be started.

For details relating to starting the engine using mechanical key, refer to <u>SEC-15</u>, "System Description".

STEERING LOCK OPERATION

Steering is locked by steering lock unit when ignition switch is in the OFF position (the ignition knob is released) and key switch is OFF (key is removed from ignition key cylinder).

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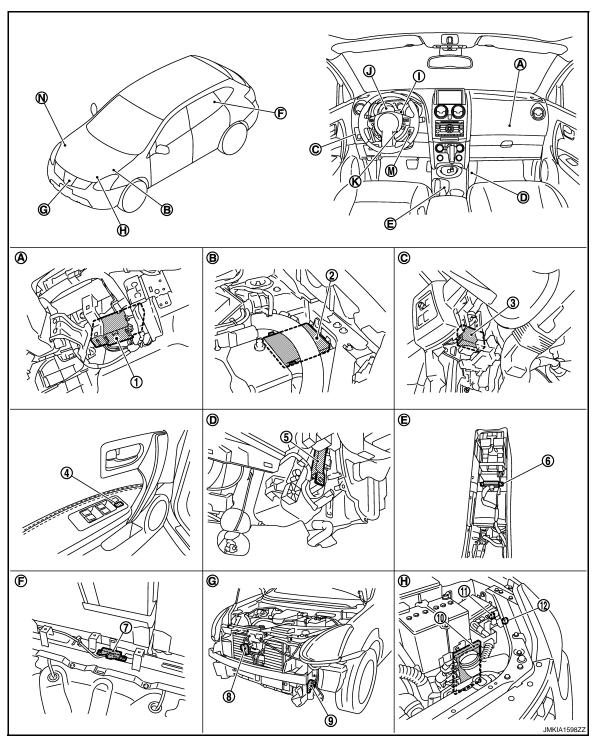
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Component Parts Location



- BCM M65, M66, M67
- 4. Door lock and unlock switch (power window main switch D5, D6)
- 7. Inside key antenna (rear seat) B45
- 10. ECM E16

- 2. IPDM E/R E10, E11, E13, E14, E15
- Inside key antenna (instrument center) M56
- 8. Horn (low) E80, E81
- 11. Horn relay E5 (except for Mexico)

- Intelligent Key unit M40
- 6. Inside key antenna (console) M252
- 9. Horn (high) E78, E79
- 12. Theft warning horn relay E70 (for Mexico)

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

- Over the glove box
- D. View with instrument lower cover (RH) removed
- View with front bumper removed G.
- Engine room (LH) B.
- E. Back side of center console
- Engine room (LH)

- Over the instrument driver lower cov-
- F. View with luggage floor trim center finisher removed

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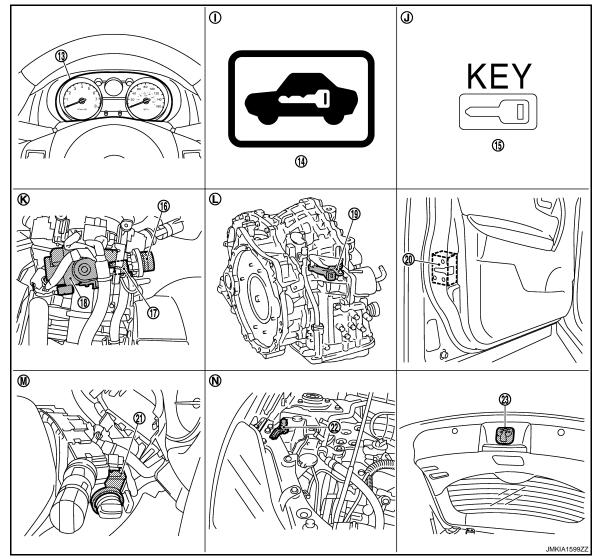
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- Combination meter M34
- 16. Ignition knob switch (Ignition knob switch, key switch and key lock solenoid M25)
- 19. Park/neutral position switch F21
- 22. Hood switch E113 (for Mexico)
- Built in combination meter Ι.
- Transaxle assembly

- Security indicator lamp (combination meter M34)
- Key switch 17. (Ignition knob switch, key switch and key lock solenoid M25)
- 20. Front door lock assembly (driver side)
- 23. Back door switch (back door lock assembly D190)
- Built in combination meter J.
- M. View with steering column cover removed

- Key warning lamp (combination meter M34)
- Steering lock unit M28 18.
- NATS antenna amp. M26
- View with steering column cover removed
- Engine room (RH)

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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION DIAGNOSIS > [WITH INTELLIGENT KEY SYSTEM]

< FUNCTION DIAGNOSIS > Component Description

INFOID:0000000004230995

Component	Reference
Intelligent Key unit	<u>SEC-43</u>
BCM	BCS-7
ECM	For California: <u>EC-31</u> For USA (Fedelal) and Canada: <u>EC-508</u> For Mexico: <u>EC-941</u>
Combination meter	MWI-6
Steering lock unit	<u>SEC-41</u>
Ignition knob switch	<u>SEC-53</u>
Key switch	<u>SEC-51</u>
Inside key antenna	DLK-90
Security indicator lamp	<u>SEC-64</u>

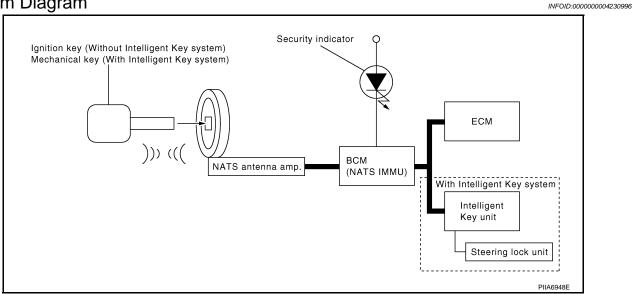
NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS)

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS)

System Diagram



System Description

INPUT/OUTPUT SIGNAL CHART

Intelligent Key Unit

Switch/Input signal	Input signal to BCM	Intelligent Key unit function	Actuator/Output signal	
Ignition knob switch	Ignition knob (press/release)		Steering lock unit	
Key switch	Mechanical key (Insert/remove)	NVIS/NATS		
Steering lock unit	Steering (lock/unlock)	_		
ECM	Engine status signal			

BCM

Switch/Input signal	Input signal to BCM	BCM function	Actuator/Output signal
NATS antenna amp.	Key ID	NVIS/NATS	Security indicator lamp
ECM	Engine status signal	INVIO/INAI O	Starter request

SYSTEM DESCRIPTION

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS) has the following immobilizer functions:

- Engine immobilizer shows high anti-theft performance to prevent engine from starting by other than the
- Only a key with key ID registered in BCM and ECM can start engine, and shows high anti-theft performance to prevent key from being copied or stolen.
- Therefore, NVIS/NATS warns outsiders that the vehicle is equipped with the anti-theft system. Refer to <u>SEC-</u> 20, "System Description".
- If system detects malfunction, security indicator illuminates when ignition switch is turned to ON position.
- If the owner requires, ignition key ID or mechanical key ID can be registered for up to 5 keys.

PRECAUTIONS FOR KEY REGISTRATION

 The key registration is a procedure that erases the current NVIS/NATS ID once, and then re-registers a new ID. Therefore the registered Intelligent Key is necessary for this procedure. Before starting the registration operation collect all registered Intelligent Keys from the customer.

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NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS)

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

- The NVIS/NATS ID registration is the procedure that registers the ID stored into the transponder (integrated in mechanical key) to BCM.
 - The Intelligent Key ID registration is the procedure that registers the ID to Intelligent Key unit.
- When performing the Intelligent Key system registration only, the engine cannot be started by inserting the key into the key cylinder. When performing the NVIS/NATS registration only, the engine cannot be started by using the mechanical key.

SECURITY INDICATOR

- Warns that the vehicle is equipped with NVIS/NATS.
- The security indicator lamp always blinks, when the ignition switch is in the except ON position.
- The security indicator lamp turns OFF, when the ignition switch is in ON position.
- When NVIS/NATS detects trouble, the security indicator lamp lights up while ignition key is in the "ON" position.

MAINTENANCE INFORMATION

CAUTION:

- During trouble diagnosis or when the following parts have been replaced with a used parts, and if
 mechanical key is added, registration* is required. A new part (except Intelligent Key and mechanical
 key) should register automatically after the ignition switch is turned ON. New one means a virgin
 control unit that has never been energized on-board
 - *: All keys kept by the owner of the vehicle should be registered with mechanical key.
- ECM
- BCM
- Mechanical key
- Intelligent Key unit
- Steering lock unit
- NVIS/NATS trouble diagnosis, system initialization and additional registration of other mechanical key IDs must be carried out using CONSULT-III hardware and SECURITY CARD.
 When NVIS/NATS initialization has been completed, the ID of the inserted Intelligent Key or mechanical key IDs can be carried out.
- Possible symptom of NVIS/NATS malfunction is "Engine cannot start". The engine can be started
 with the Intelligent Key system and NVIS/NATS. Identify the possible causes according to "Work
 Flow", Refer to SEC-6, "Work Flow".
- If ECM other than Genuine NISSAN is installed, the engine cannot be started.

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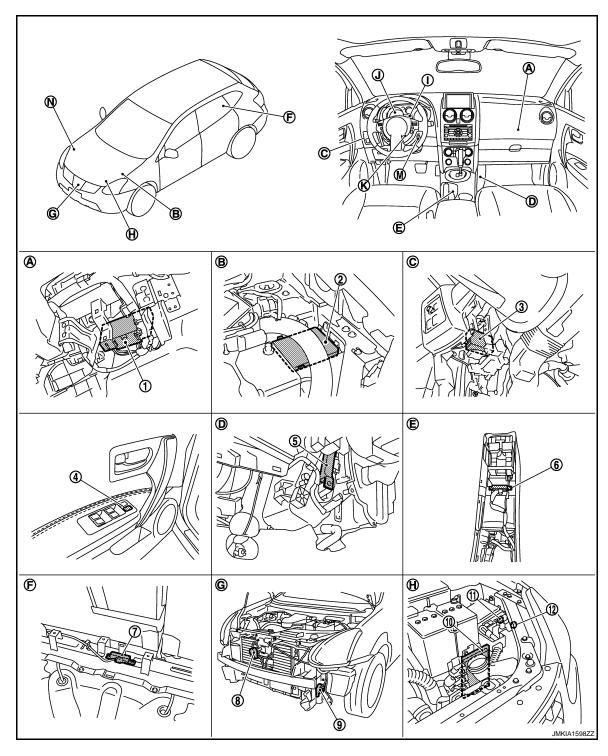
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- **BCM** M65, M66, M67
- 4. Door lock and unlock switch (power window main switch D5, D6)
- 7. Inside key antenna (rear seat) B45
- 10. ECM E16

- IPDM E/R E10, E11, E13, E14, E15
- 5. Inside key antenna (instrument center) M56
- Horn (low) E80, E81
- 11. Horn relay E5 (except for Mexico)

- 3. Intelligent Key unit M40
- Inside key antenna (console) M252
- Horn (high) E78, E79
- (for Mexico)

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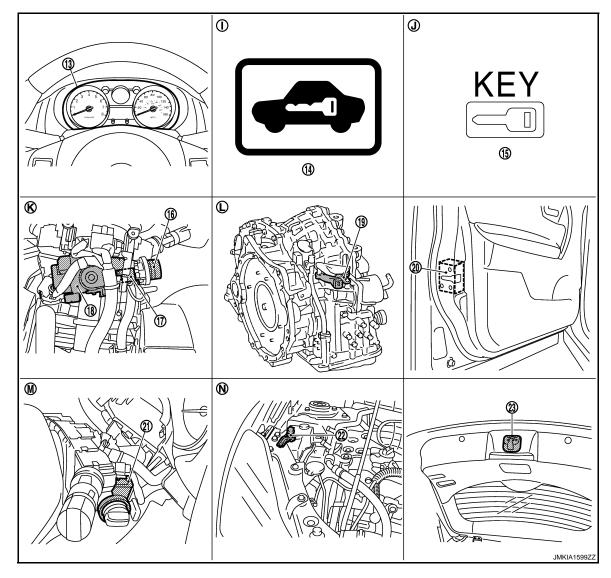
Theft warning horn relay E70

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS) [WITH INTELLIGENT KEY SYSTEM]

< FUNCTION DIAGNOSIS >

- Over the glove box
- D. View with instrument lower cover (RH) removed
- View with front bumper removed G.
- B. Engine room (LH)
- E. Back side of center console
- Engine room (LH)

- Over the instrument driver lower cov-
- F. View with luggage floor trim center finisher removed



- 13. Combination meter M34
- 16. Ignition knob switch (Ignition knob switch, key switch and key lock solenoid M25)
- 19. Park/neutral position switch F21
- 22. Hood switch E113 (for Mexico)
- Built in combination meter Ι.
- Transaxle assembly

- Security indicator lamp (combination meter M34)
- Key switch 17. (Ignition knob switch, key switch and key lock solenoid M25)
- 20. Front door lock assembly (driver side) 21. NATS antenna amp. M26
- (back door lock assembly D190) Built in combination meter J.

Back door switch

23.

Μ. View with steering column cover removed

- 15. Key warning lamp (combination meter M34)
- 18. Steering lock unit M28
- View with steering column cover removed
- N. Engine room (RH)

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS)

< FUNCTION DIAGNOSIS > Component Description

[WITH INTELLIGENT KEY SYSTEM]

INFOID:0000000004230999

Component	Reference
BCM	BCS-7
IPDM E/R	PCS-2
Steering lock unit	<u>SEC-41</u>
Key switch	<u>SEC-51</u>
Ignition knob switch	<u>SEC-53</u>
NATS antenna amp.	<u>SEC-38</u>
Security indicator lamp	<u>SEC-64</u>
Door lock and unlock switch	DLK-59
Key cylinder switch	DLK-70

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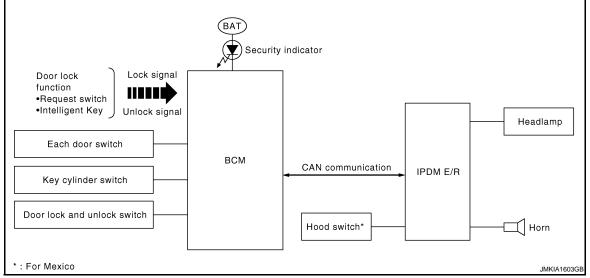
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VEHICLE SECURITY SYSTEM

System Diagram

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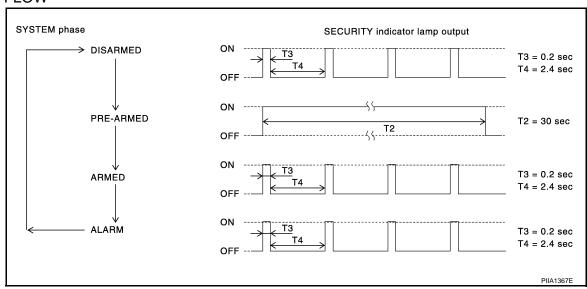
System Description

INFOID:0000000004231001

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM system	Actuator
All door switch	Open or close	Vehicle security system	IPDM E/R Head lamp Horn Security indicator lamp
Hood switch	— Open or close		
Door key cylinder switch			
Door lock and unlock switch	Lock or unlock		
Door request switch			
Intelligent May	Lock or unlock		
Intelligent Key	Panic alarm		

OPERATION FLOW



SETTING THE VEHICLE SECURITY SYSTEM

Initial Condition

VEHICLE SECURITY SYSTEM

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

• Ignition switch is in OFF position.

Disarmed Phase

- When hood, doors 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, the security indicator lamp blinks every 2.4 sec-

Pre-armed Phase and Armed Phase

When the following operation 1 or 2 is performed, the vehicle security system turns into the "pre-armed" phase. (The security indicator lamp illuminates for approx. 30 seconds. Then, the system automatically shifts into the "armed" phase.)

- BCM receives LOCK signal from front door key cylinder switch or Intelligent Key, after hood, back door and all doors are closed.
- 2. Hood, back door and all doors are closed after front doors are locked by key or door lock and unlock switch.

CANCELING THE SET VEHICLE SECURITY SYSTEM

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

- Unlock the doors with the key or Intelligent Key.
- Turn ignition switch "ON" or "ACC" position.

CANCELING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM

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

ACTIVATING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM

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

- 1. Hood or any door is opened during armed phase.
- 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

When headlamp relay and horn relay are energized, then power is supplied to headlamps (LH and RH) and horns (HIGH and LOW).

The headlamp flashes and the horn sounds intermittently.

The alarm automatically turns off after 50 seconds or when BCM receives any signal from Intelligent Key.

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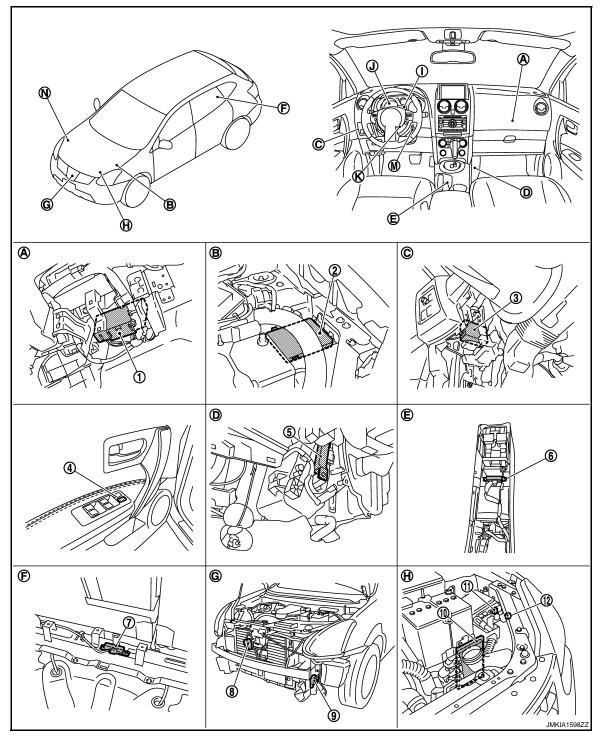
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Component Parts Location

INFOID:0000000004231002



- 1. BCM M65, M66, M67
- 4. Door lock and unlock switch (power window main switch D5, D6)
- 7. Inside key antenna (rear seat) B45
- 10. ECM E16

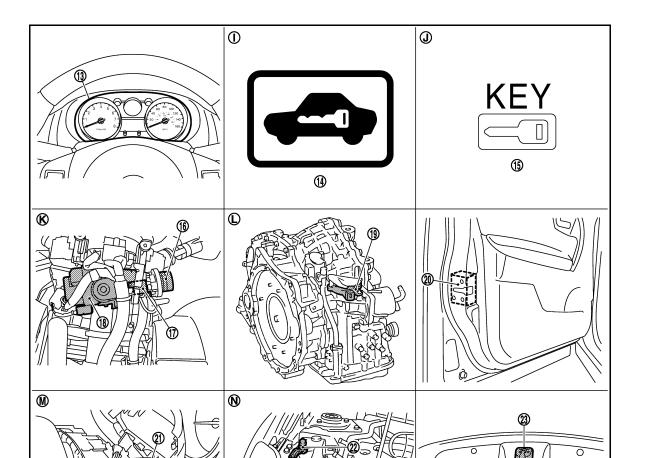
- 2. IPDM E/R E10, E11, E13, E14, E15
- 5. Inside key antenna (instrument center) M56
- 8. Horn (low) E80, E81
- 11. Horn relay E5 (except for Mexico)

- Intelligent Key unit M40
- 6. Inside key antenna (console) M252
- 9. Horn (high) E78, E79
- 12. Theft warning horn relay E70 (for Mexico)

VEHICLE SECURITY SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

- A. Over the glove box
- D. View with instrument lower cover (RH) removed
- G. View with front bumper removed
- B. Engine room (LH)
- C. Over the instrument driver lower cover
- E. Back side of center console
- F. View with luggage floor trim center finisher removed
- H. Engine room (LH)



- 3. Combination meter M34
- Ignition knob switch
 (Ignition knob switch, key switch and key lock solenoid M25)
- 19. Park/neutral position switch F21
- 22. Hood switch E113 (for Mexico)
- I. Built in combination meter
- Transaxle assembly

- 14. Security indicator lamp (combination meter M34)
- Key switch (Ignition knob switch, key switch and key lock solenoid M25)
- 20. Front door lock assembly (driver side) D9
- 23. Back door switch (back door lock assembly D190)
- J. Built in combination meter
- M. View with steering column cover removed

Key warning lamp (combination meter M34)

JMKIA1599ZZ

- 18. Steering lock unit M28
- 21. NATS antenna amp. M26
- View with steering column cover removed
- N. Engine room (RH)

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Revision: 2008 August SEC-23 2009 Rogue

VEHICLE SECURITY SYSTEM

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Component Description

INFOID:0000000004231003

Component	Reference	
BCM	BCS-7	
Horn	<u>SEC-62</u>	
Hood switch	<u>SEC-55</u>	
Security indicator	<u>SEC-64</u>	
Door switch	DLK-299	
IPDM E/R	PCS-2	

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

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

INFOID:0000000004231004

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APPLICATION ITEM

CONSULT-III can display each diagnostic item using the diagnostic test modes shown following.

Diagnosis mode	Function description
ECU Identification	BCM part number is displayed.
Self-Diagnostic Results	Displays the diagnosis results judged by BCM. Refer to SEC-104, "DTC Index".
Data Monitor	BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Work Support	Changes the setting for each system function.
Configuration	Read and save the vehicle specification.Write the vehicle specification when replacing BCM.
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from 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	CONSULT-III sub system selection item	Diagnosis mode		
		WORK SUPPORT	DATA MONITOR	ACTIVE TEST
_	BCM	×		
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER	×	×	×
Warning chime	BUZZER		×	×
Interior room lamp control	INT LAMP	×	×	×
Remote keyless entry system	MULTI REMOTE ENT	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER		×	×
Air conditioner	AIR CONDITONER		×	
Intelligent Key system	INTELLIGENT KEY		×	
Combination switch	COMB SW		×	
Immobilizer	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open	TRUNK		×	×
Vehicle security system	THEFT ALM	×	×	×
Signal buffer system	SIGNAL BUFFER		×	×
_	PTC HEATER*			

^{*:} This item is displayed, but is not function.

IMMU

IMMU: CONSULT-III Function (BCM - IMMU)

INFOID:0000000004231005

APPLICATION ITEM

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

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DIAGNOSIS SYSTEM (BCM)

[WITH INTELLIGENT KEY SYSTEM]

< FUNCTION DIAGNOSIS >

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

DATA MONITOR

Monitor item	Content
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.

ACTIVE TEST

Test item	Description
THEFT IND	This test is able to check security indicator operation [ON/OFF].

THEFT ALM

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

INFOID:0000000004231006

APPLICATION ITEM

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

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

DATA MONITOR

Monitor Item	Condition
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
KEYLESS LOCK*2	Indicates [ON/OFF] condition of lock signal from key fob.
KEYLESS UNLOCK*2	Indicates [ON/OFF] condition of unlock signal from key fob.
I-KEY LOCK*1	Indicates [ON/OFF] condition of lock signal from Intelligent Key.
I-KEY UNLOCK*1	Indicates [ON/OFF] condition of unlock signal from Intelligent Key.
TRUNK OPNR SW	Indicates [ON/OFF] condition of back door opener switch.
TRUNK CYL SW	NOTE: The item is indicated, but not monitored.
TRNK OPNR MNTR	NOTE: The item is indicated, but not monitored.
HOOD SW	Indicates [ON/OFF] condition of hood switch.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch (driver side).
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch (passenger side).
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
BACK DOOR SW	Indicates [ON/OFF] condition of back door switch.
KEY CYL LK-SW	Indicates [ON/OFF] condition of key cylinder switch.
KEY CYL UN-SW	Indicates [ON/OFF] condition of key cylinder switch.

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Monitor Item	Condition
CDL LOCK SW	Indicates [ON/OFF] condition of door lock and unlock switch.
CDL UNLOCK SW	Indicates [ON/OFF] condition of door lock and unlock switch.

^{*1:} For vehicle equipped with Intelligent Key.

ACTIVE TEST

Test item	Description
THEFT IND	This test is able to check security indicator operation [ON/OFF].
VEHICLE SECURITY HORN	This test is able to check horn operation [ON].
HEAD LAMP(HI)	This test is able to check head lamp (HI) operation [ON/OFF].

WORK SUPPORT

Test item	Description	
SECURITY ALARM SET	Vehicle security function mode can be changed in this mode. ON: Vehicle security function is ON. OFF: Vehicle security function is OFF.	
THEFT ALM TRG	The switch which triggered vehicle security system is recorded. This mode can be able to confirm and erase the record of vehicle security system.	

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 $[\]ensuremath{^{\star2}}\xspace$. For the vehicle equipped with remote key less entry system.

DIAGNOSIS SYSTEM (INTELLIGENT KEY UNIT)

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

DIAGNOSIS SYSTEM (INTELLIGENT KEY UNIT)

CONSULT-III Function (INTELLIGENT KEY)

INFOID:0000000004231007

APPLICATION ITEM

CONSULT-III performs the following functions via CAN communication with Intelligent Key unit.

Diagnosis mode	Function Description	
WORK SUPPORT	Changes the setting for each system function	
SELF-DIAG RESULTS	Displays the diagnosis results judged by Intelligent Key unit	
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from Intelligent Key unit	
DATA MONITOR	The Intelligent Key unit input/output signals are displayed	
ACTIVE TEST	The signals used to activate each device are forcibly supplied from Intelligent Key unit	
ECU IDENTIFICATION	The Intelligent Key unit part number is displayed	

WORK SUPPORT

Support item	Description	
CONFIRM KEY FOB ID	It can check whether Intelligent Key ID code is registered or not	
TAKE OUT FROM WINDOW WARN	Take away warning chime (from window) mode can be changed	
LOW BATT OF KEY FOB WARN	Intelligent Key low battery warning mode can be changed	
ANSWER BACK FUNCTION	Buzzer reminder operation can be changed	
SELECTIVE UNLOCK FUNCTION	Selective unlock mode can be changed	
ANTI KEY LOCK IN FUNCTION	Key reminder function mode can be changed to operate (ON) or not operate (OFF) with this mode	
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	
HAZARD ANSWER BACK	Hazard reminder operation mode can be changed	
ANSWER BACK WITH I-KEY LOCK	Buzzer reminder operation (lock operation) mode by each door request switch can be changed	
ANSWER BACK WITH I-KEY UNLOCK	Buzzer reminder operation (unlock operation) mode by each door request switch can be changed	
AUTO RELOCK TIMER	Auto door lock operation mode can be changed	
PANIC ALARM DELAY	Panic alarm button pressing time on Intelligent Key remote control button can be changed	
P/W DOWN DELAY	This item is indicated, but not possible to use it	
ENGINE START BY I-KEY	Engine start function (by Intelligent Key) mode can be changed	
LOCK/UNLOCK BY I-KEY	Door lock function by door request switch can be changed	

SELF-DIAG RESULT

Refer to DLK-145, "DTC Index".

DATA MONITOR

Monitor Item	Condition	
PUSH SW	Indicates [ON (pressed)/OFF (released)] condition of ignition knob switch	
KEY SW	Indicates [ON (inserted)/OFF (removed)] condition of key switch	
DR REQ SW	Indicates [ON (pressed)/OFF (released)] condition of door request switch (driver side)	
AS REQ SW	Indicates [ON (pressed)/OFF (released)] condition of door request switch (passenger side)	
BD/TR REQ SW	Indicates [ON (pressed)/OFF (released)] condition of door request switch (back door)	

DIAGNOSIS SYSTEM (INTELLIGENT KEY UNIT)

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Monitor Item	Condition	
IGN SW	Indicates [ON (ON or START position)/OFF (other than ON and START position)] condition of ignition switch ON position	
ACC SW	Indicates [ON/OFF] condition of ignition switch ACC position	
STOP LAMP SW	Indicates [ON/OFF] condition of stop lamp switch	
P RANGE SW	Indicates [ON/OFF] condition shift lever park position	
BD OPEN SW	This item is indicated, but not monitored	
TR CANCEL SW	This item is indicated, but not monitored	
DOOR LOCK SIG	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key	
DOOR UNLOCK SIG	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key	
KEYLESS TRUNK	This item is indicated, but not monitored	
KEYLESS PANIC	Indicates [ON/OFF] condition PANIC button of Intelligent key	
KEYLS PSD LH	This item is indicated, but not monitored	
KEYLS PSD RH	This item is indicated, but not monitored	
KEYLS PBD SIG	This item is indicated, but not monitored	
DOOR SW DR	Indicates [OPEN/CLOSE] condition of front door switch (driver side) from BCM via CAN communication	
DOOR SW AS	Indicates [OPEN/CLOSE] condition of front door switch (passenger side) from BCM via CAN communication	
DOOR SW RR	Indicates [OPEN/CLOSE] condition of rear door switch (RH) from BCM via CAN communication	
DOOR SW RL	Indicates [OPEN/CLOSE] condition of rear door switch (LH) from BCM via CAN communication	
DOOR BK SW	Indicates [OPEN/CLOSE] condition of back door switch from BCM via CAN communication	
TRUNK SW	This item is indicated, but not monitored	
VEHICLE SPEED	Displays the vehicle speed signal received from combination meter by numerical value [km/h]	

ACTIVE TEST

Test item	Description	
This test is able to check door lock/unlock operation • ALL UNLK: All door lock actuators are unlocked • DR UNLK: Door lock actuator (driver side) is unlocked • AS UNLK: Door lock actuator (passenger side) is unlocked • BK UNLK: This item is indicated, but inactive • LOCK: All door lock actuator is locked		
ANTENNA	This test is able to check Intelligent Key antenna operation. When the following condition are met, LED (on Intelligent Key) blinks ROOM ANT1: Inside key antenna (console) transmissions can be detected by Intelligent Key, when "ROOM ANT1" is selected ROOM ANT2: Inside key antenna (instrument center/rear seat) transmissions can be detected by Intelligent Key, when "ROOM ANT2"is selected DRIVER ANT: Outside key antenna (driver side) transmissions can be detected by Intelligent Key, when "DRIVER ANT" is selected ASSIST ANT: Outside key antenna (passenger side) transmissions can be detected by Intelligent Key, when "ASSIST ANT" is selected BK DOOR ANT: Outside key antenna (rear bumper) transmissions can be detected by Intelligent Key, when "BK DOOR ANT" is selected	
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation ON OFF	

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DIAGNOSIS SYSTEM (INTELLIGENT KEY UNIT)

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Test item	Description	
This test is able to check warning chime in combination meter operation TAKE OUT: Take away warning chime sounds KNOB: Ignition knob switch warning chime sounds KEY: Key warning chime sounds OFF		
This test is able to check warning lamp operation BLUE ON: Key warning lamp (green) illuminates RED ON: Key warning lamp (red) illuminates KNOB ON: Lock warning lamp illuminates KNOB ON: Lock warning lamp illuminates BLUE IND: Key warning lamp (green) flashes RED IND: Key warning lamp (red) flashes KNOB IND: Lock warning lamp flashes OFF		

COMPONENT DIAGNOSIS

U1000 CAN COMM CIRCUIT

BCM

BCM: Description

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

CAN Communication Signal Chart. Refer to LAN-24. "CAN Communication Signal Chart".

BCM : DTC Logic

INFOID:0000000004637743

DTC DETECTION LOGIC

DTC	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:0000000004637744

1.PERFORM SELF DIAGNOSTIC

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

Is DTC "U1000" displayed?

YES >> Refer to <u>LAN-15</u>, "Trouble <u>Diagnosis Flow Chart"</u>.

NO >> Refer to GI-41, "Intermittent Incident".

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

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

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, CAN-L) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

CAN Communication Signal Chart. Refer to LAN-24, "CAN Communication Signal Chart".

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

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 (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM): Di-

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U1000 CAN COMM CIRCUIT

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

agnosis Procedure

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1.PERFORM SELF DIAGNOSTIC

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

Is DTC "U1000" displayed?

YES >> Refer to LAN-15, "Trouble Diagnosis Flow Chart".

NO >> Refer to GI-41, "Intermittent Incident".

U1010 CONTROL UNIT (CAN)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

U1010 CONTROL UNIT (CAN)

DTC Logic INFOID:0000000004231011

DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC Detection Condition	Possible cause
U1010	CONTROL UNIT (CAN)	When detecting error during the initial diagnosis of CAN controller of Intelligent Key unit.	Intelligent Key unit

Diagnosis Procedure

1. REPLACE INTELLIGENT KEY UNIT

When DTC [U1010] is detected, replace Intelligent Key unit.

>> Replace Intelligent Key unit.

Special Repair Requirement

1. REQUIRED WORK WHEN REPLACING INTELLIGENT KEY UNIT

Initialize control unit. Refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> WORK END

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[WITH INTELLIGENT KEY SYSTEM]

P1610 LOCK MODE

Description INFOID:000000004231014

When the starting operation is carried more than 10 times consecutively under the following conditions, NVIS/NATS will shift to the mode which prevents the engine from being started.

- Unregistered mechanical key is used.
- · BCM or ECM's malfunctioning.

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1610	LOCK MODE	When the BCM detects wrong key ID, 10 or more times consecutively under the following conditions. • Unregistered mechanical key • BCM or ECM's malfunctioning.	_

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Check "Self Diagnostic Result" with CONSULT-III.

Is DTC detected?

YES >> Refer to <u>SEC-34. "Diagnosis Procedure"</u>.

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004231016

1. CHECK ENGINE START FUNCTION

- 1. Perform the check for DTC except DTC P1610.
- Use CONSULT-III to erase DTC after fixing.
- 3. Check that engine can start with registered mechanical key.

Does the engine start?

YES >> INSPECTION END

NO >> GO TO 2.

2. CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> INSPECTION END

P1611 ID DISCORD, IMMU-ECM

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

P1611 ID DISCORD, IMMU-ECM

Description INFOID:0000000004231017

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

DTC Logic INFOID:0000000004231018

DTC DETECTION LOGIC

NOTE:

 If DTC P1611 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
P1611	ID DISCORD BCM- ECM	The ID verification results between BCM and ECM are NG. The registration is necessary.	• BCM • ECM

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

Turn ignition switch ON.

Check "Self Diagnostic Result" with CONSULT-III.

Is DTC detected?

YES >> Refer to SEC-35, "Diagnosis Procedure".

NO >> INSPECTION END

Diagnosis Procedure

1.PERFORM INITIALIZATION Perform initialization with CONSULT-III. Re-register all mechanical keys.

For initialization and registration of mechanical key. Refer to "CONSULT-III Operation Manual NATS-IVIS/ NVIS".

Can the system be initialized and can the engine be started with re-registered mechanical key?

>> INSPECTION END (ID was unregistered.)

NO >> GO TO 2.

2.REPLACE BCM

Replace BCM. Refer to BCS-67, "Removal and Installation".

Perform initialization with CONSULT-III. Re-register all mechanical keys. For initialization and registration of mechanical key. Refer to "CONSULT-III Operation Manual NATS-IVIS/ NVIS".

Can the system be initialized and can the engine be started with re-registered mechanical key?

YES >> INSPECTION END (BCM was malfunctioning.)

NO >> GO TO 3.

3.REPLACE ECM

- Replace ECM. Refer to the following page.
- For CALIFORNIA: Refer to EC-22, "BASIC INSPECTION: Special Repair Requirement".
- For USA (FEDERAL) and CANADA: Refer to EC-499, "BASIC INSPECTION: Special Repair Require-
- For MEXICO: Refer to EC-933, "BASIC INSPECTION: Special Repair Requirement".
- Perform initialization with CONSULT-III. Re-register all mechanical keys. For initialization and registration of mechanical key. Refer to "CONSULT-III Operation Manual NATS-IVIS/ NVIS".

Can the system be initialized and can the engine be started with re-registered mechanical key?

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INFOID:0000000004231019

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P1611 ID DISCORD, IMMU-ECM

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

YES >> INSPECTION END (ECM was malfunctioning.)

NO >> GO TO 4.

4. CHECK INTERMITENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> INSPECTION END

P1612 CHAIN OF ECM-IMMU

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

P1612 CHAIN OF ECM-IMMU

Description INFOID:0000000004231020

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

DTC Logic INFOID:0000000004231021

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".

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

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

Turn ignition switch ON.

2. Check "Self Diagnostic Result" with CONSULT-III.

Is DTC detected?

YES >> Refer to SEC-37, "Diagnosis Procedure".

>> INSPECTION END NO

Diagnosis Procedure

1.REPLACE BCM

For initialization refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".

Replace BCM. Refer to BCS-67, "Removal and Installation". Perform initialization with CONSULT-III.

Does the engine start?

YES >> INSPECTION END (BCM was malfunctioning.)

NO

>> ECM is malfunctioning.

Replace ECM. Refer to following page.

- For CALIFORNIA: Refer to EC-22, "BASIC INSPECTION: Special Repair Requirement".

- For USA (FEDERAL) and CANADA: Refer to EC-499, "BASIC INSPECTION: Special Repair Requirement".

- For MEXICO: Refer to EC-933, "BASIC INSPECTION: Special Repair Requirement".

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INFOID:0000000004231022

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P1614 CHAIN OF IMMU-KEY

Description INFOID:000000004231023

Performs ID verification through BCM and NVIS/NATS antenna amplifier when ignition knob switch is pressed. Prohibits the release of steering lock or start of engine when an unregistered ID of mechanical key is used.

DTC Logic (INFOID:000000004231024

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1614	NATS ANTENNA AMP	Inactive communication between NATS antenna amp. and BCM. Mechanical key is malfunctioning.	Harness or connectors (The NATS antenna amp. circuit is open or short) Mechanical key NATS antenna amp. BCM

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- Insert mechanical key into key cylinder.
- 2. Press ignition knob switch.
- 3. Check "Self Diagnostic Result" with CONSULT-III.

Is DTC detected?

YES >> Refer to <u>SEC-38</u>, "<u>Diagnosis Procedure</u>".

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004231025

1. CHECK NATS ANTENNA AMP. INSTALLATION

Check NATS antenna amp. installation. Refer to SEC-149, "Removal and Installation".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Reinstall NATS antenna amp. correctly.

2. CHECK MECHANICAL KEY

Start engine with another registered mechanical key.

Does the engine start?

YES >> Replace mechanical key. Perform initialization and registration of mechanical key. Refer to "CON-SULT-III Operation Manual NATS-IVIS/NVIS"

NO >> GO TO 3.

3.CHECK NATS ANTENNA AMP. POWER SUPPLY

- 1. Turn ignition switch OFF.
- Disconnect NATS antenna amp. connector.
- Check voltage between NATS antenna amp. harness connector and ground.

(NATS ant	+) enna amp.	(-)	Voltage (V) (Approx.)	
Connector Terminal			(, 45, 21, 1)	
M26	1	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

P1614 CHAIN OF IMMU-KEY

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

4. CHECK NATS ANTENNA AMP. GROUND CIRCUIT

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

NATS ant	tenna amp.		Continuity	
Connector	Connector Terminal		Continuity	
M26 3			Existed	

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace circuit.

5. CHECK NATS ANTENNA AMP. SIGNAL CIRCUIT

Check voltage between NATS antenna amp. harness connector and ground.

(+) NATS antenna amp.		(-)	Condition	Voltage (V) (Approx.)	
Connector	connector Terminal				
	2	_	Just after inserting mechanical key in key cylinder.	Pointer of tester should move.	
M26			Other than above.	0	
IVIZO	Ground 4	Just after inserting mechanical key in key cylinder.	Pointer of tester should move.		
			Other than above.	0	

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace circuit.

6. CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> INSPECTION END

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P1615 DIFFRENCE OF KEY

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

P1615 DIFFRENCE OF KEY

Description INFOID:000000004231026

Performs ID verification through BCM when ignition knob switch is pressed.

Prohibits the release of steering lock or start of engine when an unregistered ID of mechanical key is used.

DTC Logic

DTC DETECTION LOGIC

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

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- Insert mechanical key into key cylinder.
- 2. Press ignition knob switch.
- 3. Check "Self Diagnostic Result" with CONSULT-III.

Is DTC detected?

YES >> Refer to SEC-40, "Diagnosis Procedure".

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004231028

1. PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Re-register all mechanical keys.

For initialization and registration of mechanical key. Refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".

Can the system be initialized and can the engine be started with re-registered mechanical key?

YES >> Mechanical key was unregistered.

NO >> INSPECTION END (BCM is malfunctioning.)

- Replace BCM. Refer to BCS-67, "Removal and Installation".
- Perform initialization again.

B2013 ID DISCORD I-KEY-STRG

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B2013 ID DISCORD I-KEY-STRG

Description

Intelligent Key unit performs the ID verification with the steering lock unit and releases the steering lock if both Intelligent Key unit and steering lock unit ID are same. Intelligent Key unit starts the communication with the steering lock unit when Intelligent Key is carried into the vehicle and the ignition knob switch is pressed.

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2013	STRG COMM 1	The ID verification results between Intelligent Key unit and steering control unit are NG. The registration is necessary.	Harness or connectors Steering lock unit

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press ignition knob switch.
- Check "Self Diagnostic Result" with CONSULT-III.

Is DTC detected?

YES >> Refer to <u>SEC-41, "Diagnosis Procedure"</u>.

NO >> INSPECTION END

Diagnosis Procedure

1.PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Re-register all mechanical keys.

For initialization and registration of mechanical key. Refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".

Can the system be initialized and can steering lock be released with re-registered mechanical key?

YES >> INSPECTION END (Steering lock unit was unregistered.)

NO >> GO TO 2.

2. CHECK STEERING LOCK UNIT POWER SUPPLY-1

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

	+) lock unit	(–)	Voltage (V) (Approx.)	
Connector Terminal			(+ + + + + + + + + + + + + + + + + + +	
M28	1	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK STEERING LOCK UNIT POWER SUPPLY-2

Check voltage between steering lock unit harness connector and ground.

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B2013 ID DISCORD I-KEY-STRG

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

	(+)	(-)	Voltage (V)	
Steering	g lock unit		Voltage (V) (Approx.)	
Connector	Terminal		, , , ,	
M28	M28 2		5	

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK STEERING LOCK UNIT GROUND CIRCUIT

- 1. Disconnect Intelligent Key unit connector.
- 2. Check continuity between Intelligent Key unit harness connector and steering lock unit harness connector.

Intelligent Key unit		Steering	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
M40	31	M28	4	Existed

3. Check continuity between Intelligent Key unit harness connector and ground.

Intelliger	nt Key unit		Continuity	
Connector Terminal		Ground	Continuity	
M40 31			Not existed	

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

5. CHECK STEERING LOCK UNIT COMMUNICATION CIRCUIT

- 1. Connect Intelligent Key unit connector and steering lock unit connector.
- 2. Check voltage between steering lock unit harness connector and ground.

(+) Steering lock unit		(-)		Condition	Voltage (V) (Approx.)
Connector	Terminal				(r.pproxr)
				LOCK status	5
M28	M28 3 Ground Steering lock	LOCK ⇔ UNLOCK	(V) 6 4 2 0 100 ms JMKIA0433ZZ		
			For 15 seconds after UNLOCK	5	
				15 seconds later UN- LOCK	0

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

6.CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> INSPECTION END

B2552 INTELLIGENT KEY

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B2552 INTELLIGENT KEY

Description INFOID:000000004231032

Intelligent key unit performs engine start operation and steering lock control by crosschecking ID with the Intelligent key.

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2552	INTELLIGENT KEY	Malfunction is detected inside Intelligent key unit.	Intelligent Key unit

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- Turn ignition switch ON.
- 2. Check "Self Diagnostic Result" with CONSULT-III.

Is DTC detected?

YES >> Refer to <u>SEC-43</u>, "<u>Diagnosis Procedure</u>".

NO >> INSPECTION END

Diagnosis Procedure

1. REPLACE INTELLIGENT KEY UNIT

- 1. Replace Intelligent Key unit.
- 2. Perform initialization with CONSULT-III. Re-register all mechanical keys. Refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".
- 3. Start the engine.

Does the engine start?

YES >> INSPECTION END (Intelligent Key unit was malfunctioning.)

NO >> Perform "DTC confirmation procedure". Refer to <u>SEC-43, "DTC Logic"</u>.

Special Repair Requirement

 ${f 1}$.required work when replacing intelligent key unit

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

>> WORK END

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B2590 ID DISCORD BCM-I-KEY

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

B2590 ID DISCORD BCM-I-KEY

Description INFOID:000000004231036

Intelligent Key unit performs the ID verification with BCM that allows the engine to start. BCM starts the engine if the ID is OK and prevents the engine from starting if the ID is not registered.

DTC Logic

DTC DETECTION LOGIC

NOTE:

 If DTC B2590 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-125, "DTC Index".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2590	ID DISCORD BCM-I- KEY	The ID verification results between BCM and Intelligent Key unit are NG. The registration is necessary.	BCM Intelligent Key unit

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Check "Self Diagnostic Result" with CONSULT-III.

Is DTC detected?

YES >> Refer to <u>SEC-44, "Diagnosis Procedure"</u>.

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004231038

1. PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Re-register all mechanical keys.

For initialization and registration of mechanical key. Refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".

Can the system be initialized and can the engine be started with re-registered mechanical key?

YES >> INSPECTION END (ID was unregistered.)

NO >> BCM is malfunctioning.

- Replace BCM
- Perform initialization again

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

POWER SUPPLY AND GROUND CIRCUIT INTELLIGENT KEY UNIT

INTELLIGENT KEY UNIT: Diagnosis Procedure

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1.CHECK FUSE

Check that the following fuse is not blown.

Terminal No.	Signal name	Fuse No.
11	Battery power supply	14 (10A)
6	Ignition power supply	1 (10A)

Is the fuse blown?

YES >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.

Disconnect Intelligent Key unit connector.

3. Check voltage between Intelligent Key unit harness connector and ground.

	Terminal				
	(+) (-)				
Intellige	nt Key unit	Crownd	Voltage (V) (Approx.)		
Connector	Terminal				
MAO	11	- Ground	Detterminations		
M40	6		Battery voltage		

Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3. CHECK GROUND CIRCUIT

Check continuity between Intelligent Key unit harness connector and ground.

Intelliger	nt Key unit		Continuity
Connector Terminal		Ground	Continuity
M40	12		Exists

Does continuity exist?

YES >> Intelligent Key unit power supply and ground circuit are OK.

NO >> Repair harness or connector.

INTELLIGENT KEY UNIT: Special Repair Requirement

1. REQUIRED WORK WHEN REPLACING INTELLIGENT KEY UNIT

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

>> WORK END

BCM

BCM: Diagnosis Procedure

1. CHECK FUSES AND FUSIBLE LINK

Check that the following fuses and fusible link are not fusing.

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POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Terminal No.	Signal name	Fuses and fusible link No.
41	Battery power supply	10 (10A)
57	Battery power supply	J (50A)
4	ACC power supply	20 (10A)
3	Ignition power supply	1 (10A)

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.
- Check voltage between BCM harness connector and ground.

	Terminals			Ignition switch position		
	(+)		ignition switch position			
В	всм		(-) OFF	ACC	ON	
Connector	Terminal		OH	ACC	ON	
M65	4	Ground	Approx. 0 V	Battery voltage	Battery voltage	
IVIOS	3		Approx. 0 V	Approx. 0 V	Battery voltage	
M66	41		Battery voltage	Battery voltage	Battery voltage	
M67	57		battery voltage	Ballery Vollage	ballery vollage	

Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

В	CM		Continuity
Connector Terminal		Ground	Continuity
M67	55		Existed

Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.

DOOR SWITCH

[WITH INTELLIGENT KEY SYSTEM] < COMPONENT DIAGNOSIS > DOOR SWITCH Α Description INFOID:0000000004231042 Detects door open/closed condition. В Component Function Check INFOID:0000000004231043 1. CHECK FUNCTION (III) With CONSULT-III Check door switches ("DOOR SW-DR", "DOOR SW-AS", "DOOR SW-RL", "DOOR SW-RR", "BACK DOOR D SW") in "Data Monitor" mode with CONSULT-III. Monitor item Door condition Display Е DOOR SW-DR DOOR SW-AS DOOR SW-RL $\mathsf{CLOSE} \to \mathsf{OPEN}$ $\mathsf{OFF} \to \mathsf{ON}$ F DOOR SW-RR **BACK DOOR** Is the inspection result normal? YES >> Door switch is OK. NO >> Refer to SEC-47, "Diagnosis Procedure". Н Diagnosis Procedure INFOID:0000000004231044 1. CHECK DOOR SWITCH INPUT SIGNAL

- Turn ignition switch OFF.
- 2. Disconnect door switch connectors.
- Check signal between door switch harness connector and ground with oscilloscope.

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(+)		(_)	Voltage (V) (Approx.)	
Connector	Terminal	(–)	(,)	
Front door switch (passenger side)	B27 2			(V) 15 10 5 0 + 10ms JPMIA0586GB
Front door switch (driver side)	В34	2		(V) ₁₅ 10 5 0 → 10ms JPMIA0587GB
Rear door switch RH	B53	2	Ground	(V) ₁₅ 10 5 0 **10ms JPMIA0587GB
Rear door switch LH	B71	2		(V) 15 10 5 0 + 10ms JPMIA0594GB
Back door lock assembly (back door switch)	D190	3		(V) 15 10 5 0 → 10ms JPMIA0593GB

Is the inspection result normal?

YES >> • Back door switch : GO TO 3.

• Door switch: GO TO 4.

NO >> GO TO 2.

2.CHECK DOOR SWITCH CIRCUIT

- 1. Disconnect BCM connectors.
- 2. Check continuity between BCM harness connector and door switch harness connector.

[WITH INTELLIGENT KEY SYSTEM]

BCM		Door swi	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
M65	12	B27	2	
COIVI	13	B53	- 2	
	43	D190	3	Exists
M66	47	B34	2	
	48	B71	2	

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal		Continuity
M65	12		Does not exist
IVIOS	13	Ground	
	43		
M66	47		
	48		

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-67, "Exploded View".

NO >> Repair or replace harness.

3.CHECK BACK DOOR GROUND CIRCUIT

Check continuity between back door lock assembly harness connector and ground.

Back door lock a	assembly		Continuity
Connector	Terminal	Ground	Continuity
D190	4		Exist

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK DOOR SWITCH

Check door switch.

Refer to SEC-49, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace door switch. Refer to <u>DLK-263</u>, "Removal and Installation".

5. CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> INSPECTION END

Component Inspection

1. CHECK DOOR SWITCH

- Turn ignition switch OFF.
- 2. Disconnect door switch connector.
- Check door switch.

Terminal		Condition	Continuity	
Each door 2	2	Ground	Door switch pressed	Exists
Lacif door	2		Door switch released	Does not exist

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INFOID:0000000004231045

DOOR SWITCH

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Terminal		Condition	Continuity	
Back door 3	4	Back door open	Exists	
Dack door	3	4	Back door close	Does not exist

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace door switch . Refer to <u>DLK-263</u>, "Removal and Installation".

KEY SWITCH

Description

Key switch detects that mechanical key is inserted into the key cylinder, and then transmits the signal to BCM .

Component Function Check

1. CHECK KEY SWITCH INPUT SIGNAL

Check key switch ("KEY ON SW") in "Data Monitor" mode with CONSULT-III. Refer to <u>DLK-45, "DOOR LOCK CONSULT-III Function (BCM - DOOR LOCK)"</u>.

Monitor item	Condition	
KEY ON SW	Insert mechanical key into key cylinder	: ON
KET ON SW	Remove mechanical key from key cylinder	: OFF

Is the inspection result normal?

YES >> Key switch is OK.

NO >> Refer to <u>SEC-51</u>, "<u>Diagnosis Procedure</u>".

Diagnosis Procedure

1. CHECK KEY SWITCH POWER SUPPLY CIRCUIT

- 1. Remove mechanical key from key cylinder.
- Disconnect key switch connector.
- Check voltage between ignition knob switch, key switch and key lock solenoid harness connector and ground.

(+)			\/-\t (\)	
Ignition knob switch, key switch	ch and key lock solenoid	(–)	Voltage (V) (Approx.)	
Connector	Terminal		,	
M25	2	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

2.check key switch signal circuit

1. Check continuity between BCM harness connector and ignition knob switch, key switch and key lock solenoid connector.

ВСМ		Ignition knob switch, key switch and key lock so- lenoid		Continuity
Connector	Terminal	Connector	Terminal	
M65	37	M25	1	Exists

Check continuity between key switch and ground.

Ignition knob switch, key s	witch and key lock solenoid		Continuity
Connector	Terminal	Ground	Continuity
M25	1		Does not exist

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK KEY SWITCH

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KEY SWITCH

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Check key switch function.

Refer to SEC-52, "Component Inspection".

Is the inspection result normal?

yes >> GO TO 4.

NO >> Replace ignition knob switch, key switch and key lock solenoid.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:00000000004231049

1. CHECK KEY SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect key switch connector.
- 3. Check continuity between ignition knob switch, key switch and key lock solenoid terminals.

Terminal Ignition knob switch, key switch and key lock solenoid		Condition	Continuity
		Condition	
1	2	Insert mechanical key into key cylinder	Exists
'	2	Remove mechanical key from key cylinder	Does not exist

Is the inspection result normal?

YES >> Key switch is OK.

NO >> Replace ignition knob switch, key switch and key lock solenoid.

IGNITION KNOB SWITCH

Description INFOID:000000004231050

Ignition knob switch detects that ignition knob is pressed, and then transmits the signal to Intelligent Key unit.

Component Function Check

1. CHECK IGNITION KNOB SWITCH INPUT SIGNAL

Check ignition knob switch ("PUSH SW") in "Data Monitor" mode with CONSULT-III.

Monitor item	Conditi	ion
PUSH SW	Ignition knob switch is pressed	: ON
PUSH SW	Ignition knob switch is released	: OFF

Is the inspection result normal?

YES >> Ignition knob switch is OK.

NO >> Refer to <u>SEC-53</u>, "<u>Diagnosis Procedure</u>".

Diagnosis Procedure

1. CHECK IGNITION KNOB SWITCH POWER SUPPLY CIRCUIT

Turn ignition switch OFF.

2. Disconnect ignition knob switch, key switch and key lock solenoid connector.

3. Check voltage between ignition knob switch, key switch and key lock solenoid harness connector and ground.

(-	+)		V 16 0.0	
Ignition knob switch, key s	witch and key lock solenoid	(–)	Voltage (V) (Approx.)	
Connector	Terminal		(11 - 7	
M25 4		Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

2.CHECK IGNITION KNOB SWITCH SIGNAL CIRCUIT

 Check continuity between Intelligent Key unit harness connector and ignition knob switch, key switch and key lock solenoid harness connector.

Intelligent Key unit		Ignition knob switch, key switch and key lock solenoid		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M40	27	M25	3	Exists

Check continuity between ignition knob switch, key switch and key lock solenoid harness connector and ground.

Ignition knob switch, key s	witch and key lock solenoid		Continuity
Connector	Connector Terminal		Continuity
M25	M25 3		Does not exist

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK IGNITION KNOB SWITCH

Check ignition knob switch.

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2009 Rogue

IGNITION KNOB SWITCH

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Refer to SEC-54, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace ignition knob switch, key switch and key lock solenoid.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000004231053

1. CHECK IGNITION KNOB SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect ignition knob switch. Key switch and key lock solenoid connector.
- Check continuity between ignition knob switch, key switch and key lock solenoid terminals under the following conditions.

Ignition knob switch, key switch and key lock solenoid Terminal		Condition	Continuity
2	4	Ignition knob switch is pressed	Exists
3	4	Ignition knob switch is released	Does not exist

Is the inspection result normal?

YES >> Ignition knob switch is OK.

NO >> Replace ignition knob switch, key switch and key lock solenoid.

HOOD SWITCH

Description INFOID:0000000004231054

Hood switch detects that hood is open/close condition, and then IPDM E/R detects the signal.

Component Function Check

1. CHECK FUNCTION

- Select "HOOD SW" in "Data Monitor" mode with CONSULT-III.
- Check the hood switch signal under the following condition.

Test item	Condition Status		
HOOD SW	Hood	Open	ON
HOOD SVV Hood	Tiood	Close	OFF

Is the indication normal?

YES >> INSPECTION END

>> Refer to <u>SEC-55</u>, "Diagnosis Procedure". NO

Diagnosis Procedure

1. CHECK HOOD SWITCH SIGNAL

Turn ignition switch OFF.

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

	+) M E/R	(-)	Condition		Voltage (V) (Approx.)	
Connector	Terminal					
E13	34	Ground	Hood	Open	0	
E13	34	Giouna	Giodila	Hood	Close	Battery voltage

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 2.

2.CHECK HOOD SWITCH SIGNAL CIRCUIT

- Disconnect IPDM E/R connector and hood switch connector.
- Check continuity between IPDM E/R harness connector and hood switch harness connector.

IPDI	IPDM E/R		switch	Continuity
Connector	Terminal	Connector	Terminal	Continuity
E13	34	E113	1	Existed

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

IPDM E/R			Continuity
Connector	Terminal	Ground	Continuity
E13	34		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.check hood switch ground circuit

Check continuity between hood switch harness connector and ground.

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INFOID:0000000004231055

INFOID:0000000004231056

HOOD SWITCH

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Hood	Hood switch		Continuity
Connector	Terminal	Ground	Continuity
E113	2		Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK IPDM E/R OUTPUT

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

IPD	M E/R		Voltage (V)
Connector	Terminal	Ground	(Approx.)
E13	34		Battery voltage

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace IPDM E/R. Refer to PCS-28, "Removal and Installation".

5. CHECK HOOD SWITCH

Refer to SEC-56, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace hood switch. Refer to <u>SEC-150</u>, "Removal and Installation".

6. CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000004231057

1. CHECK HOOD SWITCH

Check continuity between hood switch terminals.

Hood	Hood switch		ndition	Continuity	
Ter	minal				
1	2	Hood switch	Press	Not existed	
ı	2	Hood Switch	Release	Existed	

Is the inspection result normal?

YES >> Hood switch is OK.

NO >> Replace hood switch. Refer to <u>SEC-150</u>, "Removal and Installation".

INSIDE KEY ANTENNA INSTRUMENT CENTER

INSTRUMENT CENTER: Description

INFOID:0000000004231058

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Detects whether Intelligent Key is inside the vehicle.

INSTRUMENT CENTER: Component Function Check

INFOID:0000000004231059

1. CHECK INSIDE KEY ANTENNA INPUT SIGNAL

(P)With CONSULT-III

- 1. Check "ANTENNA" in "Active Test" mode with CONSULT-III.
- 2. Touch "ROOM ANT 2".
- 3. When Intelligent Key is in inside key antenna (instrument center) detection area, LED (on Intelligent Key) blinks.

Test Item		Inside Antenna
ANTENNA	:ROOM ANT 2	Inside key antenna (instrument center)

Is the inspection result normal?

YES >> Inside key antenna (instrument center) is OK.

NO >> Refer to <u>SEC-57</u>, "INSTRUMENT CENTER : Diagnosis Procedure".

INSTRUMENT CENTER: Diagnosis Procedure

INFOID:00000000004231060

1. CHECK INSIDE KEY ANTENNA INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect inside key antenna (instrument center) connector.
- Check signal between inside key antenna (instrument center) harness connector and ground with oscilloscope.

Terminals				
(+)			Condition	Signal
Inside key antenna (instrument center) connector	Terminal	(-)	Condition	(Reference value)
M56	1	Ground	Ignition knob switch is pressed	(V) 15 10 5 0 1 I I I I I I I I I
	2	Sisana	Ignition knob switch is pressed	(V) 15 10 5 0 1 s JMKIA0392ZZ

Is the inspection result normal?

YES >> Replace inside key antenna (instrument center).

NO >> GO TO 2.

INSIDE KEY ANTENNA

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

2.check inside key antenna circuit

- 1. Disconnect Intelligent Key unit connector.
- 2. Check continuity between Intelligent Key unit harness connector and inside key antenna (instrument center) harness connector.

Intelligen	t Key unit	Inside key antenna (instrument center)		t Inside key antenna (instrument center)		Continuity
Connector	Terminal	Connector	Terminal	Continuity		
M40	33	M56	1	Exists		
10140	34	VIOO	2	EXISIS		

3. Check continuity between Intelligent Key unit harness connector and ground.

Intelliger	t Key unit		Continuity
Connector	Terminal	Ground	
M40	33	Ground	Does not exist
IVI40	34		Does not exist

Is the inspection result normal?

YES >> Replace Intelligent Key unit. Refer to <u>DLK-271, "Removal and Installation"</u>.

NO >> Repair or replace harness between Intelligent Key unit and inside key antenna (instrument center).

CONSOLE

CONSOLE : Description

INFOID:0000000004231061

Detects whether Intelligent Key is inside the vehicle.

CONSOLE: Component Function Check

INFOID:0000000004231062

1. CHECK INSIDE KEY ANTENNA INPUT SIGNAL

(P)With CONSULT-III

- 1. Check "ANTENNA" in "Active Test" mode with CONSULT-III.
- 2. Touch "ROOM ANT 1".
- 3. When Intelligent Key is in inside key antenna (console) detection area, LED (on Intelligent Key) blinks.

Test Item		Inside Antenna	
ANTENNA	:ROOM ANT 1	Inside key antenna (console)	

Is the inspection result normal?

YES >> Inside key antenna (console) is OK.

NO >> Refer to <u>SEC-58</u>, "CONSOLE : Diagnosis Procedure".

CONSOLE: Diagnosis Procedure

INFOID:0000000004231063

1. CHECK INSIDE KEY ANTENNA INPUT SIGNAL

- Turn ignition switch OFF.
- Disconnect inside key antenna (console) connector.
- 3. Check signal between inside key antenna (console) harness connector and ground with oscilloscope.

Tern	ninal				
(+)			Condition	Signal	
Inside key antenna (console) connector	Terminal	(-)	-)	(Reference value)	
M252	1	Ground	Ignition knob switch is pressed	(V) 15 10 5 0 1	
WEGE	2	Sistema	ignilion knob owiton to pressed	(V) 15 10 5 0 1 s JMKIA0392ZZ	

Is the inspection result normal?

YES >> Replace inside key antenna (console).

NO >> GO TO 2.

2.check inside key antenna circuit

- Disconnect Intelligent Key unit connector.
- Check continuity between Intelligent Key unit harness connector and inside key antenna (console) harness connector.

Intellige	nt Key unit	Inside key antenna (console)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M40	15	M252	1	Exists
10140	16	IVIZOZ	2	LAISIS

Check continuity between Intelligent Key unit harness connector and ground.

Intelliger	nt Key unit		Continuity	
Connector	Terminal	Ground	Continuity	
M40	15	Ground	Does not exist	
IVI40	16	-	DOES HOLEKIST	

Is the inspection result normal?

YES >> Replace Intelligent Key unit. Refer to <u>DLK-271, "Removal and Installation"</u>.

>> Repair or replace harness between Intelligent Key unit and inside key antenna (console). NO

REAR SEAT

REAR SEAT: Description

REAR SEAT : Component Function Check INFOID:0000000004231065

1. CHECK INSIDE KEY ANTENNA INPUT SIGNAL

Detects whether Intelligent Key is inside the vehicle.

(P)With CONSULT-III

Check "ANTENNA" in "Active Test" mode with CONSULT-III.

SEC-59 Revision: 2008 August 2009 Rogue

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INFOID:0000000004231064

INSIDE KEY ANTENNA

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

- 2. Touch "ROOM ANT 2".
- 3. When Intelligent Key is in inside key antenna (rear seat) detection area, LED (on Intelligent Key) blinks.

Test Item		Inside Antenna
ANTENNA	:ROOM ANT 2	Inside key antenna (rear seat)

Is the inspection result normal?

YES >> Inside key antenna (rear seat) is OK.

NO >> Refer to <u>SEC-60</u>, "<u>REAR SEAT</u>: <u>Diagnosis Procedure</u>".

REAR SEAT : Diagnosis Procedure

INFOID:0000000004231066

1. CHECK INSIDE KEY ANTENNA INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect inside key antenna (rear seat) connector.
- 3. Check signal between inside key antenna (rear seat) harness connector and ground with oscilloscope.

Terr	Terminal				
(+)			Condition	Signal	
Inside key antenna (rear seat) connector	Terminal	(-)	(-)	(Reference value)	
B45	1	Ground	Ignition knob switch is pressed	(V) 15 10 5 0 JMKIA0393ZZ	
2.0	2	Sidana	ignition things officer to proceed	(V) 15 10 5 0 H 1 s JMKIA0392ZZ	

Is the inspection result normal?

YES >> Replace inside key antenna (rear seat).

NO >> GO TO 2.

2. CHECK INSIDE KEY ANTENNA CIRCUIT

1. Disconnect Intelligent Key unit connector.

Check continuity between Intelligent Key unit harness connector and inside key antenna (rear seat) harness connector.

Intelliger	nt Key unit	Inside key antenna (rear seat)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M40	13	B45	1	Exists
10140	14	B45	2	EXISIS

3. Check continuity between Intelligent Key unit harness connector and ground.

INSIDE KEY ANTENNA

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Intellige	ent Key unit		Continuity
Connector	Terminal	Ground	Continuity
M40	13	Giodila	Does not exist
IVI40	14		Does not exist

Is the inspection result normal?

YES >> Replace Intelligent Key unit. Refer to <u>DLK-271, "Removal and Installation"</u>.

NO >> Repair or replace harness between Intelligent Key unit and inside key antenna (rear seat).

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HORN

EXCEPT FOR MEXICO

EXCEPT FOR MEXICO: Description

INFOID:0000000004231067

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

EXCEPT FOR MEXICO: Component Function Check

INFOID:0000000004231068

1. CHECK FUNCTION

- 1. Select "HORN" in "Active Test" mode with CONSULT-III.
- 2. Check the horn (high/low) operation.

Test item		Desc	ription
HORN	ON	Horn (high/low)	ON (for 20 ms)

Is the operation normal?

YES >> INSPECTION END

NO >> Refer to <u>SEC-62</u>, "EXCEPT FOR MEXICO : Diagnosis Procedure".

EXCEPT FOR MEXICO: Diagnosis Procedure

INFOID:0000000004231069

1. CHECK HORN FUNCTION

Check horn function with horn switch

Do the horns sound?

YES >> GO TO 2.

NO >> Refer to HRN-2, "EXCEPT FOR MEXICO: Wiring Diagram - HORN -".

2.CHECK HORN RELAY CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect IPDM E/R connector.
- 3. Check continuity between IPDM E/R harness connector and horn relay harness connector.

IPD	M E/R	Horn relay		Continuity
Connector	Terminal	Connector	Terminal	Continuity
E15	57	E5	1	Existed

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

IPDI	M E/R		Continuity
Connector	Terminal	Ground	Continuity
E15	57		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-28, "Removal and Installation".

NO >> Repair or replace harness.

FOR MEXICO

FOR MEXICO: Description

INFOID:0000000004231070

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

FOR MEXICO: Component Function Check

INFOID:0000000004231071

1. CHECK FUNCTION

- Select "HORN" in "Active Test" mode with CONSULT-III.
- Check the horn (high/low) operation.

[WITH INTELLIGENT KEY SYSTEM]

Tes	item	Descr	iption
HORN	ON	Horn (high/low) ON (for 20 ms)	

YES >> INSPECTION END

>> Refer to SEC-63, "FOR MEXICO: Diagnosis Procedure". NO

FOR MEXICO: Diagnosis Procedure

1. CHECK HORN FUNCTION

Check horn function with horn switch

Do the horns sound?

YES >> GO TO 2.

NO >> Refer to HRN-2, "EXCEPT FOR MEXICO: Wiring Diagram - HORN -".

2.CHECK HORN RELAY CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect IPDM E/R connector, horn relay connector and theft warning horn relay connector.
- Check continuity between IPDM E/R harness connector and horn relay harness connector.

IPD	IPDM E/R		Horn relay	
Connector	Terminal	Connector	Terminal	Continuity
E15	57	E5	1	Existed

Check continuity between IPDM E/R harness connector and theft warning horn relay harness connector.

IPDM E/R		Theft warning horn relay		Continuity
Connector	Terminal	Connector Terminal		Continuity
E15	57	E70	1	Existed

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

IPDI	M E/R		Continuity
Connector Terminal		Ground	Continuity
E15	57		Not existed

Is the inspection result normal?

>> Replace IPDM E/R. Refer to PCS-28, "Removal and Installation". YES

NO >> Repair or replace harness. **SEC**

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INFOID:0000000004231072

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VEHICLE SECURITY INDICATOR

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

VEHICLE SECURITY INDICATOR

Description INFOID:000000004231073

- Vehicle security indicator is built in combination meter.
- NVIS/NATS and vehicle security system conditions are indicated by blink or illumination of vehicle security indicator.

Component Function Check

INFOID:0000000004231074

1. CHECK FUNCTION

- 1. Perform "THEFT IND" in the "Active Test" mode with CONSULT-III.
- 2. Check vehicle security indicator operation.

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

Is the inspection result normal?

YES >> INSPECTION END

NO >> Refer to <u>SEC-64, "Diagnosis Procedure"</u>.

Diagnosis Procedure

INFOID:0000000004231075

1. CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT

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

(+) Combination	n meter	(–)	Voltage (V) (Approx.)	
Connector Terminal			(+)	
M34	1	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

2.CHECK SECURITY INDICATOR LAMP SIGNAL CIRCUIT

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

BCM		Combination meter		Continuity
Connector	Terminal	Connector Terminal		Continuity
M65	23	M34	28	Existed

Check continuity between combination meter harness connector and ground.

Combination meter			Continuity	
Connector Terminal		Ground	Continuity	
M34	28		Not existed	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK BCM OUTPUT SIGNAL

1. Connect combination meter connector.

VEHICLE SECURITY INDICATOR

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

2. Check voltage between BCM harness connector and ground.

(+) BCM		(-)	Voltage (V) (Approx.)	
Connector Terminal				
M65	23	Ground	Battery voltage	

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-67, "Removal and Installation".

NO >> Replace combination meter. Refer to MWI-86, "Removal and Installation".

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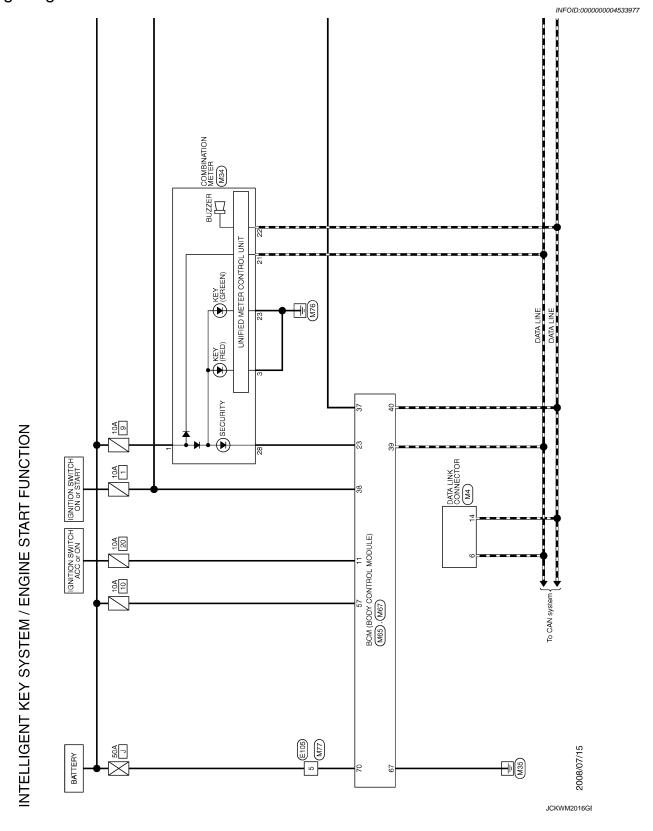
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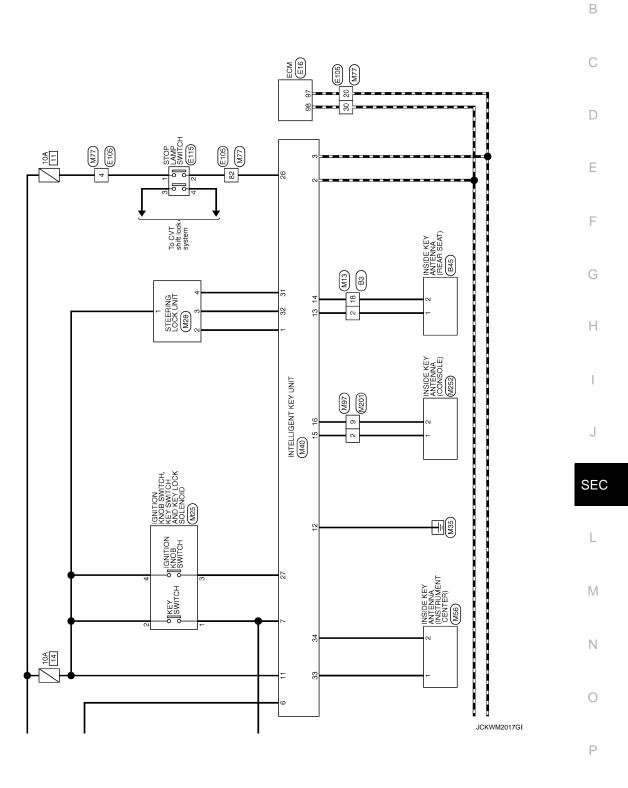
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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

Wiring Diagram - INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION -

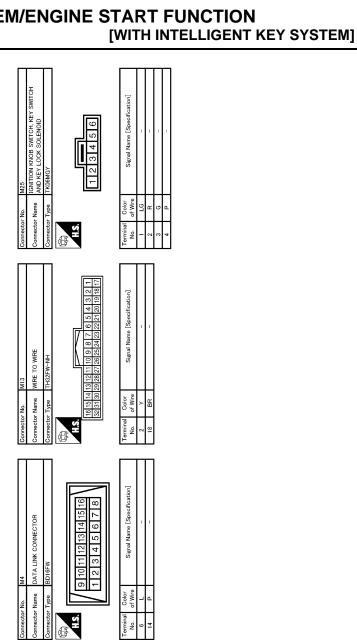


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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION



Commettor No. E105	Signal Name (Specification) Terminal No. of Wire Color Signal Name (Specification) VEHCAN-L 4 V V - VEHCAN-H 5 Y - - 30 L C - - 82 R - -	г. No. M13 Соптестог No. M25 г. Туре TH3ZFW-NH Connector No. M25 Соптестог Name INSTITION KNOB SWITCH KEY SWITCH AND KNOB SWITCH KEY SWITCH AND KNOB SWITCH AND CONTENDIO Connector Name Соптестог Name INSTITION REP SWITCH AND CONTENDIO Connector Type TKOBMGY (5) 14 13 12 11 11 10 9 B 7 6 5 4 3 3 2 11 10 19 18 17 A.S. A.S. (2) 130 26 26 27 26 26 24 23 22 27 12 0 19 18 177 A.S. A.S.	Terminal Color Signal Name [Specification] No. of Wire Signal Name [Specification] LG
Commetter No. Eds	Terminal Color No. of Wire Signal Name [Specification] No. of Wire Signal Name [Specification] No. of Wire Signal Name [Specification] No. of Wire Signal No. o	Connector No. M4 Connector No. M13 Connector Name DATA LINK CONNECTOR Connector Name WIRE TO WIRE Connector Type TH32FW-NH Connector Type TH32FW-NH Connector Type TH32FW-NH Th T1 Z 3 4 5 6 7 8	Terminal Color No. of Wire Signal Mame [Specification] No. of Wire No.
INTELLIGENT KEY SYSTEM / ENGINE Connector Name WIRE TO WIRE Connector Type TH32MW-NH	Terminal Color Signal Name [Specification] 2 G Color 18 R -	Connector No. E115 Connector Type M04FW-LC LLS ALS 1 2 4	Terminal Color Signal Name [Specification] 1

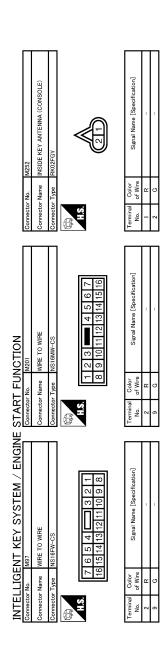
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INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION [WITH INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

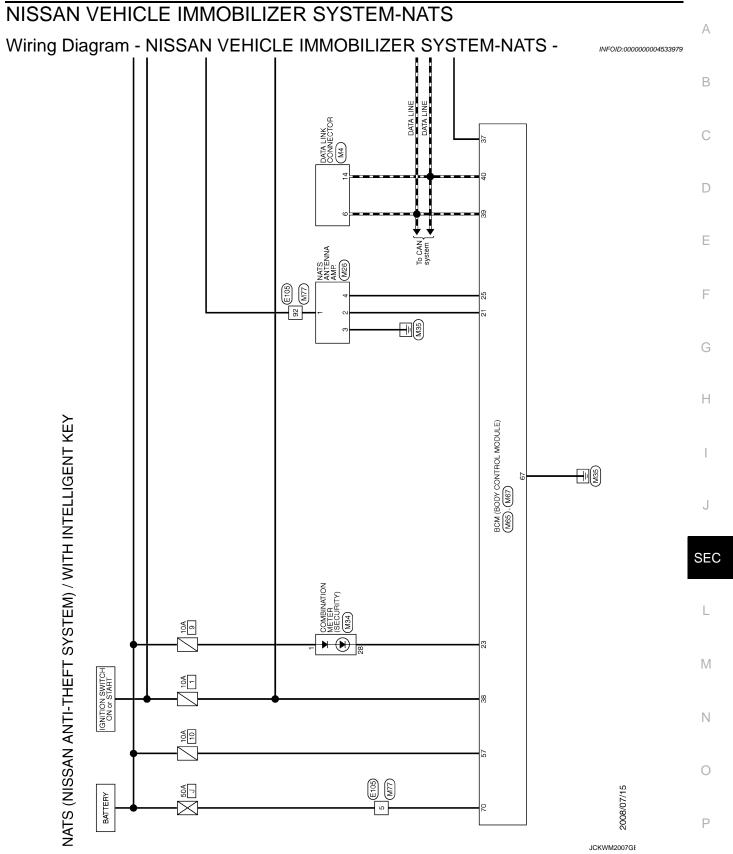
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STOP LAMP SW KNOB SW STRG LOCK UNIT GND STRG LOCK UNIT GND INSTRUMENT (+) INSTRUMENT (+)	Mr-CS16-TN4 Mr-CS16-TN4 Mr-CS16-TN4 Mr = Mr	В
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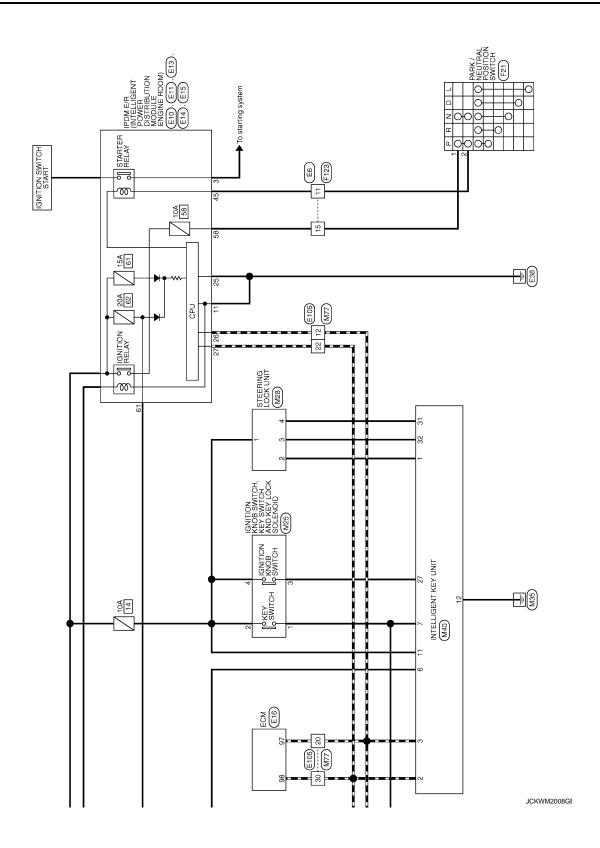
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[WITH INTELLIGENT KEY SYSTEM] < COMPONENT DIAGNOSIS >

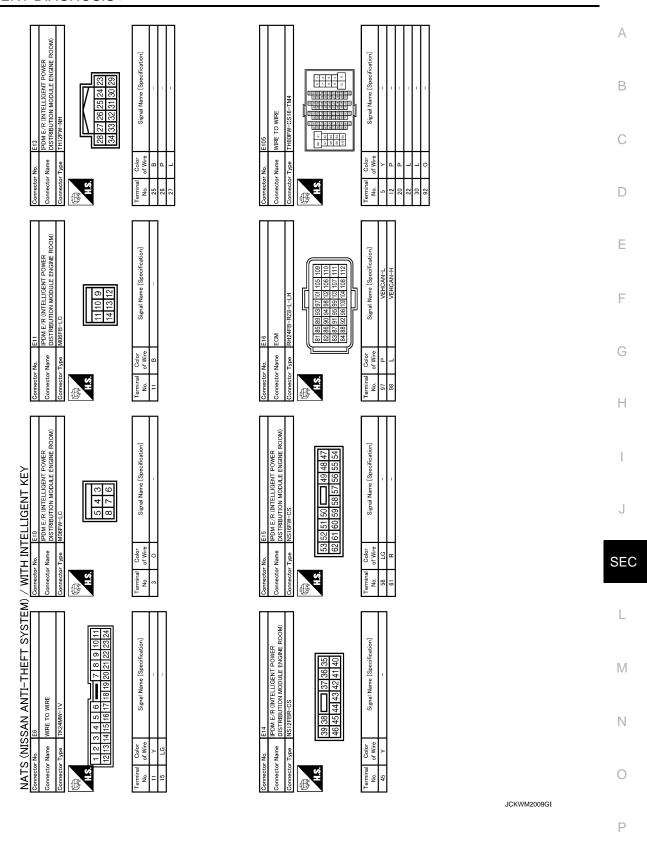




NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

< COMPONENT DIAGNOSIS >

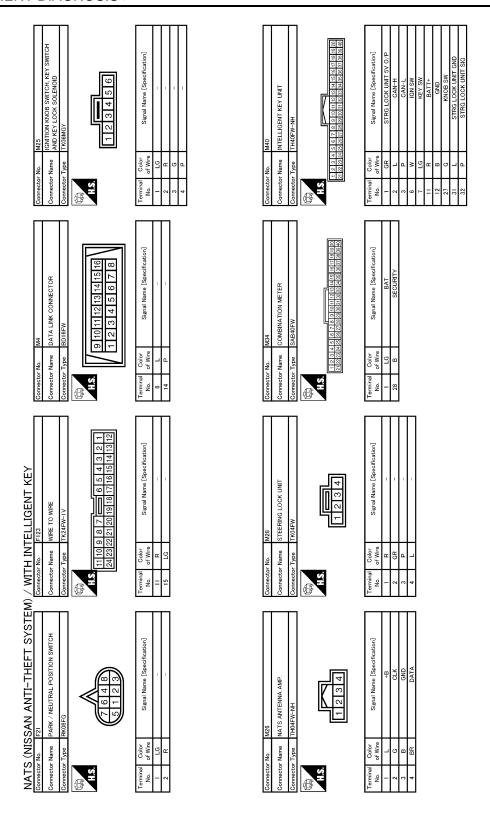
[WITH INTELLIGENT KEY SYSTEM]



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NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

[WITH INTELLIGENT KEY SYSTEM]



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NATS (N	NATS (NISSAN ANTI-THEFT SYSTEM) / WITH INTELLIGENT KEY	// WI	N. H.	TELLIGENT KEY			
Connector No.	M65	Connect	Connector No.	M67	Connector No.	M77	
Connector Nam	Connector Name BCM (BODY CONTROL MODULE)	Connect	or Name	Connector Name BCM (BODY CONTROL MODULE)	Connector Name	ne WIRE TO WIRE	
Connector Type	e TH40FW-NH	Connect	Connector Type	FEA09FB-FHA6-SA	Connector Type	e TH80MW-CS16-TM4	14
H.S.	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 16 19 20 17 12 12 14 15 16 17 16 19 20 17 18 19 20 14 15 16 17 16 19 20 14 15 16 17 16 19 20 14 15 16 17 16 19 20 14 15 16 17 16 19 20 14 15 16 17 16 19 20 14 15 16 17 16 19 20 14 15 16 17 16	H.S.		56 57 58 59 60 61 62 63 64 65 66 67 68 69 70	语 H.S.		S 0 S S S S S S S S S S S S S S S S S S
Terminal Color No. of Wire	lor Signal Name [Specification]	Termina No.	erminal Color No. of Wire	Signal Name [Specification]	Terminal Color No. of Wire		Signal Name [Specification]
21 G	IMMOBI ANT(CLOCK)	57	g	BAT FUSE	2		-
23 B	3 SECURITY IND OUT PUT	67	8	GND	12	4	-
25 BR	R IMMOBI ANT(RX,TX)	70	Υ	BAT FL	20	Ь	1
37 LG	G KEY SW				22		-
38 G	IGN				30		-
39 F	. CAN-H				92		-
40 P	CAN-L						

nnector No.		Mbb	Connector No.	Mb/	Connector No.	M//
nnector Name		BCM (BODY CONTROL MODULE)	Connector Name	BCM (BODY CONTROL MODULE)	Connector Name	WIRE TO WIRE
nnector Type	П	TH40FW-NH	Connector Type	FEA09FB-FHA6-SA	Connector Type	TH80MW-CS16-TM4
S T	22 23 24 22 23 24	2122222455 6 7 8 9 10 11 12 13 14 15 16 17 10 12 20 20 20 20 20 20 20 20 20 20 20 20 20	H.S.	<u>56 57 58 59 60 61 62 83 64</u>	₹ H.S.	8 2 3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
rminal No.	Color of Wire	Signal Name [Specification]	Terminal Color No. of Wire	Signal Name [Specification]	Terminal Color No. of Wire	Signal Name [Specification]
21	ŋ	IMMOBI ANT(CLOCK)	57 G	BAT FUSE	>	-
23	В	SECURITY IND OUT PUT	4	GND	+	Ť.
52	H :	IMMOBI ANT(RX,TX)	70 Y	BATFL	20 P	1
/200	ם כ	KEY SW IGN			30 L	1 1
39	٦	CAN-H			╀	1
40	۵	CAN-L			ł	

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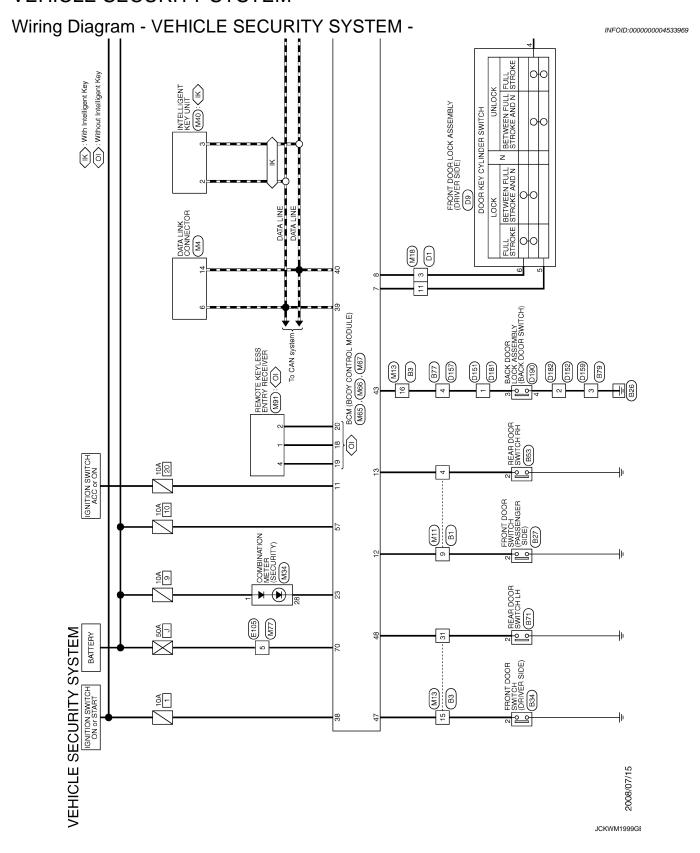
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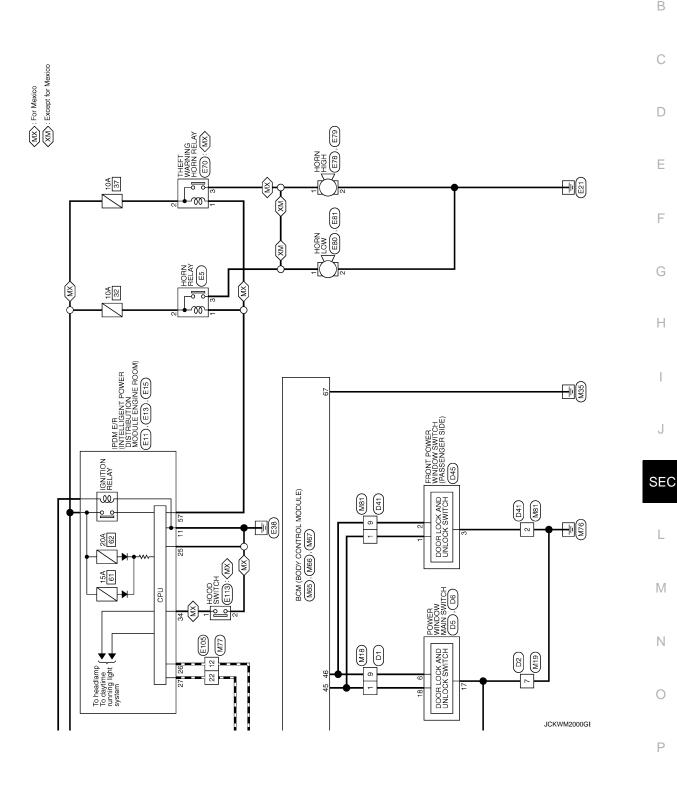
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	sation.]		ation]		А
DG NSGSPW-CS NSGSPW-CS 17 18 19	Signal Name [Specification]	R-CS	Signal Name [Specification]		В
or No.	Color of Wire B B B B B B B B B B B B B B B B B B B	Connector Name WIRE TO WIRE Connector Type INSOBERECS	Dolor of Wire Wire W		С
Connectt Connectt Connectt H.S.	Terminal No. 17	Conne	Terminal No.		D
MTCH 6 7 15 16	offication)	SWITCH 12	refrestion)		Е
00w MAIN SI	Signal Name [Specification]	R SIDE) 1 3 4 9 10 11	Signal Name (Specification)		F
	Color of Wire BR	H.H. —	Color of Wire B B B B		G
Connector No. Connector Name Connector Type H.S.	Terminal O of O of O	Connector No. Connector Name Connector Type	Terminal O O O O O O O O O O O O O O O O O O O		Н
	П				П
- ω ω ω	ecification]	70 10 10 10	ecification]		I
RE 121110	Signal Name [Specification]	3 12 11 3 V	Signal Name [Specification]		
D2 WIRE TO WIRE NS16FW-CS 7 6 5 4	<u>""</u>	D41 WIRE TO WIRE THISFW-NH 8 7 6 5 16 15 14 13	ω σ σ σ σ σ σ σ σ σ σ σ σ σ σ σ σ σ σ σ	_	J
r No.	of Wire B B	r No.	of Wire BR BR		SEC
Connectc Connectc	Terminal No.	Connectt Connectt Connectt H.S.	Terminal No.		
		(DRIVER	Tu Tu		L
3 Z 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Signal Name [Specification]	DB FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE) EGBFGY-RS T 2 3 4 5 6	Signal Name [Specification]		M
O WIRE W-NH 6 5 4 6 5 4 14 13 12 1	Signal Nam	-RS 2 3 4	Signal Nam		
E SECURIT' DI WIRE TO WIRE THIGFW-NH 8 7 6 5 16 15 14 13	Color of Wire		Wire Wire W		Ν
VEHICLE SECURITY SYSTEM Connector Name WIRE TO WIRE Connector Type THIGFW-NH M.S. R.S. R.S.	Terminal No. of W 11 11 11 11 11 11 11	Connector No. Connector Name Connector Type	Color Colo		0
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Connector No. D181 Connector Name WIRE TO WIRE Connector Type NSOBMBR-CS	g =	No. of Wire Objust varie (Streamgardo)	Connector No. E11 Connector Name IPOM E-/R (INTELLIGENT POWER Connector Name INSTREBUTION MODILLE ENGINE ROOM) Connector Type MOSFB-LC	H.S. 11109 141312	Terminal Color Signal Name [Specification]
Connector No. D159 Connector Name WIRE TO WIRE Connector Type M04FW±C	s =	No. of Wire Signal Mail Capbonication)	Connector No. E5 Connector Name HORN RELAY Connector Type -	H3.	Terminal Color Signal Name [Specification]
Connector No. D157 Connector Name WIRE TO WIRE Connector Type NS10FW-CS	9 5	No. of Wire Signal rather Laptoningson)	Connector No. D190 Connector Name BACK DOOR LOCK ASSEMBLY Connector Type NS04FW-CS	H3.	Terminal Color Signal Name [Specification] 3 4 8 -
VEHICLE SECURITY SYSTEM Connector No. D152 Connector Name WIRE TO WIRE Connector Type M02FW-CY-LC	g =		Connector No. D182 Connector Name WIRE TO WIRE Connector Type MOZAWY-GY-LC	H3.	Terminal Color Signal Name [Specification] 2 B

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	(cation.)		Cation		Α
HIGH T	Signal Name [Specification]	E105 THROFFW-CS16-TM4 THROFFW-CS16-TM4	Signal Name [Specification]		В
Connector No. E78 Connector Name HORN HIGH Connector Type POIFB-A	inal Color of Wire G	No. Name	of Wire		С
Com	Terminal No. 1	Connector	Terminal No. 5 5 12 22 22		D
*ELAY	eoification]		eofication		Е
E70 MO3FW-R-LC 2 311	Signal Name (Specification)	LOW FA	Signal Name [Specification]		F
or No.	al Color of Wree	Connector No. E81 Connector Name HORN LOW Connector Type POIFB-A H.S.	al Color B B B		G
Connectt Connectt Connectt H.S.	Terminal No. 1	Connectt Connectt H.S.	Terminal No. 2		Н
E15 IPDM E.Y (NITELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) NS16FW-CS 52 51 50 49 48 47 61 60 59 58 57 56 55 54	Signal Name [Specification]		Signal Name [Specification]		I
E15 IPDM E/R (IN- DISTRIBUTION NS16FW-CS 53 52 51 50 6 62 61 60 59 5	Sign	RN LOW FB-A	Sign		J
Connector No. E15 Connector Name D1S7 Connector Type NSI Connector Name D1S7 Connector Name D	Terminal Color No. of Wire 57 V	Connector No. E80 Connector Name HOI Connector Type PDII	Terminal Color No. 10 G Mire		SEC
			П		L
VEHICLE SECURITY SYSTEM Jonnector No. E13 Jonnector Name PDM E/R (NYELLICENT POWER DISTRIBUTION MODULE ENGINE ROOM) JONNector Type THIETPY-NH THIETPY-NH	Signal Name [Specification]		Signal Name [Specification]		M
SECURI E113 IPDM E/R (III DISTRIBUTION THIZEW-NH THIZEW-NH THIZEW-NH THIZEW-NH	ΰ	HORN HIGH	Ø		Ν
VEHICLE S Connector No. Connector Type Connector Type H.S.	Color No. of Vire 25 B P P P P P P P P P P P P P P P P P P	Connector No. Connector Name Connector Type	Terminal Color No. of Wire 2 B B		0
<u> 3</u>				JCKWM2004GE	
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Connector Name WIRE TO WIRE Connector Type THESPW-NH LS [6] 1514 1312 1110 9 7 6 4 3 2 1 [2] 31 30 28 28 27 26 24 28 27 19 18 17 [2] 4	Terminal Color Signal Name [Specification] 15 W -	Connector Name INTELLIGENT KEY UNIT Connector Type TH40FW-NH LLS TELET ET E	Terminal Color Signal Name [Specification] No. of Wire Specification 2
Connector No. MII Connector Name WIRE TO WIRE Connector Type THEOFW-CSIG-TMA	Terminal Color No. of Wire Signal Name [Specification] 4 LG 9 P	Connector No. M34 Connector Name COMBINATION METER Connector Type SAE40FW T 2 3 4 5 6 7 6 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Terminal Color Signal Name [Specification] No. of Wire Signal Name [Specification] 1 LG EAT EAT 28 SECURITY
Connector No. M4 Connector Name DATA LINK CONNECTOR Connector Type BD16FW 9 10 11 12 3 4 5 6 7 8	Terminal Color Signal Name [Specification] No. of Wire Signal Name [Specification] 6	Connector No. M/19 Connector Name WiRE TO WIRE Connector Type NS16MW-CS Lip 2 3	Terminal Golor Signal Name [Specification] No. of Wire Signal Name [Specification] 7 B
VEHICLE SECURITY SYSTEM Geomector Name HOOD SWITCH Geomector Type WIZFW	Terminal Golor Signal Name [Specification] No. of Wire W	Connector No. MIB Connector Name WIRE TO WIRE Connector Type THI6MW-NH M.S. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	Terminal Color Signal Name [Specification] 1 P - -

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M67 B CM (BODY CONTROL MODULE) B FEA09FE-FHA6-SA FEA09FE-FHA6-SA FEA09FE-FHA6-SA FEA09FE-FHA6-SA FEA09FE-FHA6-SA FEA09FE-FHA6-SA FEA09FE-FHA6-SA	Color Signal Name [Specification] of Wine G BAT FUSE B GND Y BAT FL				A B
Connector No. Connector Type	Terminal O No. of No. 27 67 67 70 70				D
M66 BCM (BODY CONTROL MODULE) FEAGSFW-FHA6-SA	Signal Name [Specification] BACK DODOR SW CDLLOCKSW CDLUNLOCKSW DR SW DR DR SW RL	MBI REMOTE KEYLESS ENTRY RECEIVER TKG4FW 1 2 3 4	Signal Name [Spreeification] SIGNAL POWER		E F
Connector No. M66 Connector Name BCM (BODY CONITR Connector Type FEA/9FW-FHA6F-SA HS 11 42 43 44 45 45 45 50 51 52 53	Terminal Color No. of Wire Sig No. of Wire No.	Connector Name REMOTE KE Connector Type TKO4FW M.S.	Terminal Color No. of Wire Sign		G
GAN-L		MRE TO WIRE THIGHWIT-NH 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	Signal Name [Specification]		J
Ф		Connector No. Connector Name Connector Type 1 Connector Type 1	Terminal Color No. of Wire No. of Wire O C C S S S S S S S S		SEC
	2 L 2 L 2 L 2 L 2 L 2 L 2 L 2 L 2 L 2 L				L
M65 M65 M66 M67 M67 M67 M67 M67 M67 M67 M67 M67	Signal Name [Specification] REY OVO UNLOOK KEY OVL LOCK SW AGO AGO BRSW AS DR SW AS DR SW AS REVLESS TUNER SENS GNU KEVLESS TUNER SIGNAL SECURITY ND OUT PUT GIN CAN-H	M/RE TO WRE TH80MV-CS16-TM4 1	re Signal Name (Specification)		M
VEHICLE Connector No. Connector Type Connector Type 12 31 212 32	Terminal Color Nico of Wire Nico of N	Connector No. Connector Type Connector Type H.S.	Terminal Color		0
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ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
IGN ON SW	Ignition switch OFF or ACC	Off
IGIN ON SW	Ignition switch ON	On
KEY ON SW	Mechanical key is removed from key cylinder	Off
RET ON SW	Mechanical key is inserted to key cylinder	On
CDL LOCK SW	Door lock/unlock switch does not operate	Off
CDL LOCK SW	Press door lock/unlock switch to the lock side	On
CDL UNLOCK SW	Door lock/unlock switch does not operate	Off
CDL UNLOCK SW	Press door lock/unlock switch to the unlock side	On
DOOD OW DD	Driver's door closed	Off
DOOR SW-DR	Driver's door opened	On
DOOD CW AC	Passenger door closed	Off
DOOR SW-AS	Passenger door opened	On
DOOD OW DD	Rear RH door closed	Off
DOOR SW-RR	Rear RH door opened	On
DOOD CW DI	Rear LH door closed	Off
DOOR SW-RL	Rear LH door opened	On
DACK DOOD OM	Back door closed	Off
BACK DOOR SW	Back door opened	On
KEY CYLLK CW	Other than driver door key cylinder LOCK position	Off
KEY CYL LK-SW	Driver door key cylinder LOCK position	On
KEY CYLLIN CM	Other than driver door key cylinder UNLOCK position	Off
KEY CYL UN-SW	Driver door key cylinder UNLOCK position	On
KEVI FOC LOOK	"LOCK" button of key fob is not pressed	Off
KEYLESS LOCK	"LOCK" button of key fob is pressed	On
KEVI ESS LINILOSK	"UNLOCK" button of key fob is not pressed	Off
KEYLESS UNLOCK	"UNLOCK" button of key fob is pressed	On
I-KEY LOCK	"LOCK" button of Intelligent Key or door request switch are not pressed	Off
	"LOCK" button of Intelligent Key or door request switch are pressed	On
L KEV LINI OOK	"UNLOCK" button of Intelligent Key or door request switch are not pressed	Off
I-KEY UNLOCK	"UNLOCK" button of Intelligent Key or door request switch are pressed	On
ACC ON CW	Ignition switch OFF	Off
ACC ON SW	Ignition switch ACC or ON	On
DEAD DEE CW	Rear window defogger switch OFF	Off
REAR DEF SW	Rear window defogger switch ON	On
LIGHT OW 10T	Lighting switch OFF	Off
LIGHT SW 1ST	Lighting switch 1ST	On

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Monitor Item	Condition	Value/Status
BUCKLE SW	The seat belt (driver side) is unfastened. [Seat belt switch (driver side) OFF]	Off
BUCKLE SW	The seat belt (driver side) is fastened. [Seat belt switch (driver side) ON]	On
KEYLESS PANIC	PANIC button of key fob is not pressed	Off
RETLESS PAINIC	PANIC button of key fob is pressed	On
KEYLESS TRUNK	NOTE: The item is indicated, but not monitored.	Off
TRNK OPN MNTR	NOTE: The item is indicated, but not monitored.	Off
DKE LOK IMI OK	LOCK/UNLOCK button of key fob is not pressed and held simultaneously	Off
RKE LCK-UNLCK	LOCK/UNLOCK button of key fob is pressed and held simultaneously	On
DIVE IVEED LINE IV	UNLOCK button of key fob is not pressed	Off
RKE KEEP UNLK	UNLOCK button of key fob is pressed and held	On
LIL DE AM OW	Lighting switch OFF	Off
HI BEAM SW	Lighting switch HI	On
LIEAD LAMB OW 4	Lighting switch OFF	Off
HEAD LAMP SW 1	Lighting switch 2ND	On
LIEAD LAMB OW O	Lighting switch OFF	Off
HEAD LAMP SW 2	Lighting switch 2ND	On
AUTO LIGHT SW	NOTE: The item is indicated, but not monitored.	Off
DACCING CW	Other than lighting switch PASS	Off
PASSING SW	Lighting switch PASS	On
FR FOG SW	Front fog lamp switch OFF	Off
FR FOG SW	Front fog lamp switch ON	On
RR FOG SW	NOTE: The item is indicated, but not monitored.	Off
TURN SIGNAL R	Turn signal switch OFF	Off
TORN SIGNAL K	Turn signal switch RH	On
TURN SIGNAL L	Turn signal switch OFF	Off
TORN SIGNAL L	Turn signal switch LH	On
ENGINE RUN	Engine stopped	Off
LINGINE RON	Engine running	On
PKB SW	Parking brake switch is OFF	Off
I ND OW	Parking brake switch is ON	On
CARGO LAMP SW	NOTE: The item is indicated, but not monitored.	Off
OPTICAL SENSOR	NOTE: The item is indicated, but not monitored.	0 V
IGN SW CAN	Ignition switch OFF or ACC	Off
IGN SW CAN	Ignition switch ON	On
ED WIDED III	Front wiper switch OFF	Off
FR WIPER HI	Front wiper switch HI	On
ED WIDER LOW	Front wiper switch OFF	Off
FR WIPER LOW	Front wiper switch LO	On

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Monitor Item	Condition	Value/Status
FR WIPER INT	Front wiper switch OFF	Off
FR WIPER INT	Front wiper switch INT	On
ED WACHED CW	Front washer switch OFF	Off
FR WASHER SW	Front washer switch ON	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
ED WIDED STOD	Any position other than front wiper stop position	Off
FR WIPER STOP	Front wiper stop position	On
VEHICLE SPEED	While driving	Equivalent to speedometer reading
DD WIDED ON	Rear wiper switch OFF	Off
RR WIPER ON	Rear wiper switch ON	On
	Rear wiper switch OFF	Off
RR WIPER INT	Rear wiper switch INT	On
	Rear washer switch OFF	Off
RR WASHER SW	Rear washer switch ON	On
	Rear wiper stop position	Off
RR WIPER STOP	Other than rear wiper stop position	On
RR WIPER STP2	NOTE: The item is indicated, but not monitored.	Off
H/L WASH SW	NOTE: The item is indicated, but not monitored.	Off
	Hazard switch OFF	Off
HAZARD SW	Hazard switch ON	On
DDAKE OW	Brake pedal is not depressed	Off
BRAKE SW	Brake pedal is depressed	On
EANLONI CIC	Blower fan motor switch OFF	Off
FAN ON SIG	Blower fan motor switch ON (other than OFF)	On
AIR COND SW	Compressor ON is not requested from auto amp. (A/C indicator OFF, blower fan motor switch OFF or etc.)	Off
AIR COIND SW	Compressor ON is requested from auto amp. (A/C indicator ON and blower fan motor switch ON).	On
I-KEY TRUNK	NOTE: The item is indicated, but not monitored.	Off
	UNLOCK button of Intelligent Key is not pressed	Off
I-KEY PW DWN	UNLOCK button of Intelligent Key is pressed and held	On
LIZEV DANIC	PANIC button of Intelligent Key is not pressed	Off
I-KEY PANIC	PANIC button of Intelligent Key is pressed	On
PUSH SW	Return to ignition switch to "LOCK" position	Off
PUSH 3W	Press ignition switch	On
TONIC ODNID CW	When back door opener switch is not pressed	Off
TRNK OPNR SW	When back door opener switch is pressed	On
TRUNK CYL SW	NOTE: The item is indicated, but not monitored.	Off
HOOD SW	Close the hood NOTE: Vehicles of except for Mexico are OFF-fixed	Off
	Open the hood	On

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[WITH INTELLIGENT KEY SYSTEM]

Monitor Item	Condition	Value/Status
OIL PRESS SW	Ignition switch OFF or ACC Engine running	Off
	Ignition switch ON	On
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 REGGI FLI	ID of front LH tire transmitter is not registered	Yet
ID REGST FR1	ID of front RH tire transmitter is registered	Done
ID REGST FRT	ID of front RH tire transmitter is not registered	Yet
ID REGST RR1	ID of rear RH tire transmitter is registered	Done
ID REGST KKT	ID of rear RH tire transmitter is not registered	Yet
ID DECCE DI 4	ID of rear LH tire transmitter is registered	Done
ID REGST RL1	ID of rear LH tire transmitter is not registered	Yet
WARNING LAMP	Tire pressure indicator OFF	Off
WARNING LAMP	Tire pressure indicator ON	On
חווקקרה	Tire pressure warning alarm is not sounding	Off
BUZZER	Tire pressure warning alarm is sounding	On

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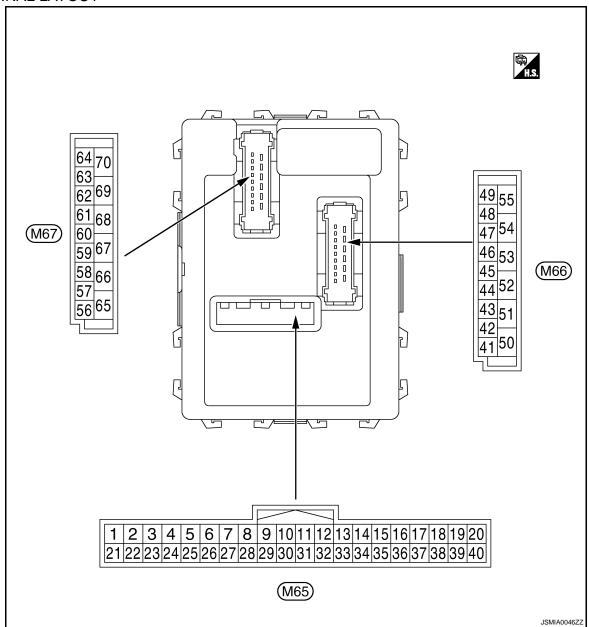
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TERMINAL LAYOUT



PHYSICAL VALUES

CAUTION:

- Check combination switch system terminal waveform under the loaded condition with lighting switch, turn signal switch and wiper switch OFF is not to be fluctuated by being overloaded.
- Turn wiper intermittent dial position to 4 except when checking waveform or voltage of wiper intermittent dial position. Wiper intermittent dial position can be confirmed on CONSULT-III. Refer to BCS-27, "COMB SW: CONSULT-III Function (BCM COMB SW)".
- BCM reads the status of the combination switch at 10 ms internal normally. Refer to <u>BCS-9, "System Diagram"</u>.

		nal No.	Description		Condition		Value (Approx.)
(Wire		color)	Signal name	Input/			
	+	_	Output				
	1	Ground	Ignition key hole illu-	Output	Ignition key hole	OFF	Battery voltage
	(V)	Ground	mination control	Output	illumination	ON	0 V

< ECU DIAGNOSIS >

Terminal No. Description (Wire color)		Description			Condition	Value	
+	-	Signal name	Input/ Output		Condition	(Approx.)	
					All switch OFF Turn signal switch RH	0 V	
				Combination	Lighting switch HI Lighting switch 1ST	(V) 15 10 5 0 ++10ms PKIB4959J	
2 (G)	Ground	Combination switch INPUT 5	Input	switch (Wiper intermit- tent dial 4)	Lighting switch 2ND	1.0 V (V) 15 10 FKIB4953J 2.0 V	
				Combination switch (Wiper intermittent dial 4)	All switch OFF	0 V	
					Turn signal switch LH		
3 (Y)	Ground	Combination switch INPUT 4	Input		Lighting switch PASS Lighting switch 2ND	(V) 15 10 5 0 ++10ms PKIB4959J 1.0 V	
(Y)					Front fog lamp switch ON	(V) 15 10 5 0 +-10ms PKIB4955J 0.8 V	
					All switch OFF	0.8 V	
					Front wiper switch LO		
				Combination	Front wiper switch MIST	(V) 15	
4 (W)	Ground	Combination switch INPUT 3	Input	switch (Wiper intermit- tent dial 4)	Front wiper switch INT	10 5 0 ++10ms PKIB4959J 1.0 V	

< ECU DIAGNOSIS >

	nal No.	Description				Value (Approx.)	
+ (Wire	e color)	Signal name	Input/ Output		Condition		
					All switch OFF (Wiper intermittent dial 4)	0 V	
					Front washer switch (Wiper intermittent dial 4)	(<u>V)</u>	
					Rear washer ON (Wiper intermittent dial 4)	15	
					Any of the condition below with all switch OFF	→ +10ms	
5 (R)	Ground	Combination switch INPUT 2	Input	Combination switch	Wiper intermittent dial 1Wiper intermittent dial 5Wiper intermittent dial 6	рків4959J 1.0 V	
					Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 +-10ms !! PKIB4955J 0.8 V	
	Ground	ound Combination switch INPUT 1		Combination switch	All switch OFF (Wiper intermittent dial 4)	0 V	
					Front wiper switch HI (Wiper intermittent dial 4)	(V)	
					Rear wiper switch INT (Wiper intermittent dial 4)	10	
					Wiper intermittent dial 3 (All switch OFF)	→ ←10ms PKIB4959J	
6 (P)			Input		Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2	(V) 15 10 ++10ms PKIB4952J 1.7 V	
					Any of the condition below with all switch OFF • Wiper intermittent dial 6 • Wiper intermittent dial 7	(V) 15 10 5 0 +10ms 	

< ECU DIAGNOSIS >

	inal No. e color)	Description		O and distinct		Value	
+	- COIOI)	Signal name	Input/ Output		Condition	(Approx.)	
7 (L)	Ground	Door key cylinder switch UNLOCK sig- nal	Input	Door key cylin- der switch	NEUTRAL position	(V) ₁₅ 10 5 0 → 10ms JPMIA0587GB	
					LINII OCK position	8.0 - 8.5 V	
					UNLOCK position	0 V	
8 (R)	Ground	Door key cylinder switch LOCK signal	Input	Door key cylinder switch	NEUTRAL position	0 → • 10ms JPMIA0587GB	
					LOCK position	8.0 - 8.5 V 0 V	
9	0	Cton losses and t	lee t	Stop lamp	OFF (Brake pedal is not depressed)	0 V	
(R)	Ground	Stop lamp switch	Input	switch	ON (Brake pedal is depressed)	Battery voltage	
10 (SB)	Ground	Rear window defog- ger switch	Input	Rear window defogger switch	Not pressed	Battery voltage	
		ger switch		Ignition switch O	Pressed	0 V 0 V	
11 (SB)	Ground	Ignition switch ACC	Input	Ignition switch A		Battery voltage	
12 (P)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closed)	(V) ₁₅ 10 5 0 ***10ms JPMIA0586GB 7.5 - 8.0 V	
					ON (When passenger door opened)	0 V	
13 (LG)	Ground	Rear door switch RH	Input	Rear door switch RH	OFF (When rear door RH closed)	(V) 15 10 5 0	
					ON (When rear door RH opened)	0 V	

	nal No.	Description				Value
+	color)	Signal name	Input/ Output		Condition	(Approx.)
15 [*] (O)	Ground	Tire pressure warning check switch	Input	Ignition switch O	FF	(V) 15 10 5 0 10 10 10 10 10 10 10 10 10 10 10 10 1
18 [*] (O)	Ground	Remote keyless en- try receiver ground	Input	Ignition switch O	N	0 V
				Without Intelligent Key system	At any condition	5 V
19 [*] (V)	Ground	Remote keyless en- try receiver power supply	Input	With Intelligent Key system	Ignition switch OFF For 3 seconds after ignition switch OFF to ON	0 V
					3 seconds or later after ig- nition switch OFF to ON	5 V
				Without Intelligent Key system	At any condition	(V) 15 10 5 0 JPMIA0589GB NOTE: The wave form changes according to signal-receiving condition.
20 [*] (GR)	Ground	Remote keyless entry receiver signal	Input		Ignition switch OFF For 3 seconds after ignition switch OFF to ON	0 V
				With Intelligent Key system	3 seconds or later after ig- nition switch OFF to ON	(V) 15 10 5 0 JPMIA0589GB NOTE: The wave form changes according to signal-receiving condition.
21 (G)	Ground	Immobilizer anten- na signal (Clock)	Input/ Output	Ignition switch O	FF	Battery voltage

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

	nal No. color)	Description			0 10	Value	
+	- COIOI)	Signal name	Input/ Output		Condition	(Approx.)	
					ON	0 V	
23 (B)	Ground	Security indicator signal	Input	Security indicator	Blinking (Ignition switch OFF)	(V) 15 10 5 0	
					OFF	Battery voltage	
25 (BR)	Ground	Immobilizer antenna signal (Rx, Tx)	Input/ Output	Ignition switch C	PFF	Battery voltage	
				Ignition switch O	FF		
27 (Y)	Ground	A/C switch	witch Input	Ignition switch	A/C switch OFF	(V) ₁₅ 10 5 0 → 10ms	
						JPMIA0591GB 1.6 V	
					A/C switch ON	0 V	
				Ignition switch O	PFF	(//)	
28 (LG)	Ground	Blower fan switch	Input	Ignition switch ON	Blower fan switch OFF	(V) ₁₅ 10 5 0 → 10ms JPMIA0592GB	S
						7.0 - 7.5 V	,
					Blower fan switch ON	0 V	
29	Ground	Hazard switch	Input	Hazard switch	OFF	Battery voltage	
(W)					ON	0 V	
30 (G)	Ground	Back door opener switch	Input	Back door opener switch	Not pressed	Battery voltage	
(G)		SWILCH	1	opener switch	Pressed	0 V	

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< ECU DIAGNOSIS >

	nal No.	Description				Value	
+ (Wire	color)	Signal name	Input/ Output		Condition	(Approx.)	
20				Combination switch	All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 → 10ms PKIB4960J 7.2 V	
32 (BR)	Ground	Combination switch OUTPUT 5	Output		Front fog lamp switch ON (Wiper intermittent dial 4)		
					Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15 10	
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	0 → +10ms PKIB4956J	
33		. Combination switch		Combination	All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 → 10ms PKIB4960J 7.2 V	
(GR)	Ground	OUTPUT 4	Output	switch	Lighting switch 1ST (Wiper intermittent dial 4)	(V)	
					Rear wiper switch INT (Wiper intermittent dial 4)	15 10 5	
				Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	0 +10ms PKIB4958J		

< ECU DIAGNOSIS >

	nal No. e color)	Description		2 111		Value	
+	- COIOF)	Signal name	Input/ Output		Condition	(Approx.)	
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 + 10ms PKIB4960J 7.2 V	
34 (L)	Ground	Combination switch OUTPUT 3	Output	Combination switch	Lighting switch 2ND (Wiper intermittent dial 4)		
					Lighting switch HI (Wiper intermittent dial 4)	(V) 15 10	
					Rear washer switch ON (Wiper intermittent dial 4)	5 0	
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	PKIB4958J 1.2 V	
35	Ground	Combination switch OUTPUT 2	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF	(V) 15 10 5 0 +-10ms PKIB4960J 7.2 V	
(B)					Lighting switch 2ND Lighting switch PASS	(V)	
					Front wiper switch INT	15 10 5 0	
					Front wiper switch HI	++10ms PKIB4958J	
36	Ground	Combination switch	Output	Combination switch	All switch OFF	(V) 15 10 5 0 ***10ms PKIB4960J 7.2 V	
(V)		OUTPUT 1	_	(Wiper intermit- tent dial 4)	Turn signal switch RH Turn signal switch LH	(V) 15	
					Front wiper switch LO (Front wiper switch MIST)	10 5 0	
					Front washer switch ON	→ +10ms PKIB4958J	
						1.2 V	

< ECU DIAGNOSIS >

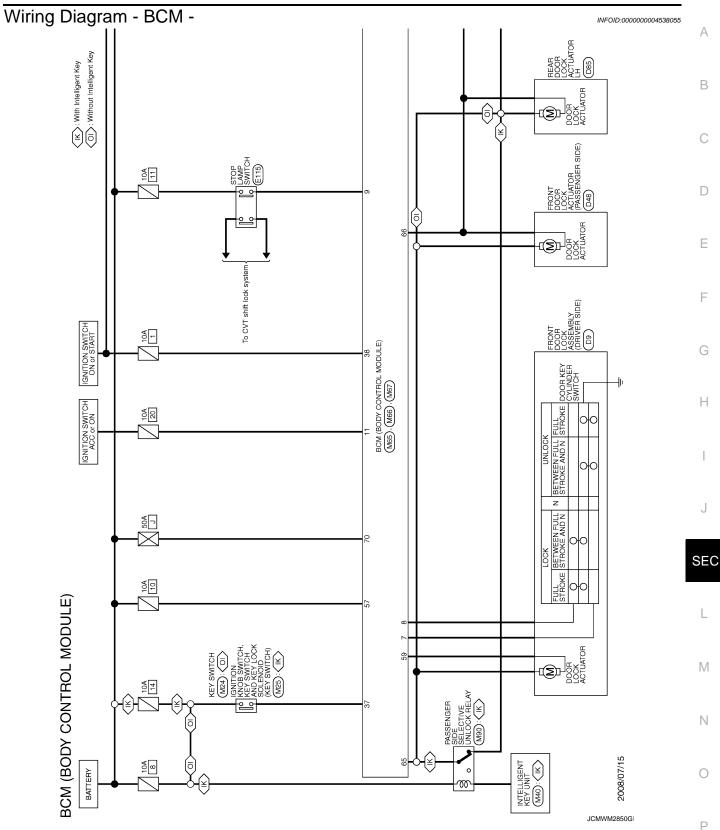
	nal No. color)	Description				Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
37 (LG)	Ground	Key switch	Input	der	al key into ignition key cylin-	Battery voltage
(LG)				Remove mechar cylinder	nical key from ignition key	0 V
38	Ground	Ignition switch ON	Input	Ignition switch C		0 V
(G)		.		Ignition switch C	N or START	Battery voltage
39 (L)	Ground	CAN-H	Input/ Output		_	_
40 (P)	Ground	CAN-L	Input/ Output		_	_
43 (V)	Ground	Back door switch	Input	Back door switch	OFF (When back door closed)	(V) ₁₅ 10 5 0 → 10ms JPMIA0593GB 9.5 - 10.0 V
					ON (When back door opened)	0 V
44				Ignition switch	Rear wiper stop position	0 V
(B)	Ground	Rear wiper auto stop	Input	ON	Any position other than rear wiper stop position	Battery voltage
45 (P)	Ground	Door lock and unlock switch LOCK signal	Input	Door lock and unlock switch	NEUTRAL position	(V) 15 10 5 0 → 10ms JPMIA0591GB 1.6 V
					LOCK position	0 V
46 (BR)	Ground	Door lock and unlock switch UNLOCK sig- nal	Input	Door lock and unlock switch	NEUTRAL position	(V) 10 5 0 → 10ms JPMIA0591GB 1.6 V
					UNLOCK position	0 V

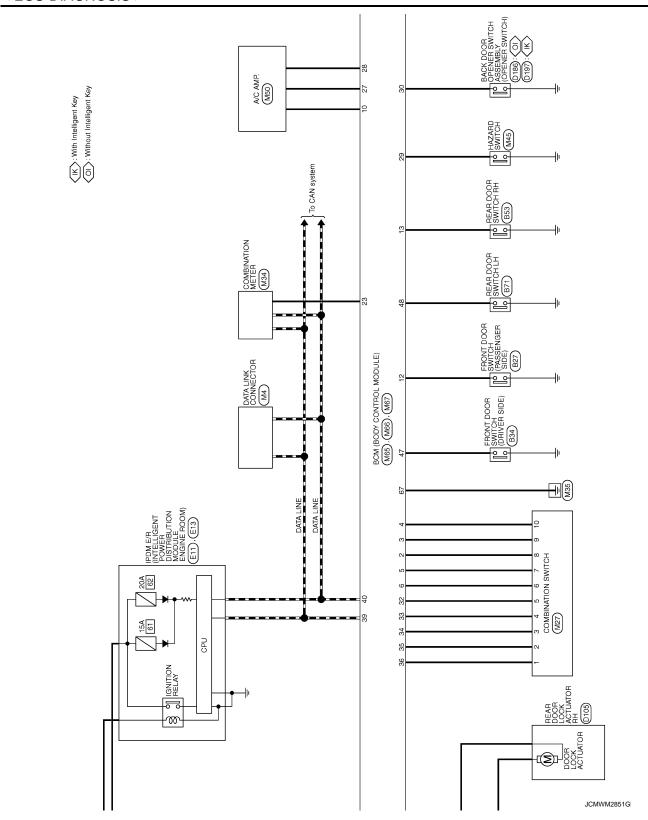
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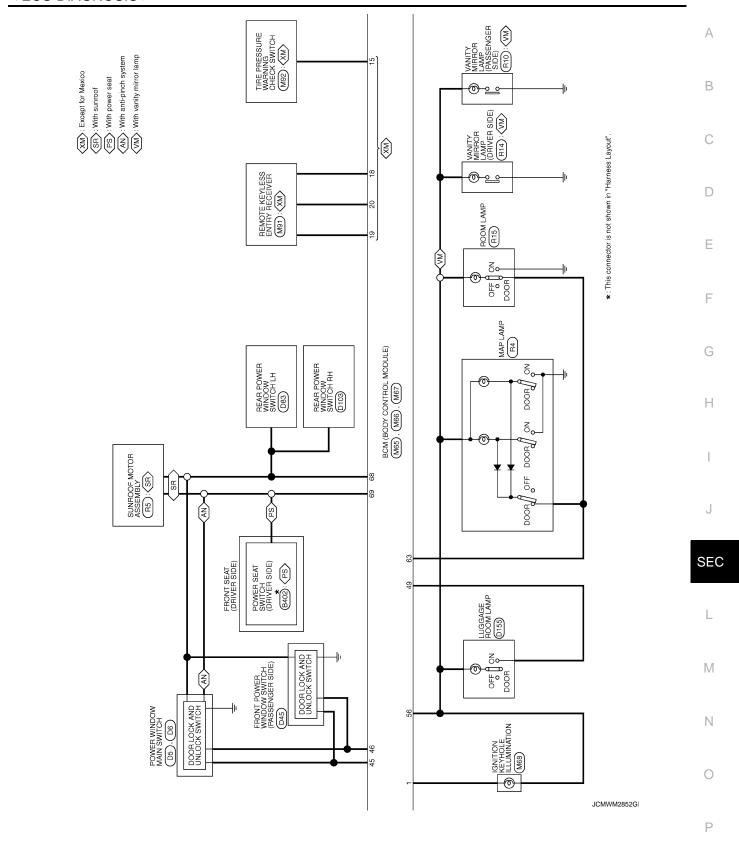
Terminal No. Description (Wire color)		Description				Value	
+ (vvire	e color)	Signal name	Input/ Output		Condition	(Approx.)	
47 (W)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closed)	(V) ₁₅ 10 5 0 ++10ms JPMIA0587GB 8.0 - 8.5 V	
					ON (When driver door opened)	0 V	
48 (GR)	Ground	Rear door switch LH	Input	Rear door switch LH	OFF (When rear door LH closed)	(V) ₁₅ 10 5 0 	
					ON (When rear door LH opened)	0 V	
49	Ground	Back door lamp control	Output	Back door lamp switch DOOR position	Back door is closed (Back door lamp turns OFF)	Battery voltage	
(L)	Ground				Back door is opened (Back door lamp turns ON)	0 V	
53	Ground		Output	Back door opener switch	Not pressed (Back door actuator is activated)	0 V	
(V)	Ground	Back door open	Output		Pressed (Back door actuator is activated)	Battery voltage	
55 (SB)	Ground	Rear wiper motor	Output	Ignition switch	Rear wiper switch OFF Rear wiper switch ON	0 V Battery voltage	
56		Interior room lamp			interior room lamp battery	0 V	
(Y)	Ground	power supply	Output	-	ter passing the interior room	Battery voltage	
57 (G)	Ground	Battery power sup- ply	Input	Ignition switch O	FF	Battery voltage	
59	Ground	Driver door UN-	Output	Driver door	UNLOCK (Actuator is activated)	Battery voltage	
(L)	Ground	LOCK	Output	Dilver door	Other then UNLOCK (Actuator is not activated)	0 V	

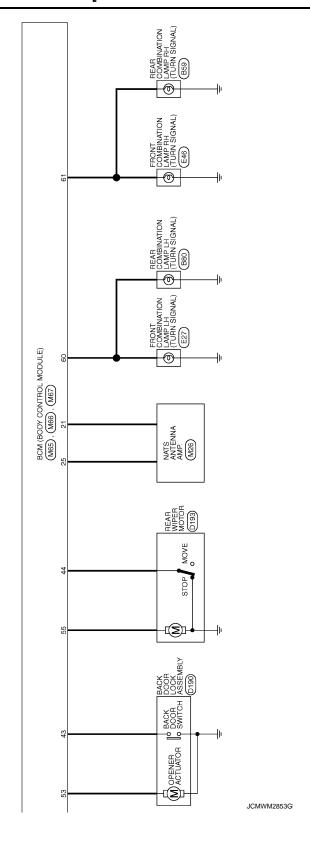
	nal No.	Description				Value
+ (VVire	color)	Signal name	Input/ Output		Condition	(Approx.)
					Turn signal switch OFF	0 V
60 (BR)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1s PKIC6370E 6.0 V
					Turn signal switch OFF	0 V
61 (GR)	Ground	Turn signal RH	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 PKIC6370E
-					OFF	6.0 V
63 (R)	Ground	Interior room lamp timer control	Output	Interior room lamp	ON	Battery voltage 0 V
65	Cround	All doors I OCK	Output	All doors	LOCK (Actuator is activated)	Battery voltage
(V)	Ground	All doors LOCK	Output	All doors	Other then LOCK (Actuator is not activated)	0 V
66	Ground	Passenger door and	Output	Passenger door	UNLOCK (Actuator is activated)	Battery voltage
(G)	Ground	rear door UNLOCK	Output	and rear door	Other then UNLOCK (Actuator is not activated)	0 V
67 (B)	Ground	Ground	Output	Ignition switch ON		0 V
68 (L)	Ground	P/W power supply (RAP)	Output	Ignition switch ON		Battery voltage
69 (P)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF		Battery voltage
70 (Y)	Ground	Battery power sup- ply	Input	Ignition switch OFF		Battery voltage

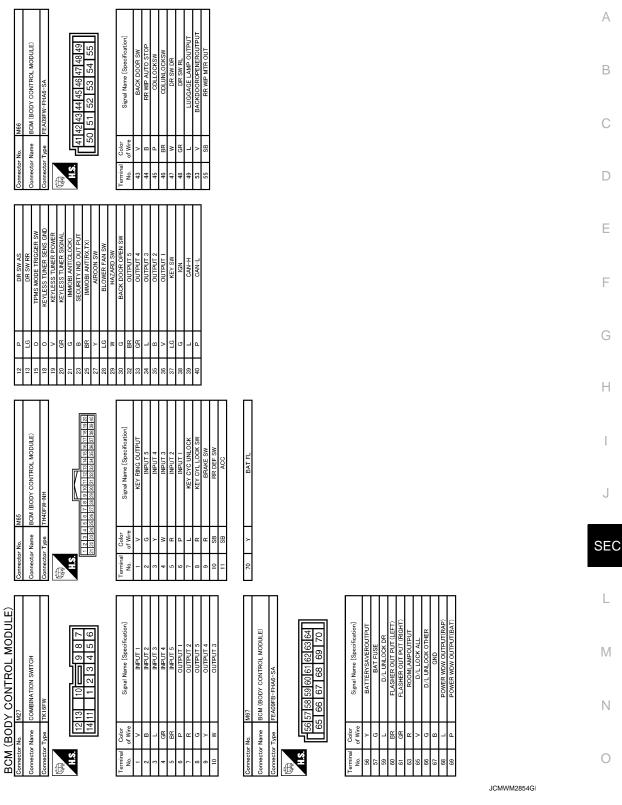
^{*:} Except for Mexico











Fail-safe

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 more than 5 seconds while driving the rear wiper, BCM stops power supply to protect the rear wiper motor.

Condition of cancellation

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

- Pass more than 1 minute after the rear wiper stop.
- Turn the rear wiper switch OFF.
- 3. Operate the rear wiper switch or rear washer switch.

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.

DTC Inspection Priority Chart

INFOID:0000000004538057

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

Priority	DTC
1	U1000: CAN COMM CIRCUIT
2	C1735: IGN CIRCUIT OPEN
3	C1704: LOW PRESSURE FL C1705: LOW PRESSURE FR C1706: LOW PRESSURE RR C1707: LOW PRESSURE RR C1707: LOW PRESSURE RL C1708: [NO DATA] FL C1709: [NO DATA] FL C1710: [NO DATA] RR C1711: [NO DATA] RR C1711: [NO DATA] RL C1712: [CHECKSUM ERR] FR C1714: [CHECKSUM ERR] FR C1714: [CHECKSUM ERR] RR C1715: [CHECKSUM ERR] RR C1715: [CHECKSUM ERR] RR C1716: [PRESS DATA ERR] FL C1717: [PRESS DATA ERR] FR C1718: [PRESS DATA ERR] RR C1719: [PRESS DATA ERR] RR C1719: [CODE ERR] FL C1721: [CODE ERR] FR C1722: [CODE ERR] RR C1723: [CODE ERR] RR C1724: [BATT VOLT LOW] FL C1726: [BATT VOLT LOW] FR C1727: [BATT VOLT LOW] RR

DTC Index

NOTE:

Details of time display

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

CONSULT display	Tire pressure monitor warning lamp ON	Reference
U1000: CAN COMM CIRCUIT	_	BCS-35

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

CONSULT display	Tire pressure monitor warning lamp ON	Reference	А
C1704: LOW PRESSURE FL	×		
C1705: LOW PRESSURE FR	×	WT-15	В
C1706: LOW PRESSURE RR	×	<u>wi-15</u>	Ь
C1707: LOW PRESSURE RL	×		
C1708: [NO DATA] FL	×		С
C1709: [NO DATA] FR	\/\/T 17		
C1710: [NO DATA] RR	<u>WT-17</u>		
C1711: [NO DATA] RL	×		D
C1712: [CHECKSUM ERR] FL	×		
C1713: [CHECKSUM ERR] FR	WT-20	Е	
C1714: [CHECKSUM ERR] RR	×	<u>W1-20</u>	
C1715: [CHECKSUM ERR] RL	×		
C1716: [PRESS DATA ERR] FL	×		F
C1717: [PRESS DATA ERR] FR	<u>WT-23</u>		
C1718: [PRESS DATA ERR] RR	×	<u>W1-25</u>	G
C1719: [PRESS DATA ERR] RL	×		
C1720: [CODE ERR] FL	×		
C1721: [CODE ERR] FR	×	WT-2 <u>5</u>	Н
C1722: [CODE ERR] RR	×	<u>W1-25</u>	
C1723: [CODE ERR] RL	×		ı
C1724: [BATT VOLT LOW] FL	_		
C1725: [BATT VOLT LOW] FR	_	W/T OO	
C1726: [BATT VOLT LOW] RR	<u>WT-28</u>	J	
C1727: [BATT VOLT LOW] RL	_		
C1729: VHCL SPEED SIG ERR	×	<u>WT-31</u>	SEC
C1735: IGN CIRCUIT OPEN	_	BCS-36	SEC

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INTELLIGENT KEY UNIT

Reference Value

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

Monitor Item		Value/Status						
PUSH SW	Ignition knob	Release	OFF					
1 0011 000	Igrillori kilob	Press	ON					
KEY SW	Mechanical key	Removed	OFF					
KLI SW	Wechanical key	Inserted	ON					
DD DEO CW	Door request switch	Release	OFF					
DR REQ SW	(driver)	Press	ON					
AC DEO CW	Door request switch	Release	OFF					
AS REQ SW	(passenger)	Press	ON					
BD/TR REQ SW	Door request switch	Release	OFF					
DD/TR REQ SW	(back door)	Press	ON					
IGN SW	Ignition switch	Other than ON position	OFF					
IGIN SVV	ignition switch	ON position	ON					
ACC SW	Ignition ewitch	Other than ACC or ON position	OFF					
AUU 300	Ignition switch	ACC or ON position	ON					
STOD I AMD SW	Proke nodel	Press	OFF					
STOP LAMP SW	Brake pedal	Release	ON					
D D 4 1 0 5 0 1 1	Chiff position	P position	ON					
P RANGE SW	Shift position	Other than P position	OFF					
BD OPEN SW		The item is indicated, but not monitored.						
TR CANCEL SW		The item is indicated, but not monitored.						
DOOD I OOK SIC	Lock button of	Release	OFF					
DOOR LOCK SIG	Intelligent Key	Press	ON					
DOOD LINI OOK SIG	Unlock button of	Release	OFF					
DOOR UNLOCK SIG	Intelligent Key	Press	ON					
KEYLESS TRUNK		The item is indicated, but not me	onitored.					
KEVI EGO DANIO	PANIC button of key	Release	OFF					
KEYLESS PANIC	fob	Press	ON					
KEYLESS PSD LH		The item is indicated, but not mo	onitored.					
KEYLESS PSD RH		The item is indicated, but not me	onitored.					
KEYLESS PBD SIG		The item is indicated, but not me	onitored.					
DOOD SW DD	Door (driver side)	Close	OFF					
DOOR SW DR	Door (driver side)	Open	ON					
DOOD OW AC	D/	Close	OFF					
DOOR SW AS	Door (passenger side)	Open	ON					
DOOD CW DD	Door (*** - ** DU)	Close	OFF					
DOOR SW RR	Door (rear RH)	Open	ON					
DOOD OW DI	Deer /111\	Close	OFF					
DOOR SW RL	Door (rear LH)	Open	ON					

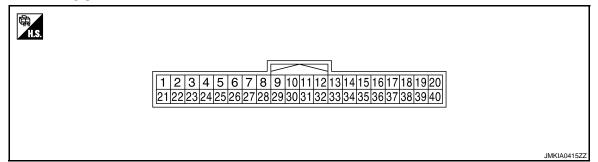
INTELLIGENT KEY UNIT

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Monitor Item	Condition		Value/Status	
DOOR BK SW	Back door	Close	OFF	
		Open	ON	
TRUNK SW	The item is indicated, but not monitored.			
VEHICLE SPEED	While driving		Equivalent to speedometer reading	

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No.		Description				Value IV/I	
+ (wire	e color)	Signal name	Input/ Output	Condition		Value [V] (Approx.)	
1 (GR)	Ground	Steering lock unit power supply	Output	_		5	
2 (L)	Ground	CAN - H	Input/ Output	_		_	
3 (P)	Ground	CAN - L	Input/ Output	_		_	
4		Intelligent Key warn- ing buzzer	Output	Intelligent Key warning buzz- er	Sounding	0	
(O)	Ground				Not sounding	Battery voltage	
5		Ground Front door request switch (driver side)	Input	Front door request switch (driver side)	ON (Pressed)	0	
(Y)	Ground				OFF (Released)	5	
6	6 Ground	Ignition switch power	Input	put Ignition switch OFF or ACC ON or START	OFF or ACC	0	
(W)	Ground	supply	IIIput		ON or START	Battery voltage	
7	7 (LG) Ground Key switch	Kan anitah	lanut.	When ignition key is inserted into ignition key cylinder		Battery voltage	
(LG)		Input	When ignition key is not inserted into ignition key cylinder		0		
10	Ground	nd Park position switch	Input -	Shift lever in park position		0	
(SB)	Ground			Other than above		Battery voltage	
11 (R)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage	
12 (B)	Ground	Ground	_	Ignition switch ON		0	

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Terminal No. (wire color)		Description				Value [V]	
	e color)	Signal name	Input/ Output	Condition		(Approx.)	
13	Crowd	Inside key antenna		Ignition knob	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0393ZZ	
(Y)	Ground	(+) (rear seat)	Output		When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0391ZZ	
	Inside key antenna	nside key antenna Output	Ignition knob	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0392ZZ		
	Glound	(-) (rear seat)	Cuipai	is pressed.	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0390ZZ	
15 (R) Grou	Ground	Ground Inside key antenna (+) (console) Output	Output	Ignition knob	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0393ZZ	
	Giouna		is pressed.	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 MINIMATERIAL STATES AND STATE		

INTELLIGENT KEY UNIT

Terminal No. Description (wire color)		0 150		Value [V]		
+	- COIOI)	Signal name	Input/ Output		Condition	(Approx.)
16		Inside key antenna		Ignition knob	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 1 1 1 1 1 1 1 1 1
(G)	Ground	(-) (console)	Output	is pressed.	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0390ZZ
17		Outside key antenna		When the back door re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0397ZZ
(W)	Ground	(+) (rear bumper)	Output	quest switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0514ZZ
18		Outside key antenna		When the back door re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0395ZZ
(R)	Ground	d (-) (rear bumper) Output	quest switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0515ZZ	

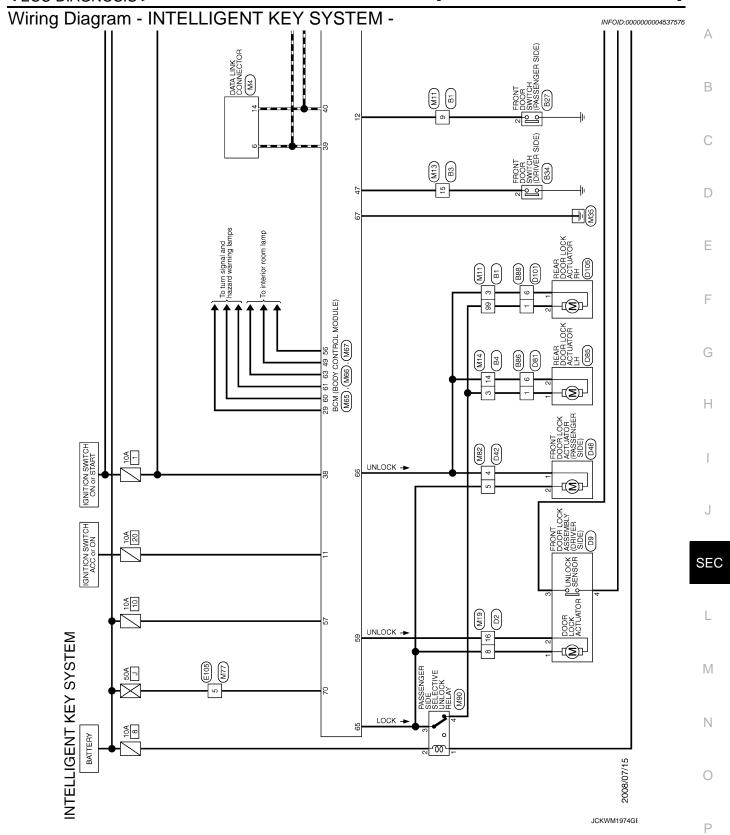
	ninal No.	Description				Value [V]
	e color)	Signal name	Input/ Output	(Condition	(Approx.)
19		Outside key antenna		When the front door request switch	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0397ZZ
(BR)	Ground	(+) (driver side)	Output	(driver side) is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0514ZZ
20	Ground	Outside key antenna	Output	When the front door request switch (driver side) is	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0395ZZ
(O)	Gloana	(-) (driver side)	Gupu	operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0616ZZ
25		Front door request		Front door request switch	ON (Pressed)	0
(BR)	Ground	switch (passenger side)	Input	(passenger side)	OFF (Released)	5
26 (B)	Ground	Stop lamp switch	Input	Depress the br	-	Battery voltage 0
27 (G)	Ground	Ignition knob switch	Input	Ignition switch	When ignition knob switch is pressed	Battery voltage
(G)				OI I	When ignition knob switch is released	0
28 (W)	Ground	Unlock sensor	Input	Lock (ON)		5
29		Back door request		Unlock (OFF) Back door re-	ON (Pressed)	0
(SP)	Ground	switch	Input	quest switch	OFF (Released)	5
31 (L)	Ground	Steering lock unit ground	_	_	_	0

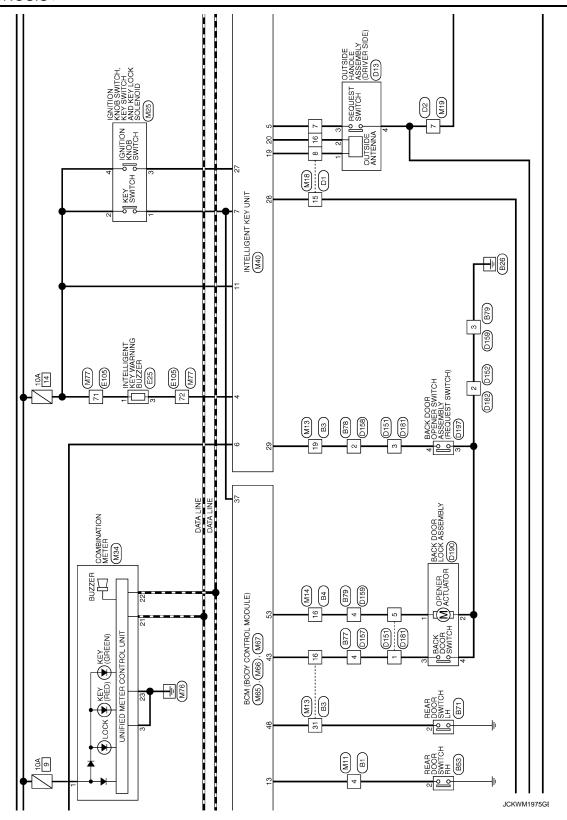
INTELLIGENT KEY UNIT

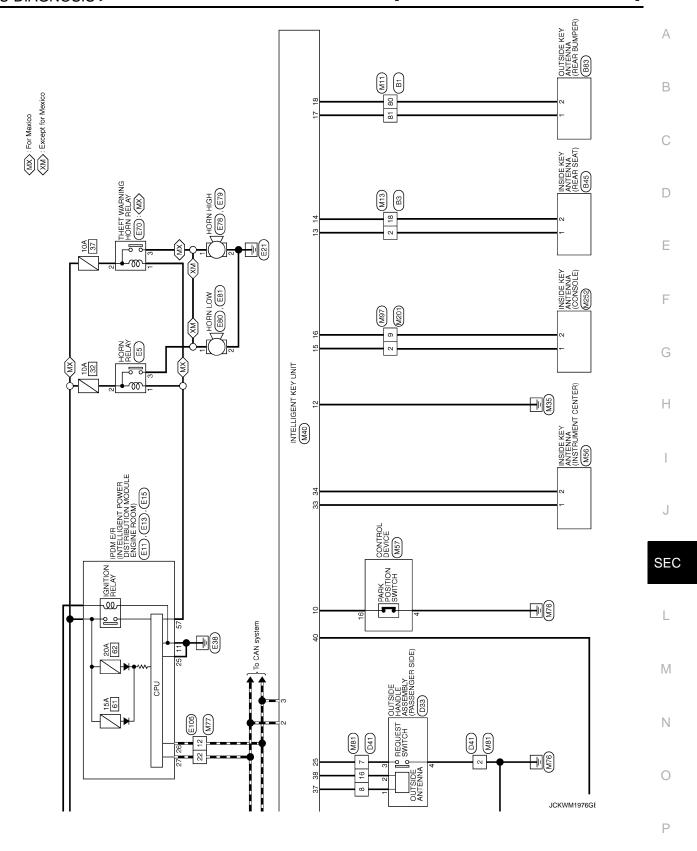
	Terminal No. Description			Value [V]	А		
+ (wir	re color)	Signal name	Input/ Output		Condition	(Approx.)	A
					LOCK status	5	В
32 (P)	Ground	Steering lock unit communication	Input/ Output	Steering lock	LOCK or UNLOCK	(V) 6 4 2 0 100 ms JMKIA0433ZZ	C
33	Ground	Inside key antenna (+)	Output	Ignition knob	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1	E F G
(L)	Giodila	(instrument center)	Output	is pressed.	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 4 1 s JMKIA0391ZZ	Н
34	Ground	Inside key antenna	Quitout	Ignition knob	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 Is 1 Is JMKIA0392ZZ	SEC
(P)	Ground (-) (instrument center)	Output	is pressed.	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0390ZZ	M N	

< ECU DIAGNOSIS >

Terminal No.		Description				Value [V]	
+ (wir	e color)	Signal name	Input/ Output		Condition	(Approx.)	
37		Outside key antenna	Output	When the front door request switch (passenger	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0397ZZ	
(V)	Ground	(+) (passenger side)	Cutput	side) is oper- ated with igni- tion switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0514ZZ	
38	Ground Outside key antenna (-) (passenger side) Output When the front door request switch (passenger side) is operated with ignition switch OFF	front door request switch (passenger	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0395ZZ			
(P)		(-) (passenger side)	Output	ated with igni- tion switch	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0515ZZ	
40 (V)	Ground	Passenger side se- lective unlock relay	Input	Press front door request switch (pas-	Anti-hijack operation	Battery voltage → 0 → Battery voltage	
(· /				senger side)	Other than above	Battery voltage	







Connector No. B27	Connector Name FRONT DOOR SWITCH (PASSENGER SIDE)	H.S.	Terminal Color Signal Name [Specification] 2 BR		Terminal Color Signal Name [Specification] No. of Wire 2 GR -
Connector No. B4	Connector Name WIRE TO WIRE	NS NS NS NS NS NS NS NS	Terminal Color Signal Name (Specification) Color Col		Terminal Color Signal Name [Specification]
Connector No. B3	Connector Name WIRE TO WIRE	H32 1 2 3 4 5 6 7 8 9 10 11 21 3 4 5 6 7 20 20 20 20 20 20 20	Terminal Golor Signal Name [Specification] No. of Wire Signal Name [Specification] 2	T T T T T T T T T T	Terminal Color Signal Name [Specification] No. of Wire G
INTELLIGENT KEY SYSTEM Connector No. B1	Connector Name WIRE TO WIRE	H.S. I FROMWING CONTROL OF THE STATE OF THE	Terminal Color Signal Name [Specification] Color Col	I o I o I o I	Terminal Color Signal Name [Specification] No. of Wire 2 P

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INTELLIGENT KEY UNIT

Connector No. B83 Connector Name OUT SIDE KEY ANTENNA (REAR BUMPER) Connector Type RKIZE CY H.S.	Terminal Golor Signal Name [Specification]	Cornector No. D2 Cornector No. D2 Cornector Name WIRE TO WIRE Cornector Type NS 1674-CS T C S 4 C 1 1 1 0 S S T T T T T T T		A B C
Connector No. 679 Connector Name WIRE TO WIRE Connector Type MOMWY-LC 1 2 3 4	Terminal Color No. of Wire Signal Name (Specification) 3 B	Connector No. D1		E F G
Connector No. 978 Connector Type TH08MW-NH H.S. 1 2 3 4 5 6 7 8	Terminal Golor Signal Name [Specification] 2 SB	Signal Name Signal Name Specification Specification Signal Name Specification Sp		J
INTELLIGENT KEY SYSTEM Connector Num Connector Name WIRE TO WIRE Connector Type NSTOWW-CS MSTOWW-CS MSTOWW-CS	Terminal Color No. of Wire 4 W Signal Name [Specification]	Somestor No. B86 Connector Name WIRE TO WIRE	JCKWM1978GE	M N
				Р

Revision: 2008 August SEC-117 2009 Rogue

Connector No. D41 Connector Name WRE TO WIRE Connector Type TH16FW-NH #.S. Image: Property of the prope	Terminal Color Signal Name [Specification] 2 8 8 -	Connector No. D85 Connector Name REAR DOOR LOCK ACTUATOR LH Connector Type EBEGY-RS M.S. (123456	Terminal Color Signal Name [Specification] No. of Wire V
Connector No. D33 Connector Name (DUTSIDE HANDLE ASSEMBLY Connector Type RH04MB H.S. (4 3 2 1)	Terminal Color Signal Nane [Specification] No. of Wire V 2 P	Connector No. Connector Name WIRE TO WIRE Connector Type NISI2FW-CS 12 11 10 9 8 7 6	Terminal Color Signal Name [Specification] No. of Wire Signal Name [Specification]
Connector No. D13 Connector Type RH04MB Connector Type RH04MB (4 3 2 1)	Terminal Color Signal Name [Specification] Color ER	Connector No. D48 Connector Name (PASSENGER SIDE) Connector Type E08FGY-RS M.S. (6 5 4 3 2 1)	Terminal Color Signal Name [Specification] No. of Wire Y
INTELLIGENT KEY SYSTEM Connector No. 109 Connector Name SUC. Connector Type E08F07-RS 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.	Terminal Color Signal Name [Specification] No. of Wire Signal Name [Specification] Signal Name Specification] Signal Name Specification Specification Signal Name Specification Spec	Connector No. D42 Connector Name WIRE TO WIRE Connector Type NISIOFW-CS 10 9 8 7 6 5	Terminal Color Signal Name [Specification] No. of Wire Y Y Y S Y Y Y Y Y Y

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INTELLIGENT KEY UNIT

	Signal Name [Specification]		Signal Name [Specification]		A B
No. D152 Name WIRE TO WIRE Type M02FW-GY-LC	Color B B	No. DI81 Name WRETO WIRE Type NSG8MBR-CS 1 2	Color Signal Name of Wire SB SB V		С
Connector No. Connector Name Connector Type H.S.	Terminal No.	Connector No. Connector Name Connector Type	Terminal No. O.		D
	cification		offication]		Е
DISI WIRE TO WIRE NSOBFBR-CS 3	Signal Name [Specification]	D159 WIRE TO WIRE MO4FW-LC	Signal Name (Specification)		F
Commetter No. 0151 Commetter Name WIRE Commetter Type NS38	Color	Connector No. 0159 Connector Name WIFE Connector Type MO44 H.S.	Terminal Color Of Wise 8 B B Color C		G
		8 8 8			Н
DIOS REAR DOOR LOCK ACTUATOR RH EDGFGV-RS SEGF ST	Signal Name [Specification]		Signal Name [Specification]		I
DIOS REAR DOOR L EOSFGY-RS	Signa Signa	WIRE TO WIRE THOSEW-NH 4 3 8 7 8 8 7	Signa		J
Commettor No. D Commettor Name R Commettor Type E	Terminal Color No. of Wire 2 V	Connector No. D Connector Name W Connector Type T LS.	Terminal Color No. of Wire 2 SB		SEC
					L
INTELLIGENT KEY SYSTEM Connector No. D101 Connector Name WIRE TO WIRE Connector Type NSIZFW-CS NSIZFW-CS	Signal Name [Specification]	S	Signal Name [Specification]		M
ENT KEY DIOI WRE TO WIRE NSIZFW-CS 5 4		D157 WIRE TO WIRE NS10FW-CS 4 3			Ν
INTELLIGE Connector No. Connector Name Connector Type H.S.	No. O'Glor of Wire of Wire of G	Connector No. Connector Name Connector Type	Terminal Color No. of Wire 4 W		0
<u>[0] 0 0] [2 </u>				JCKWM1980GE	
					Р

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	Commetter Type	Terminal Color Signal Name (Specification) No. of Wire Signal Name (Specification) 1 GR 2 - - 3 G -	T POWER Commettor No. E25 Commettor No. E25 Commettor Name INTELLIGENT KEY WARNING BUZZER Commettor Type RK03FBR RK0	Terminal Color Signal Name (Specification) No. of Wire Signal Name (Specification) 1 0 1 0 1 1 0 1 1 0 1 1
Connector No.	Connector Type TH04MM-NH	Terminal Golor Signal Name [Specification] No. of Wire Signal Name [Specification] 3 B - -	T POWER Connector No. E15 Connector No. E15 Connector Name POWER POWER	Terminal Golor Signal Name [Specification] No. of Wire Signal Name [Specification] 57 V -
	Connector Type NSO4FW-CS H.S.	Terminal Color Signal Name [Specification] No. of Wire Signal Name [Specification] No. of Wire Signal Name [Specification] No. of Wire No. o	Connector No. E13 E14	Terminal Color Signal Name [Specification] 26 P - 26 P
\mathbb{H}	Connector Type MOZMW-GV-LC H.S. 1	Terminal Color Signal Name (Specification) No. of Wire 2 B	Connector No. E11 Connector No. E11 Connector Name ploys REBUTTON MODULE ENGINE ROOM) Connector Type MOBFB-LC 1110 9 141312	Terminal Color Signal Name [Specification] No. of Wire

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INTELLIGENT KEY UNIT

Connector No. E80 Connector Name HORN LOW Connector Type POIFB-A	Terminal Color Nigral Name [Specification] 1	Mile Connector No. Mile Connector Name WIRE TO WIRE		A B C
Connector No. E79 Connector Name HORN HIGH Connector Type POIFB-A H.S.	Terminal Color Signal Name [Specification] 2 B	Connector No. M4 Connector Name DATA LINK CONNECTOR Connector Type BD16FW BD16F		E F G
Connector No. E78 Connector Name HORN HIGH Connector Type POITER-A	Terminal Color No. of Wire 1 G	Connector No. E105		J
INTELLIGENT KEY SYSTEM Connector No. E70 Connector Name THEFT WARNING HORN RELAY Connector Type MOSPW-R-LC	Terminal Color Signal Name [Specification]	Connector No. E81 Connector Name HORN LOW Connector Type POIFB-A H.S. Terminal Color No. of Wire 2 B		M N
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Connector No. M19 Connector No. M19 Connector Name WIRE TO WIRE Connector Type NS18MW-CS Connector Type Con	Terminal Color Signal Name Specification] No. of Wire Signal Name Specification]	15 R 16 G 17 W 16 G 17 W 18 R 18 R 19 BR 20 O 2 25 BR 27 G 27 G 27 G 27 G 28 BR 27 G 27 G 28 BR 27 G 27 G 28 BR 27 G 28 B	a > a >
Connector No. M18	Terminal Color Signal Name Specification Terminal Color Signal Name Specification No. of Wire No. of Wire Of Wire	Connector No. M34 M40 Connector Name COMBINATION METER Connector Name INTELLIGENT KEY UNIT Connector Type TH40FW-N4H Connector Type TH40FW-N4H MAS TT2 at a single singl	Terminal Color Signal Name Specification No. of Wire Signal Name Specification No. of Wire Signal Name Specification No. of Wire Signal Name Sig
INTELLIGENT KEY SYSTEM Connector No. Mi3 Connector No. Mi3 Connector No. Mi3 Connector Type TH32FW-NH Connector	Terminal Color Signal Name [Specification] Terminal Color No. of Wire Signal Name [Specification] No. 15	Connector No. M25 Connector Name IGNITION KNOB SWITCH, KEY SWITCH Connector Name AND KEY LOCK SOLENOID Connector Type TKOBMGY	Terminal Color Signal Name [Specification] Terminal Color Signal Name [Specification] Terminal Color

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	ion] 201T		А
M66 BCM (BODY CONTROL MODULE) FEAGSFW-FHAG-SA	Signal Name (Specification) BACK DOOR SW DR SW DR DR SW RL LUGGAGE LAMP OUTPUT BACKDOOR OF PREROUTPUT	-CS	В
	Color Sign	MR82 WIRE TO 12 5 6	С
Commettor No. Commettor Name Commettor Type	Terminal C No. 43 44 48 48 49 49 53	Connector No. Connector Name Connector Type H.S. H.S. 4 of Wir	D
3ULE)	Freation]	[fication]	Е
M65 BCM (BODY CONTROL MODULE) TH40FW-NN E Z E B UNITED SI H SIGNITED SI H SI	Signal Name [Specification] ACC DR SW AS DR SW RR HAZARD SW KEY SW KEY SW CAN-H CAN-H CAN-H	In Name (Spec	F
4 2	P Color of Wire SB	No. M81 Name WIRE TO WIRE Type THIBMW-NH 1 2 3 4 1 2 3 4 1 1 1 2 2 4 4 9 10 11 12 7 9	G
Connector No Connector Type A. S.	Terminal 10. (1) 11. (12) 13. (29) 29. (29) 39. (39) 39. (40)	Connector No. Connector Type Terminal Color No. C Wr. 2 C Wr. 16 P P	Н
	pecification)	Specification]	1
ж-ин 6 5 4 3 14 13 12 11	Signal Name [Specification]	WIRE TO WIRE THBOMW-CSI 6-TM4 THEOMW-CSI 6-TM4 Signal Name [Specification]	J
or Type	al Golor of Wire SB	No. Name (1998)	SEC
Connecte	Terminal No. No. 16	Commerton Commerton Commerton Commercial Commer	L
INSTRUMENT	pecification	DL MODULE) 62 63 64 69 70 15 pecification] AMEROUTPUT FUSE UT PUT (REGHT) UT PUT (REGHT) UT PUT (REGHT) OOK ALL OOK ALL AT FL	M
INTELLIGENT KEY SYSTEM Connector No. M56 CENTEN CEN	Signal Name (Specification)	3-FHA6-SA 59 60 61 59 60 61 67 68 BATTERYS BATTERYS FLASHER O FLASHER	
	Color of Wire		N
INTELLIC Connector Name Connector Type H.S.	Terminal No.	Connector No Connector Name Connector Name Connector Name Connector Type Connec	VM1984GE
			P

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INT	LLIGE	INTELLIGENT KEY SYSTEM							[ſ
Connector No.	tor No.	M90	Connector No.		M97	Connector No.	o. M201	01	Conn	Connector No.	M252	_
Connect	Connector Name	PASSENGER SIDE SELECTIVE UNLOCK RELAY	Connecto	Connector Name V	WIRE TO WIRE	Connector Name	ame WIF	WIRE TO WIRE	Conn	Connector Name	INSIDE KEY ANTENNA (CONSOLE)	
Connect	Connector Type	MS03FB-M2-LC	Connector Type		NS16FW-CS	Connector Type		NS16MW-CS	Conn	Connector Type RK02FGY	RK02FGY	П
H.S.		2 4 1	H.S.	16	7 6 5 4 3 2 1 16 15 14 13 12 11 10 9 8	E H.S.	8 4	3 — 4 5 6 7 10 11 12 13 14 15 16	₫.	H.S.		
Terminal No.	al Color of Wire	Signal Name [Specification]	Terminal Color No. of Wire	Color of Wire	Signal Name [Specification]	Terminal (Color of Wire	Signal Name [Specification]	Terminal No.	inal Color b. of Wire	Signal Name [Specification]	
-	>	1	2	œ	1	2	~	1		œ	1	Γ
2	ΓC	-	6	ŋ	1	6	5	-	2	9	-	
3	۸	-										
4	œ											

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Fail Safe		INFOID:000000004537577

Display contents of CONSULT-III	Fail-safe	Cancellation
B2013: STRG COMM 1	Inhibits steering look unlocking	Erase DTC
B2552: INTELLIGENT KEY	Inhibits steering look unlocking Inhibits engine cranking (BCM) Fuel cut (ECM)	Erase DTC
B2590: NATS MALFUNCTION	Inhibits steering look unlocking Inhibits engine cranking (BCM) Fuel cut (ECM)	Erase DTC

DTC Inspection Priority Chart

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

Priority	DTC
1	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN) B2552: INTELIGENT KEY
2	B2013: STRG COMM 1 B2590: NATS MALFUNCTION

DTC Index

NOTE:

Details of time display

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

CONSULT display	Detection condition	Fail-safe	Diagnosis
No DTC is detected. further testing may be required.	_	_	_
U1000: CAN COMM CIRCUIT	Intelligent Key unit cannot receive CAN communication signal continuously for 2 seconds or more	_	Check CAN communication system. Refer to LAN-27
U1010: CONTROL UNIT (CAN)	Intelligent Key unit detects internal CAN communication circuit malfunction	_	Replace Intelligent Key unit.
B2013: STRG COMM 1	The ID verification result between Intelligent key unit and steering lock unit are NG. Or Intelligent Key unit cannot communicate with steering lock unit	×	Perform steering lock unit ID registration with CONSULT-III
B2552: INTELLIGENT KEY	Intelligent Key unit internal malfunction	×	Replace Intelligent Key unit.
B2590: ID DISCORD BCM-I-KEY	The ID verification result between Intelligent key unit and BCM are NG. Or Intelligent Key unit cannot communicate with BCM	×	Check NATS Refer to <u>SEC-44</u>

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

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

Reference Value

VALUES ON THE DIAGNOSIS TOOL

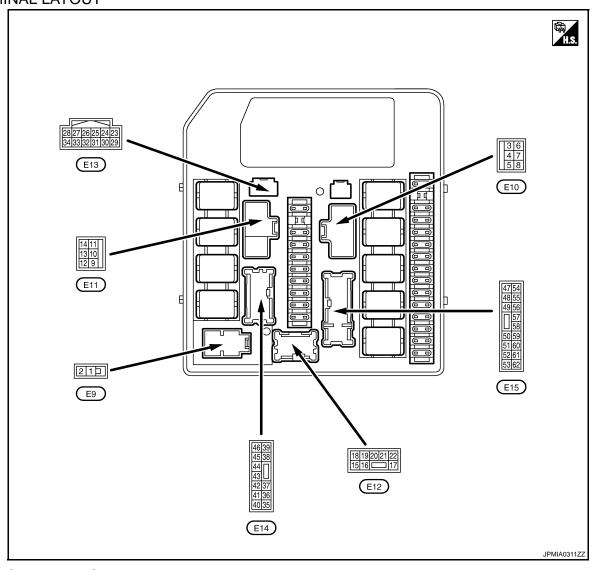
Monitor Item		Condition	Value/Status
MOTOR FAN REQ	Engine idle speed	Changes depending on engine coolant temperature, air conditioner operation status, vehicle speed, etc.	1 - 4
		A/C switch OFF	Off
AC COMP REQ	Engine running	A/C switch ON (Compressor is operating)	On
TAIL & CLD DEO	Lighting switch OFF		Off
TAIL&CLR REQ	Lighting switch 1ST or 2	ND	On
# 10 PF0	Lighting switch OFF		Off
HL LO REQ	Lighting switch 2ND		On
W. LW. D.F.O.	Lighting switch OFF		Off
HL HI REQ	Lighting switch HI (Light	is illuminated)	On
FR FOG REQ		Front fog lamp switch OFF	Off
NOTE: This item is monitored only on the vehicle with front fog lamp.	Lighting switch 2ND	Front fog lamp switch ON	On
		Front wiper switch OFF	Stop
FR WIP REQ	Innitian avital ON	Front wiper switch INT	1LOW
	Ignition switch ON	Front wiper switch LO	Low
		Front wiper switch HI	Hi
		Front wiper stop position	STOP P
WIP AUTO STOP	Ignition switch ON	Any position other than front wiper stop position	ACT P
		Front wiper operates normally	Off
WIP PROT	Ignition switch ON	BLOCK	
ST RLY REQ NOTE:	When Intelligent Key is of is pushed	outside the vehicle, and the push switch	Off
Vehicle without Intelligent Key system indicates only "ON", and it does not change.	When Intelligent Key is in pushed	On	
GN RLY	Ignition switch OFF or A	CC	Off
STATE!	Ignition switch ON		On
		Rear window defogger switch OFF	Off
RR DEF REQ	Ignition switch ON Rear window defogger switch ON (Rear window defogger is operating)		On
OII D GW	Ignition switch OFF, ACC	C or engine running	Open
OIL P SW	Ignition switch ON		Close
OTRL REQ	Daytime running light sy	stem is not operated.	Off
NOTE: This item is monitored only on the vehicle with the daytime running light system.	Daytime running light sy	stem is operated.	On

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) [WITH INTELLIGENT KEY SYSTÉM]

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
HOOD SW	Close the hood	Off
NOTE: This item is monitored only the vehicle for Mexico.	Open the hood	On
	Not operation	Off
THFT HRN REQ	Horn is activated with vehicle security system or panic alarm system.	On
HORN CHIRP	Not operation	Off
HORN CHIRP	Horn is activated with key fob LOCK operation.	On

TERMINAL LAYOUT



PHYSICAL VALUES

	nal No.	Description			Value
	color)	Signal name	Input/	Condition	(Approx.)
+	-	<u> </u>	Output		
1 (R)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage
2 (G)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage

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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) [WITH INTELLIGENT KEY SYSTÉM]

< ECU DIAGNOSIS >

	inal No. e color)	Description				Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
3	Ground	Starter relay power cumply	Output	When engine is clar	king	Battery voltag
(O)	Ground	Starter relay power supply	Output	When engine is not	clanking	0 V
4	Ground	Cooling fan relay-1 power	Output	Cooling fan opera-	OFF	0 V
(W)	Orodria	supply	Output	tion	MID or HI	Battery voltag
5	Ground	Ignition switch START	Input	Ignition switch OFF,	ACC or ON	0 V
(R)	Orodria	ignition switch on the	Прис	Ignition switch STAF	RT	Battery voltag
6 (BR)	Ground	Battery power supply (Cooling fan relay)	Input	Ignition switch OFF		Battery voltag
7	Ground	Cooling fan motor-2 (HI)	_	Cooling fan opera-	OFF	Battery voltag
(P)	Orodria	ground	_	tion	HI	0 V
8	Ground	Cooling fan relay-2 power	Output	Cooling fan opera-	OFF	0 V
(G)	Orodria	supply	Output	tion	HI	Battery voltag
11 (B)	Ground	Ground	_	Ignition switch ON		0 V
12	Ground	Rear window defogger re-	Output	Ignition switch ON	Rear window defogger switch OFF	0 V
(O)	Ground	lay power supply	Output	Ignition switch ON	Rear window defogger switch ON	Battery voltag
15 ^{*1}	Ground	Daytime running light relay	Output	Daytime running	Not operated	Battery voltag
(SB)	Giodila	control	Output	light system	Operated	0 V
16 ^{*2}	Ground	Front fog lamp (LH)	Output	Lighting switch	Front fog lamp switch OFF	0 V
(Y)	Orodria	Tront log lamp (Em)	Output	2ND Front fog lamp switch ON		Battery voltag
17 ^{*2}	Ground	Front fog lamp (RH)	Output	Lighting switch Front fog lamp switch OFF		0 V
(W)	Orodria	Tront log lamp (RTI)	Catput	2ND Front fog lamp switch ON		Battery voltag
18	Ground	Headlamp LO (LH)	Output	Lighting switch OFF		0 V
(L)		, ,		Lighting switch 2ND		Battery voltag
20	Ground	Headlamp LO (RH)	Output	Lighting switch OFF		0 V
(SB)		1 (/		Lighting switch 2ND		Battery voltag
				Lighting switch OFF		0 V
21 (G)	Ground	Headlamp HI (LH)	Output	Lighting switch 2NLighting switch PA		Battery voltag
				Daytime running ligh	nt system Operated*1	7.0 V
				Lighting switch OFF		0 V
22 (LG)	Ground	Headlamp HI (RH)	Output	Lighting switch 2ND and HI Lighting switch PASS		Battery voltag
				Daytime running light system Operated*1		7.0 V
23	Graved	Oil proggues quitab	Inn::t	Ignition quiteb ON	Engine stopped	0 V
(W)	Ground	Oil pressure switch	Input	Ignition switch ON	Engine running	Battery voltag
24					Front wiper stop position	0 V
(Y)	Ground	Front wiper auto stop	Input	Ignition switch ON	Any position other than front wiper stop position	Battery voltag
25 (B)	Ground	Ground	_	Ignition switch ON		0 V
26 (P)	_	CAN-L	Input/ Output		_	_

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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) [WITH INTELLIGENT KEY SYSTÉM]

< ECU DIAGNOSIS >

	nal No. color)	Description		_		Value
+	-	Signal name	Input/ Output	(Condition	(Approx.)
27 (L)	_	CAN-H	Input/ Output		_	_
31	Ground	Cooling fan rolay-4 control	Output	Cooling fan opera-	OFF	Battery voltage
(LG)	Ground	Cooling fan relay-4 control	Output	tion	LO	0 - 1.0 V
32		Throttle control motor re-			kimately 2 seconds or more tion switch from ON to OFF	Battery voltage
(V)	Ground	lay control	Input	Ignition switch ON For approximately tion switch from O	2 seconds after turning igni-	0 - 1.0 V
				Ignition switch OFF		0 V
33 (GR)	Ground	Fuel pump relay control	Input	Leaving and CNI	Engine stopped	Battery voltage
(OIV)				Ignition switch ON	Engine running	0.8 V
34 ^{*3}				Close the hood		Battery voltage
(W)	Ground	Hood switch	Input	Open the hood		0 V
37	_	Tail, license plate lamps		Lighting switch OFF		0 V
(R)	Ground	and illuminations	Output	Lighting switch 1ST		Battery voltage
38				Lighting switch OFF		0 V
(R)	Ground	Parking lamp (LH)	Output	Lighting switch 1ST		Battery voltage
39				Lighting switch OFF		0 V
(GR)	Ground	Parking lamp (RH)	Output	Lighting switch 1ST		Battery voltage
40				Ignition switch OFF	or ACC	0 V
(BR)	Ground	Ignition relay power supply	Output	Ignition switch ON		Battery voltage
41				Ignition switch OFF or ACC		0 V
(O)	Ground	Ignition relay power supply	Output	Ignition switch ON		Battery voltage
42				3	Front wiper switch OFF	0 V
(L)	Ground	Front wiper HI	Output	Ignition switch ON	Front wiper switch HI	Battery voltage
43					Front wiper switch OFF	0 V
(G)	Ground	Front wiper LO	Output	Ignition switch ON	Front wiper switch LO	Battery voltage
					Selector lever "P" or "N"	Battery voltage
45 (Y)	Ground	Starter relay power supply	Input	Ignition switch ON	Selector lever in any position other than "P" or "N"	0 V
46	Ground	Fuel pump relay power	Output	Ignition switch OF After passing appr after turning the ig	oximately 1 second or more	0 V
(W)	Ground	supply	Output	 For approximately 1 second after turning the ignition switch ON Engine running 		Battery voltage
47					kimately 4 seconds or more tion switch from ON to OFF	0 V
(BR)	Ground	ECM relay power supply	Output	Ignition switch ON For approximately tion switch from O	4 seconds after turning igni-	Battery voltage
48					kimately 4 seconds or more tion switch from ON to OFF	0 V
(R)	Ground	ECM relay power supply	Output	Ignition switch ONFor approximately	4 seconds after turning igni-	Battery voltage

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

	nal No.	Description				Value
+ (Wire	color)	Signal name	Input/ Output	(Condition	(Approx.)
50	Cravad	Cooling for roles E control	Outnut	Cooling fan opera-	OFF	Battery voltage
(G)	Ground	Cooling fan relay-5 control	Output	tion	MID or HI	0 - 1.0 V
51					kimately 4 seconds or more tion switch from ON to OFF	Battery voltage
(L)	Ground	ECM relay control	Output	Ignition switch ON For approximately tion switch from C	4 seconds after turning igni-	0 - 1.0 V
52		Throttle control motor re-			kimately 2 seconds or more tion switch from ON to OFF	0 V
(P)	Ground	lay power supply	Output	Ignition switch ON For approximately tion switch from C	2 seconds after turning igni-	Battery voltage
				Engine stopped		0 V
55	_			A/C switch OFF		0 V
(O)	Ground	A/C relay power supply	Output	Engine running A/C switch ON (A/C compressor is operating)		Battery voltage
56	Ground	Ignition switch ON	Input	Ignition switch OFF or ACC		0 V
(SB)	Giodila	Igrition switch ON	iliput	Ignition switch ON		Battery voltage
57	Ground	Horn relay control	Output	The horn is not active	rated	Battery voltage
(V)	Orodria	Hom relay control	Output	The horn is activated	d	0 V
58	Ground	Ignition relay power supply	Output	Ignition switch OFF	or ACC	0 V
(LG)	Crouna	ignition rolay power supply	Catpat	Ignition switch ON		Battery voltage
59	Ground	Ignition relay power supply	Output	Ignition switch OFF	or ACC	0 V
(BR)	Ground	ignition roley power supply	Catpat	Ignition switch ON		Battery voltage
60	Ground	Ignition relay power supply	Output	Ignition switch OFF	or ACC	0 V
(SB)	2.53.74	.g	20.500	Ignition switch ON		Battery voltage
61 (R)	Ground	ECM power supply	Output	Ignition switch OFF		Battery voltage

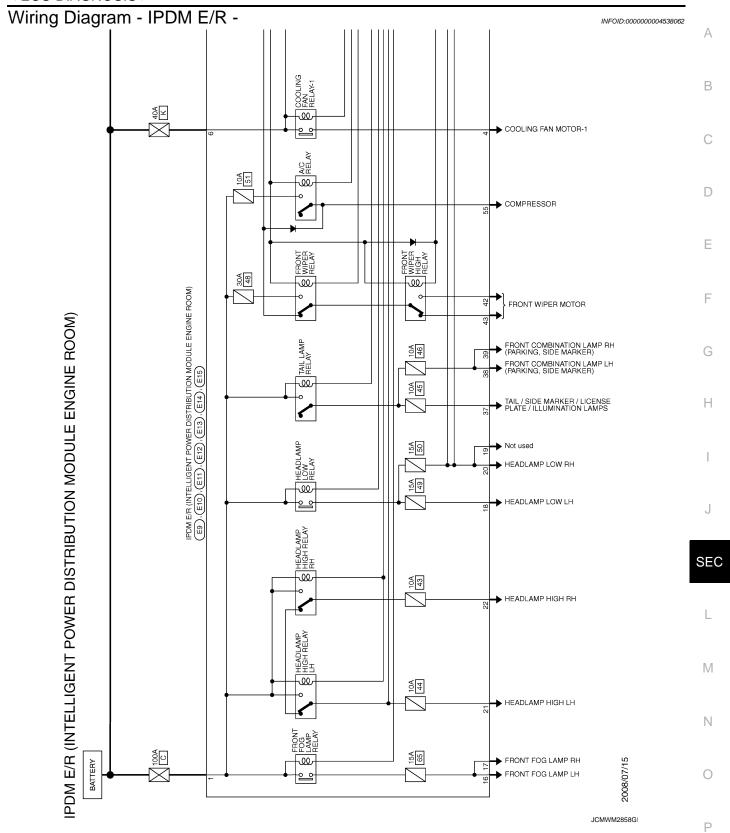
^{*1:} With daytime running light system

^{*2:} With front fog lamp system

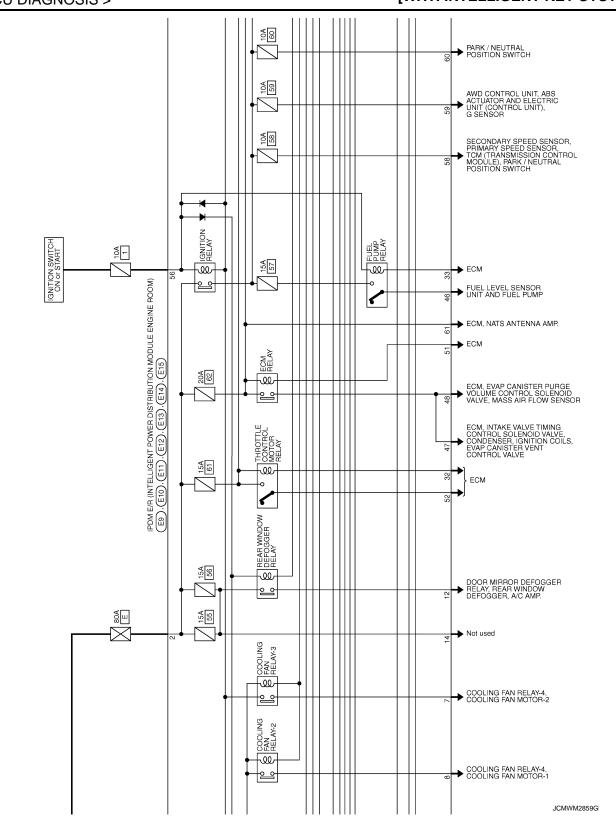
^{*3:} For Mexico

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) [WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >



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



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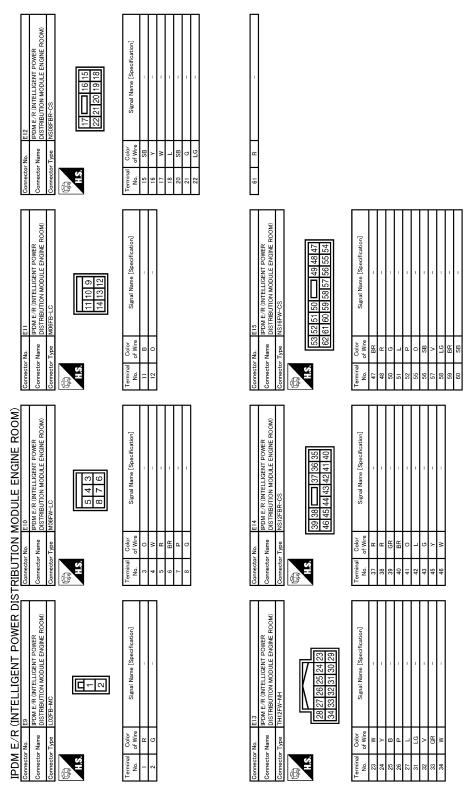
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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) [WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >



Fail-safe INFOID:0000000004538063

JCMWM2861G

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

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

Control part	Fail-safe in operation
Cooling fan	 The cooling fan relay-1, the cooling fan relay-2, the cooling fan relay-3 and the cooling fan relay-5 turn ON when the ignition switch is turned ON The cooling fan relay-1, the cooling fan relay-2, the cooling fan relay-3 and the cooling fan relay-5 turn OFF when the ignition switch is turned OFF Cooling fan relay-4 OFF
A/C compressor	A/C relay OFF

If no CAN communication is available with BCM

Control part	Fail-safe in operation
Headlamp	 The headlamp low relay turns ON when the ignition switch is turned ON The headlamp low relay turns OFF when the ignition switch is turned OFF Headlamp high relay OFF
Parking lampsLicense plate lampsTail lampsIlluminations	 The tail lamp relay and the daytime running light relay* turn ON when the ignition switch is turned ON The tail lamp relay and the daytime running light relay* turn OFF when the ignition switch is turned OFF
Front wiper	 The status just before activation of fail-safe control is maintained until the ignition switch is turned OFF while the front wiper is operating at LO or HI speed. The front 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
Starter motor	Starter relay OFF
Rear window defogger	Rear window defogger relay OFF
Horn	Horn relay OFF

NOTE:

IGNITION RELAY MALFUNCTION DETECTION FUNCTION

- IPDM E/R monitors status of ignition relay by the voltage at ignition relay contact circuit inside it.
- IPDM E/R judges that the ignition relay is error, if status of the ignition relay and ignition switch ON signal (CAN).
- If the ignition relay cannot turn OFF due to contact seizure, it activates the tail lamp relay and daytime running light relay* for 10 minutes to alert the user to the ignition relay malfunction when the ignition switch is turned OFF.

Detection		IPDM E/R judgment	Operation	
Ignition switch ON signal	Ignition relay	- IPDIVI E/K juagineni	Ореганоп	
ON	ON	Ignition relay normal	_	
OFF	OFF	Ignition relay normal	_	
OFF	ON	Ignition relay ON stuck	Turn on the tail lamp relay and daytime running light relay* for 10 minutes	
ON	OFF	Ignition relay OFF stuck	Detect DTC "B2099: IGN RELAY OFF"	

NOTE:

FRONT WIPER CONTROL

IPDM E/R detects the front wiper stop position with the front wiper stop position signal.

When the front wiper stop position signal is in the conditions listed below, IPDM E/R repeats a front wiper 10 seconds operation and 20 seconds stop five times.

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^{*:} With daytime running light system

^{*:} With daytime running light system

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) [WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

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	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.

DTC Index INFOID:0000000004538064

CONSULT display	Fail-safe	Timing ^{NOTE}		Reference page
No DTC is detected. further testing may be required.	_	_	_	_
U1000: CAN COMM CIRCUIT	×	CRNT	PAST	PCS-13
B2099: IGN RELAY OFF	_	CRNT	PAST	PCS-14

NOTE:

The details of time display are as follows.

- CRNT: The malfunctions that are detected now.
- PAST: The number is indicated when it is normal at present and a malfunction was detected in the past.

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SECURITY CONTROL SYSTEM

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

SYMPTOM DIAGNOSIS

SECURITY CONTROL SYSTEM

Symptom Table

Use the chart below to help you find the cause of the symptom. The numbers indicate the order of the inspection.

No.	Function	Operation condition	Symptom	Diagnosis Item	Reference page	
1	INTELLIGENT KEY SYSTEM/ ENGINE START FUNCTION	Ignition switch turn ON		KEY warning lamp (GREEN) illuminates	SEC-138	
			Ignition switch does not turn ON	KEY warning lamp does not illuminate	SEC-138	
				KEY warning lamp (RED) il- luminates	SEC-139	
		Engine start	Engine can not start	_	SEC-140	
2	VEHICLE SECURITY SYSTEM	Lock all doors with Intelligent Key or door request switch	Vehicle security system can not be set	_	SEC-142	
		Lock all doors with Intelligent Key or request switch.	Security indicator does not turn ON or flash	_	SEC-141	
		2 SECURITY	In the armed phase, open the door	Vehicle security system does not active	_	SEC-143
		When alarm sound, press Intelligent Key button	Vehicle security system can not be canceled	_	SEC-144	
		When alarm sound, press door request switch		_	SEC-145	

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IGNITION KNOB SWITCH DOES NOT TURN ON

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

IGNITION KNOB SWITCH DOES NOT TURN ON KEY WARNING LAMP (GREEN) ILLUMINATES

KEY WARNING LAMP (GREEN) ILLUMINATES: Description

INFOID:0000000004231097

NOTE:

• Before performing the diagnosis, check "Work Flow". Refer to SEC-6, "Work Flow".

KEY WARNING LAMP (GREEN) ILLUMINATES: Diagnosis Procedure

INFOID:0000000004231098

1. CHECK STEERING LOCK UNIT

Check steering lock unit.

Refer to SEC-104, "DTC Index".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-41, "Intermittent Incident".

NO >> GO TO 1.

KEY WARNING LAMP DOES NOT ILLUMINATE

KEY WARNING LAMP DOES NOT ILLUMINATE: Description

INFOID:0000000004231099

NOTE:

Before performing the diagnosis, check "Work Flow". Refer to <u>SEC-6, "Work Flow".</u>

KEY WARNING LAMP DOES NOT ILLUMINATE: Diagnosis Procedure

INFOID:0000000004231100

1. CHECK INTELLIGENT KEY UNIT POWER SUPPLY AND GROUND CIRCUIT

Check Intelligent Key unit power supply and ground circuit.

Refer to SEC-45, "INTELLIGENT KEY UNIT: Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK IGNITION KNOB SWITCH

Check ignition knob switch.

Refer to SEC-53, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3. CHECK KEY SWITCH

Check key switch.

Refer to SEC-51, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunctioning parts.

4.confirm the operation

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-41, "Intermittent Incident".

NO >> GO TO 1.

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IGNITION KNOB SWITCH DOES NOT TURN ON

<	SYMPTOM DIAGN	IOSIS
K	EY WARNING	LAM

< SYMPTOM DIAGNOSIS >	[WITH INTELLIGENT KEY SYSTEM]	
KEY WARNING LAMP (RED) ILLUMINATES		_
KEY WARNING LAMP (RED) ILLUMINATES : Desc	eription INFOID:00000000423110	A 1
NOTE: • Before performing the diagnosis, check "Work Flow". Refer to SE	EC-6, "Work Flow".	В
KEY WARNING LAMP (RED) ILLUMINATES : Diagr	nosis Procedure INFOID:00000000423110	2
1. CHECK INSIDE KEY ANTENNA		С
Check inside key antenna. Refer to <u>SEC-57</u> , "INSTRUMENT CENTER: Component Function	<u>Check"</u> .	D
Is the inspection result normal? YES >> GO TO 2.		
NO >> Repair or replace the malfunctioning parts.		Е
2.CONFIRM THE OPERATION		
Confirm the operation again.		F
<u>Is the result normal?</u> YES >> Check intermittent incident. Refer to GI-41, "Intermittent incident."	ot Incident"	
NO >> GO TO 1.	n moldon. .	G
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ENGINE CAN NOT START WITH INTELLIGENT KEY

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

ENGINE CAN NOT START WITH INTELLIGENT KEY

Description INFOID:000000004231103

NOTE:

• Before performing the diagnosis, check "Work Flow". Refer to DLK-11, "Work Flow".

Diagnosis Procedure

INFOID:0000000004231104

1. CHECK KEY SWITCH

Check key switch.

Refer to SEC-51, "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-41, "Intermittent Incident".

NO >> GO TO 1.

SECURITY INDICATOR LAMP DOES NOT TURN ON OR FLASH

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

SECURITY INDICATOR LAMP DOES NOT TURN ON OR FLASH

Description INFOID:0000000004231105

NOTE:

• Before performing the diagnosis, check "Work Flow". Refer to SEC-6, "Work Flow".

Diagnosis Procedure

INFOID:0000000004231106

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1. CHECK VEHICLE SECURITY INDICATOR LAMP

Check vehicle security indicator lamp.

Refer to SEC-64, "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-41, "Intermittent Incident".

NO >> GO TO 1.

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VEHICLE SECURITY SYSTEM CAN NOT BE SET

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

VEHICLE SECURITY SYSTEM CAN NOT BE SET

Description INFOID:000000004231107

NOTE:

• Before performing the diagnosis, check "Work Flow". Refer to SEC-6, "Work Flow".

Diagnosis Procedure

INFOID:0000000004231108

1. CHECK DOOR LOCK FUNCTION

Check door lock function.

Refer to DLK-23, "DOOR LOCK FUNCTION: System Description".

s the inspection result normal?

YES >> GO TO 2.

NO >> Refer to <u>SEC-6</u>, "Work Flow".

2. CHECK HOOD SWITCH

Check hood switch.

Refer to SEC-55, "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-41, "Intermittent Incident".

NO >> GO TO 1.

VEHICLE SECURITY ALARM DOES NOT ACTIVATE

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

VEHICLE SECURITY ALARM DOES NOT ACTIVATE

Description INFOID:0000000004231109

NOTE:

Before performing the diagnosis, check "Work Flow". Refer to <u>SEC-6, "Work Flow".</u>

Diagnosis Procedure

1. CHECK DOOR SWITCH

Check door switch.

Refer to SEC-47, "Component Function Check".

Is the inspection results normal?

YES >> GO TO 2.

NO >> Repair or replace malfunction part.

2.CHECK HORN

Check horn.

Refer to SEC-62, "EXCEPT FOR MEXICO: Component Function Check". (Except for Mexico)

Refer to <u>SEC-62</u>, "FOR MEXICO: Component Function Check". (For Mexico)

Is the inspection results normal?

>> GO TO 3. YES

NO >> Repair or replace malfunction part.

 $oldsymbol{3}.$ CHECK HEADLAMP OPERATION

Check headlamp operation by lighting switch.

Does headlamp come on when turning switch ON?

YES >> GO TO 4.

>> Check headlamp system. Refer to EXL-6, "Work Flow". (XENON type), Refer to EXL-134, "Work NO Flow". (HALOGEN type)

4. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-41, "Intermittent Incident".

NO >> GO TO 1.

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VEHICLE SECURITY SYSTEM CAN NOT BE CANCELED WITH INTELLIGENT KEY

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

VEHICLE SECURITY SYSTEM CAN NOT BE CANCELED WITH INTELLI-GENT KEY

Description INFOID:000000004231111

NOTE:

• Before performing the diagnosis, check "Work Flow". Refer to SEC-6, "Work Flow".

Diagnosis Procedure

INFOID:0000000004231112

1. CHECK INTELLIGENT KEY SYSTEM

Check Intelligent Key system.

Refer to DLK-20, "INTELLIGENT KEY SYSTEM: System Description".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Refer to <u>DLK-11</u>, "Work Flow".

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-41, "Intermittent Incident".

NO >> GO TO 1.

VEHICLE SECURITY SYSTEM CAN NOT BE CANCELED WITH DOOR REQUEST SWITCH

[WITH INTELLIGENT KEY SYSTEM] < SYMPTOM DIAGNOSIS > VEHICLE SECURITY SYSTEM CAN NOT BE CANCELED WITH DOOR RE-Α **QUEST SWITCH** Description INFOID:0000000004231113 В NOTE: Before performing the diagnosis, check "Work Flow". Refer to SEC-6, "Work Flow". Diagnosis Procedure INFOID:0000000004231114 1. CHECK INTELLIGENT KEY SYSTEM D Check Intelligent Key system. Refer to DLK-20, "INTELLIGENT KEY SYSTEM: System Description". Is the inspection result normal? Е YES >> GO TO 2. NO >> Refer to <u>DLK-11</u>, "Work Flow". 2.CONFIRM THE OPERATION F Confirm the operation again. Is the result normal? YES >> Check intermittent incident. Refer to GI-41, "Intermittent Incident". NO >> GO TO 1. Н J

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PRECAUTION

PRECAUTIONS FOR USA AND CANADA

FOR USA AND CANADA: Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the "SRS AIRBAG" and "SEAT BELT" of this Service Manual.

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the "SRS AIRBAG".
- Never 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.

FOR USA AND CANADA: Precaution Necessary for Steering Wheel Rotation After Battery Disconnect

NOTE:

- This Procedure is applied only to models with Intelligent Key system and NVIS/IVIS (NISSAN/INFINITI VEHICLE IMMOBILIZER SYSTEM NATS).
- Remove and install all control units after disconnecting both battery cables with the ignition knob in the "LOCK" position.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work.
 If DTC is detected, perform trouble diagnosis according to self-diagnostic results.

For models equipped with the Intelligent Key system and NVIS/IVIS, an electrically controlled steering lock mechanism is adopted on the key cylinder.

For this reason, if the battery is disconnected or if the battery is discharged, the steering wheel will lock and steering wheel rotation will become impossible.

If steering wheel rotation is required when battery power is interrupted, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

1. Connect both battery cables.

NOTE:

Supply power using jumper cables if battery is discharged.

- 2. Use the Intelligent Key or mechanical key to turn the ignition switch to the "ACC" position. At this time, the steering lock will be released.
- Disconnect both battery cables. The steering lock will remain released and the steering wheel can be rotated.
- 4. Perform the necessary repair operation.
- 5. When the repair work is completed, return the ignition switch to the "LOCK" position before connecting the battery cables. (At this time, the steering lock mechanism will engage.)
- 6. Perform a self-diagnosis check of all control units using CONSULT-III.

FOR MEXICO

FOR MEXICO: Precaution for Supplemental Restraint System (SRS) "AIR BAG" and

"SEAT BELT PRE-TENSIONER"

INFOID:0000000004231117

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

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WARNING:

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

FOR MEXICO: Precaution Necessary for Steering Wheel Rotation After Battery Disconnect INFOID:0000000004231118

NOTE:

- This Procedure is applied only to models with Intelligent Key system and NVIS/IVIS (NISSAN/INFINITI VEHICLE IMMOBILIZER SYSTEM - NATS).
- Remove and install all control units after disconnecting both battery cables with the ignition knob in the "LOCK" position.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If DTC is detected, perform trouble diagnosis according to self-diagnostic results.

For models equipped with the Intelligent Key system and NVIS/IVIS, an electrically controlled steering lock mechanism is adopted on the key cylinder.

For this reason, if the battery is disconnected or if the battery is discharged, the steering wheel will lock and steering wheel rotation will become impossible.

If steering wheel rotation is required when battery power is interrupted, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

Connect both battery cables.

NOTE:

Supply power using jumper cables if battery is discharged.

- Use the Intelligent Key or mechanical key to turn the ignition switch to the "ACC" position. At this time, the steering lock will be released.
- Disconnect both battery cables. The steering lock will remain released and the steering wheel can be rotated.
- 4. Perform the necessary repair operation.
- 5. When the repair work is completed, return the ignition switch to the "LOCK" position before connecting the battery cables. (At this time, the steering lock mechanism will engage.)
- 6. Perform a self-diagnosis check of all control units using CONSULT-III.

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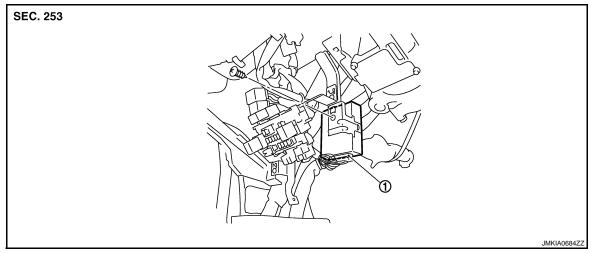
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ON-VEHICLE REPAIR

INTELLIGENT KEY UNIT

Exploded View

INFOID:0000000004231119



Intelligent Key unit M40

Removal and Installation

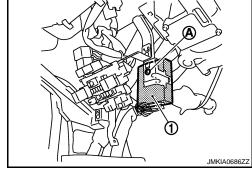
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REMOVAL

- Remove lower instrument panel (driver side). Refer to <u>IP-13, "Removal and Installation"</u>.
- 2. Remove the Intelligent Key unit mounting screw (A), and then remove Intelligent Key unit (1).

NOTE:

Perform the system initialization when replacing Intelligent Key unit. Refer to <u>SEC-9</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".



INSTALLATION

Install in the reverse order of removal.

NATS ANTENNA AMP.

Exploded View

INFOID:0000000004231121

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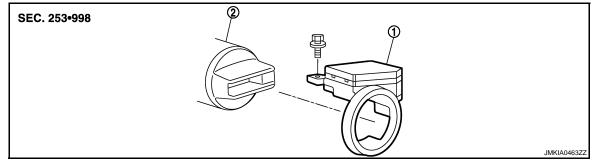
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1. NATS antenna amp.

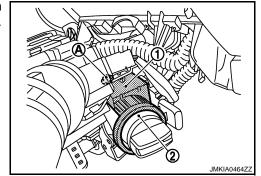
2. Steering lock assembly

Removal and Installation

INFOID:0000000004231122

REMOVAL

- 1. Remove the steering column cover. Refer to <u>IP-13</u>, "Removal and Installation".
- 2. Remove the NATS antenna amp. mounting screw (A), and then remove NATS antenna amp. (1) from steering lock assembly (2).



INSTALLATION

Install in the reverse order of removal.

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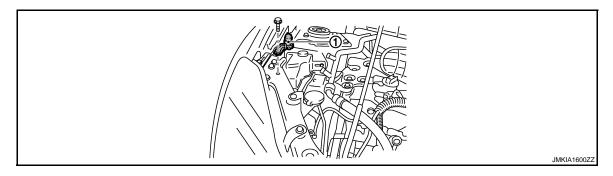
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[WITH INTELLIGENT KEY SYSTEM]

HOOD SWITCH

Exploded View

HOOD SWITCH



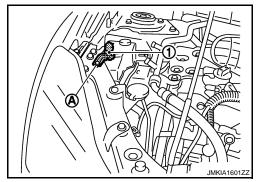
Hood switch

Removal and Installation

INFOID:0000000004231124

REMOVAL

1. Remove the hood switch mounting bolt (A), and then remove hood switch (1).



INSTALLATION

Install in the reverse order of removal.

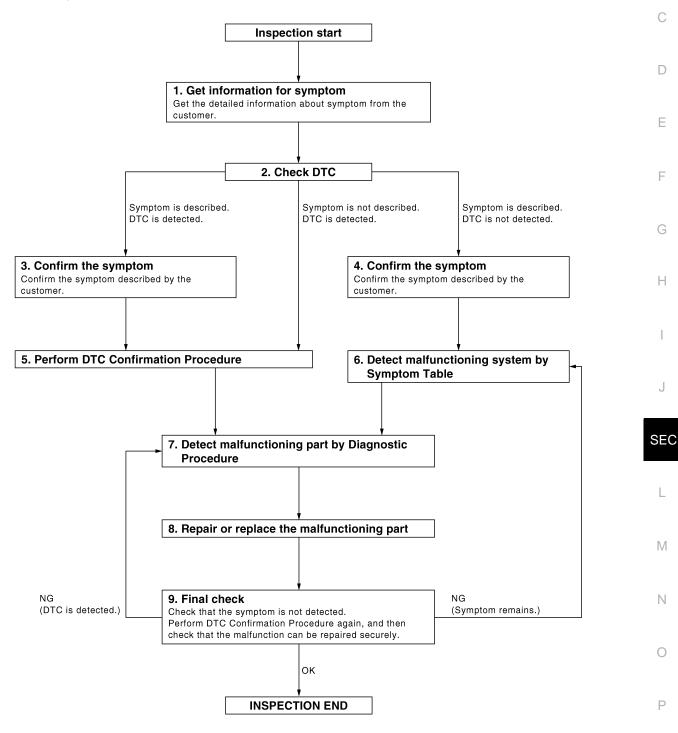
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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

OVERALL SEQUENCE



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DIAGNOSIS AND REPAIR WORK FLOW

[WITHOUT INTELLIGENT KEY SYSTEM]

< BASIC INSPECTION >

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.
- 2. Perform the following procedure if DTC is displayed.
- Erase DTC.
- Study the relationship between the cause detected by DTC and the symptom described by the customer.
- 3. Check related service bulletins for information.

Is any symptom described and any DTC detected?

Symptom is described, DTC is displayed>>GO TO 3.

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

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

3.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

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

>> GO TO 5.

4. CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

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

>> GO TO 6.

5. PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again. If two or more DTCs are detected, refer to <u>SEC-215</u>, "<u>DTC Inspection Priority Chart</u>" (BCM) and determine trouble diagnosis order.

Is DTC detected?

YES >> GO TO 7.

NO >> Refer to GI-41, "Intermittent Incident".

6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

Detect malfunctioning system according to Symptom Table based on the confirmed symptom in step 4.

>> GO TO 7.

7. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

NOTE:

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

>> GO TO 8.

8. REPAIR OR REPLACE THE MALFUNCTIONING PART

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

DIAGNOSIS AND REPAIR WORK FLOW

[WITHOUT INTELLIGENT KEY SYSTEM]

< BASIC INSPECTION > Α >> GO TO 9. 9. FINAL CHECK When DTC was detected in step 9, perform DTC Confirmation Procedure or Component Function Check В again, and then check that the malfunctions have been fully repaired. When symptom was described by the customer, refer to the confirmed symptom in step 3 or 4, and check that the symptom is not detected. Are all malfunctions corrected? NO (DTC is detected)>>GO TO 7. NO (Symptom remains)>>GO TO 6. >> INSPECTION END J L

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INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

INSPECTION AND ADJUSTMENT ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description

INFOID:0000000004231126

Perform the system initialization when replacing BCM or ECM with a used parts or registering an additional ignition key.

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement

Refer to the CONSULT-III Operation Manual-NATS.

ECM RE-COMMUNICATING FUNCTION

ECM RE-COMMUNICATING FUNCTION : Description

INFOID:0000000004231128

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:0000000004231129

1.PERFORM ECM RE-COMMUNICATING FUNCTION

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

Can engine be started?

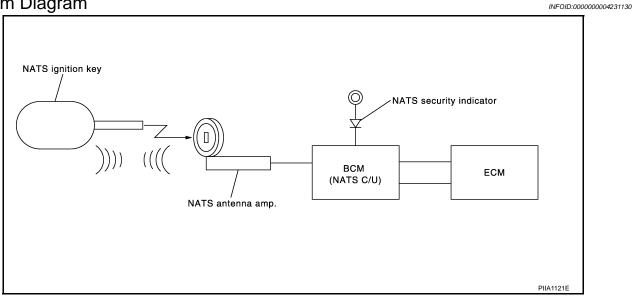
YES >> Procedure is completed.

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

FUNCTION DIAGNOSIS

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS)

System Diagram



System Description

INPUT/OUTPUT SIGNAL CHART

BCM

Switch/Input signal	Input signal to BCM	BCM function	Actuator/Output signal
NATS antenna amp.	Key ID	NVIS/NATS	Security indicator lamp
ECM	Engine status signal	INVIO/INATO	Starter request

SYSTEM DESCRIPTION

NVIS (Nissan Vehicle Immobilizer System-NATS) has the following immobilizer functions:

- Engine immobilizer shows high anti-theft performance to prevent engine start by other than the owner.
- Only a key with key ID registered in BCM and ECM can start engine, and shows high anti-theft performance to prevent key from being copied or stolen.
- Therefore, NVIS/NATS warns outsiders that the vehicle is equipped with the anti-theft system. Refer to <u>SEC-159</u>, "System Description".
- If system detects malfunction, security indicator illuminate when ignition switch is turned to ON position.
- If the owner requires, ignition key ID can be registered for up to 5 keys.
- During trouble diagnosis or when the following parts have been replaced, and if ignition key is added, registration* is required.
 - *1: All keys kept by the owner of the vehicle should be registered with ignition key.
- ECM
- BCM
- Ignition key
- EPS control unit
- IPDM E/R
- Combination meter
- NVIS/NATS trouble diagnosis, system initialization and additional registration of other Ignition key IDs must be carried out using CONSULT-III hardware and SECURITY CARD.
 - When NVIS/NATS initialization has been completed, the ID of the inserted ignition key or ignition key IDs can be carried out.
- Possible symptom of NVIS/NATS malfunction is "Engine cannot start". The engine can be started with the NVIS/NATS. Identify the possible causes according to "Work Flow". Refer to <u>SEC-151</u>, "Work Flow".

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Revision: 2008 August SEC-155 2009 Rogue

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS)

< FUNCTION DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

• If ECM other than Genuine NISSAN is installed, the engine cannot be started. For ECM replacement procedure, refer to SEC-154, "ECM RE-COMMUNICATING FUNCTION: Description".

PRECAUTIONS FOR KEY REGISTRATION

- The key registration is a procedure that erases the current NVIS/NATS ID once, and then re-registers a new ID. Therefore the registered ignition key is necessary for this procedure. Before starting the registration operation collect all registered ignition keys from the customer
- The NVIS/NATS ID registration is the procedure that registers the ID stored into the transponder (integrated in ignition key) to BCM.

SECURITY INDICATOR LAMP

- Warns that the vehicle is equipped with NVIS/NATS.
- The security indicator lamp always blinks, when the ignition switch is in the except ON position.
- The security indicator turns OFF, when the ignition switch is in ON position.
- When NVIS/NATS detects trouble, the security indicator lamp lights up while ignition key is in the "ON" position.

MAINTENANCE INFORMATION

CAUTION:

- During trouble diagnosis or when the following parts have been replaced with a used parts, and if
 ignition key is added, registration* is required. A new part (except ignition key) should register automatically after the ignition switch is turned ON. New one means a virgin control unit that has never
 been energized on-board
 - *: All keys kept by the owner of the vehicle should be registered with ignition key.
- ECM
- BCM
- Ignition key
- NVIS/NATS trouble diagnosis, system initialization and additional registration of other ignition key IDs must be carried out using CONSULT-III hardware and SECURITY CARD.
 When NVIS/NATS initialization has been completed, the ID of the inserted ignition key IDs can be carried out.
- If ECM other than Genuine NISSAN is installed, the engine cannot be started.

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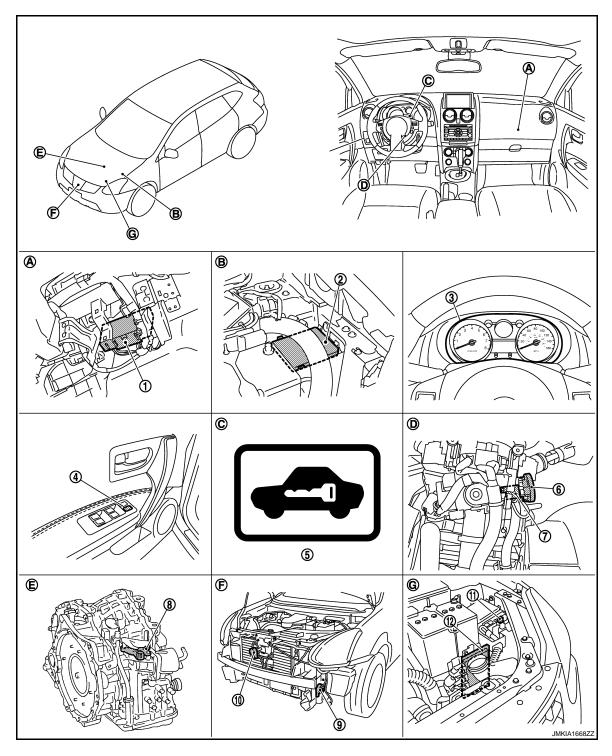
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- 1. **BCM** M65, M66, M67
- 4. Door lock and unlock switch D5, D6
- 7. Key switch M24
- Horn (low) E80, E81 10.
- Α. Over the glove box

- IPDM E/R E10, E11, E13, E14, E15
- Security indicator lamp (combination meter M34)
- Park/neutral position switch F21 8.
- Horn relay E5 11.
- B. Engine room (LH)

- Combination meter (security indicator lamp) M34
- 6. NATS antenna amp. M26
- 9. Horn (high) E78, E79
- ECM E16 12.
- C. Built in combination meter

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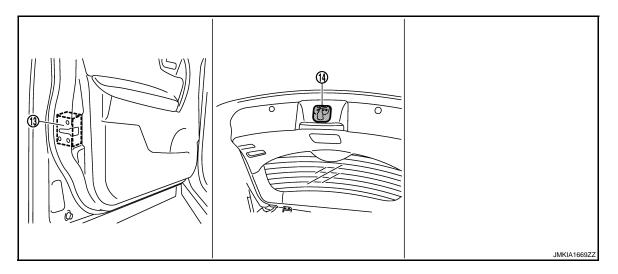
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NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS) [WITHOUT INTELLIGENT KEY SYSTEM]

- < FUNCTION DIAGNOSIS >
 - View with steering column cover re- E. Transaxle assembly moved
- F. View with front bumper removed

G. Engine room (LH)



- 13. Front door lock assembly (driver side) D9
- Back door switch (back door lock assembly D190)

Component Description

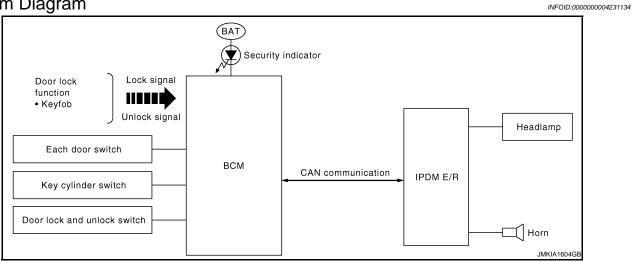
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Component	Reference
BCM	BCS-7
NATS antenna amp.	SEC-172
Security indicator	SEC-181
IPDM E/R	PCS-2

Revision: 2008 August SEC-158 2009 Rogue

VEHICLE SECURITY SYSTEM

System Diagram

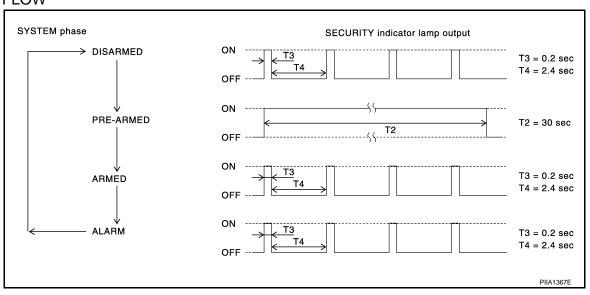


System Description

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM system	Actuator	Н
All door switch	Open or close			
Door key cylinder switch	Lock or unlock		IPDM E/R	1
Door lock and unlock switch	LOCK OF UTILOCK	Vehicle security system	Head lamp Horn	
Keyfob	Lock or unlock		Security indicator lamp	
Reyloo	Panic alarm			J

OPERATION FLOW



SETTING THE VEHICLE SECURITY SYSTEM

Initial Condition

• Ignition switch is in OFF position.

Disarmed Phase

• When doors 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.

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VEHICLE SECURITY SYSTEM

< FUNCTION DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

When the vehicle security system is in the disarmed phase, the security indicator lamp blinks every 2.4 seconds.

Pre-armed Phase and Armed Phase

When the following operation 1 or 2 is performed, the vehicle security system turns into the "pre-armed" phase. (The security indicator lamp illuminates for approx. 30 seconds. Then, the system automatically shifts into the "armed" phase.)

- BCM receives LOCK signal from front door key cylinder switch or keyfob, after back door and all doors are closed.
- 2. Back door and all doors are closed after front doors are locked by key or door lock and unlock switch.

CANCELING THE SET VEHICLE SECURITY SYSTEM

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

- 1. Unlock the doors with the key or keyfob.
- Turn ignition switch "ON" or "ACC" position.

CANCELING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM

When unlocking the door with the key or keyfob the alarm operation is canceled.

ACTIVATING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM

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

- 1. Any door is opened during armed phase.
- 2. Disconnecting and connecting the battery connector before canceling armed phase.

PANIC ALARM OPERATION

Remote keyless entry system may or may not operate vehicle security system (horn and headlamps) as required.

When the remote keyless entry system is triggered, ground is supplied intermittently to both headlamp relay and horn relay.

When headlamp relay and horn relay are energized, then power is supplied to headlamps (LH and RH) and horns (HIGH and LOW).

The headlamp flashes and the horn sounds intermittently.

The alarm automatically turns off after 50 seconds or when BCM receives any signal from keyfob.

Component Parts Location

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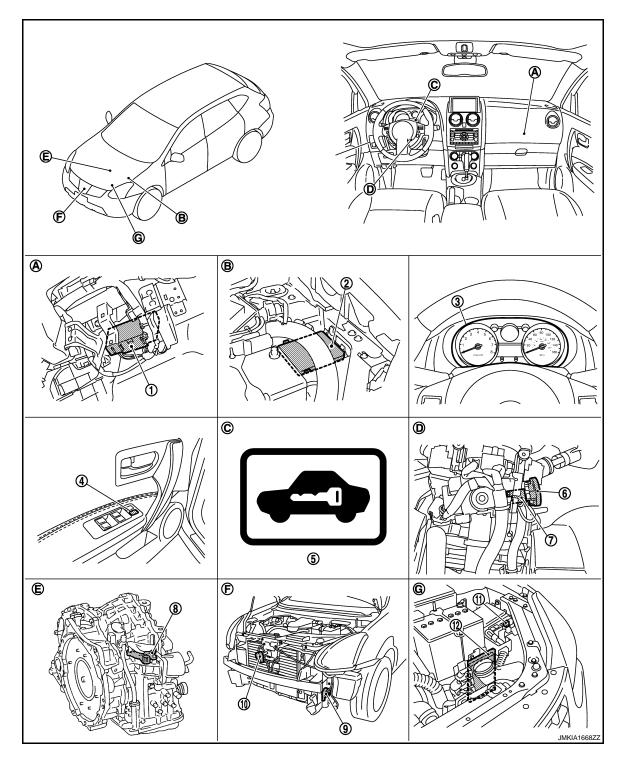
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- 1. BCM M65, M66, M67
- 4. Door lock and unlock switch D5, D6
- 7. Key switch M24
- 10. Horn (low) E80, E81
- A. Over the glove box

- IPDM E/R
 E10, E11, E13, E14, E15
- Security indicator lamp (combination meter M34)
- 8. Park/neutral position switch F21
- 11. Horn relay E5
- B. Engine room (LH)

- Combination meter (security indicator lamp)
 M34
- 6. NATS antenna amp. M26
- 9. Horn (high) E78, E79
- 12. ECM E16
- C. Built in combination meter

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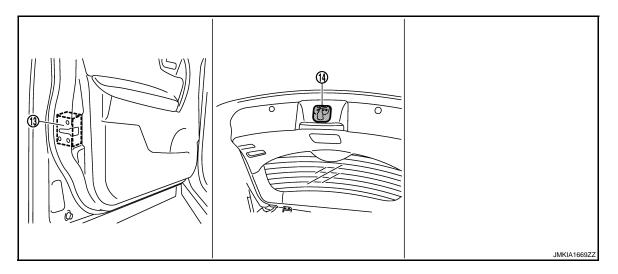
VEHICLE SECURITY SYSTEM

< FUNCTION DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

- D. View with steering column cover re- E. moved
 - . Transaxle assembly
- F. View with front bumper removed

G. Engine room (LH)



- 13. Front door lock assembly (driver side) D9
- Back door switch (back door lock assembly D190)

Component Description

INFOID:0000000004231137

Component	Reference
BCM	BCS-7
Horn	SEC-180
Security indicator	SEC-181
Door switch	DLK-299
NATS antenna amp.	<u>SEC-172</u>

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

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

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APPLICATION ITEM

CONSULT-III can display each diagnostic item using the diagnostic test modes shown following.

Diagnosis mode	Function description
ECU Identification	BCM part number is displayed.
Self-Diagnostic Result	Displays the diagnosis results judged by BCM. Refer to BCS-63, "DTC Index".
Data Monitor	BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Work Support	Changes the setting for each system function.
Configuration	Read and save the vehicle specification.Write the vehicle specification when replacing BCM.
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from 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.

 \times : Applicable item

Custom	CONSULT-III	Diagnosis mode		
System	sub system selection item	Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp control	INT LAMP	×	×	×
Remote keyless entry system	MULTI REMOTE ENT	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER		×	×
Air conditioner	AIR CONDITONER		×	
Intelligent Key system	INTELLIGENT KEY		×	
Combination switch	COMB SW		×	
_	BCM	×		
Immobilizer	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open	TRUNK		×	×
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR	×	×	×
Signal buffer system	SIGNAL BUFFER		×	×
	FUEL LID*			
TPMS	TPMS (AIR PRESSURE MONITOR)	×	×	×
Panic alarm system	PANIC ALARM			×

^{*:} This item is displayed, but is not function.

IMMU

Revision: 2008 August SEC-163 2009 Rogue

DIAGNOSIS SYSTEM (BCM)

[WITHOUT INTELLIGENT KEY SYSTEM]

< FUNCTION DIAGNOSIS >

IMMU: CONSULT-III Function (BCM - IMMU)

INFOID:0000000004231139

APPLICATION ITEM

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

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

DATA MONITOR

Monitor item	Content
IGN ON SW Indicates [ON/OFF] condition of ignition switch in ON position.	

ACTIVE TEST

Test item	Description
THEFT IND	This test is able to check security indicator operation [ON/OFF].

THEFT ALM

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

INFOID:0000000004231140

APPLICATION ITEM

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

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

DATA MONITOR

Monitor Item	Condition
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
KEYLESS LOCK*2	Indicates [ON/OFF] condition of lock signal from key fob.
KEYLESS UNLOCK*2	Indicates [ON/OFF] condition of unlock signal from key fob.
I-KEY LOCK*1	Indicates [ON/OFF] condition of lock signal from Intelligent Key.
I-KEY UNLOCK*1	Indicates [ON/OFF] condition of unlock signal from Intelligent Key.
TRUNK OPNR SW	Indicates [ON/OFF] condition of back door opener switch.
TRUNK CYL SW	NOTE: The item is indicated, but not monitored.
TRNK OPNR MNTR	NOTE: The item is indicated, but not monitored.
HOOD SW	Indicates [ON/OFF] condition of hood switch.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch (driver side).
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch (passenger side).
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
BACK DOOR SW	Indicates [ON/OFF] condition of back door switch.

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

Monitor Item	Condition
KEY CYL LK-SW	Indicates [ON/OFF] condition of key cylinder switch.
KEY CYL UN-SW	Indicates [ON/OFF] condition of key cylinder switch.
CDL LOCK SW	Indicates [ON/OFF] condition of door lock and unlock switch.
CDL UNLOCK SW	Indicates [ON/OFF] condition of door lock and unlock switch.

^{*1:} For vehicle equipped with Intelligent Key.

ACTIVE TEST

Test item	Description	
THEFT IND	This test is able to check security indicator operation [ON/OFF].	
VEHICLE SECURITY HORN	This test is able to check horn operation [ON].	
HEAD LAMP(HI)	This test is able to check head lamp (HI) operation [ON/OFF].	

WORK SUPPORT

Test item	Description	
SECURITY ALARM SET	Vehicle security function mode can be changed in this mode. ON: Vehicle security function is ON. OFF: Vehicle security function is OFF.	
THEFT ALM TRG	The switch which triggered vehicle security system is recorded. This mode can be able to confirm and erase the record of vehicle security system.	

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 $^{^{\}star 2}\!\!:$ For the vehicle equipped with remote key less entry system.

COMPONENT DIAGNOSIS

U1000 CAN COMM CIRCUIT

BCM

BCM : Description

INFOID:0000000004637766

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

BCM: DTC Logic

DTC DETECTION LOGIC

DTC	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:0000000004637768

1.PERFORM SELF DIAGNOSTIC

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

Is DTC "U1000" displayed?

YES >> Refer to LAN-15, "Trouble Diagnosis Flow Chart".

NO >> Refer to GI-41, "Intermittent Incident".

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

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

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, CAN-L) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

CAN Communication Signal Chart. Refer to LAN-24, "CAN Communication Signal Chart".

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

DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC Detection Condition	Possible cause
U1000	000 CAN COMM CIRCUIT When IPDM E/R cannot communicate CAN communication signal continuously for 2 seconds or more.		CAN communication system

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

U1000 CAN COMM CIRCUIT

[WITHOUT INTELLIGENT KEY SYSTEM] < COMPONENT DIAGNOSIS > agnosis Procedure INFOID:0000000004637771 Α 1.PERFORM SELF DIAGNOSTIC Turn the ignition switch ON and wait for 2 seconds or more. В Check "Self Diagnostic Result". 2. Is DTC "U1000" displayed? >> Refer to LAN-15, "Trouble Diagnosis Flow Chart". C >> Refer to GI-41, "Intermittent Incident". NO D Е F G Н J L

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[WITHOUT INTELLIGENT KEY SYSTEM]

P1610 LOCK MODE

Description INFOID:000000004231144

When the starting operation is carried more than 10 times consecutively under the following conditions, NVIS/NATS will shift to the mode which prevents the engine from being started.

- Unregistered ignition key is used.
- · BCM or ECM's malfunctioning.

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1610	When the starting operation is carried out 10 or more times consecutively under the following conditions. • Unregistered ignition key • BCM or ECM's malfunctioning.		_

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Check "Self Diagnostic Result" with CONSULT-III.

Is DTC detected?

YES >> Refer to <u>SEC-168</u>, "Diagnosis Procedure".

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004231146

1. CHECK ENGINE START FUNCTION

- 1. Perform the check for DTC except DTC P1610.
- Use CONSULT-III to erase DTC after fixing.
- 3. Check that engine can start with registered ignition key.

Does the engine start?

YES >> INSPECTION END

NO >> GO TO 2.

2. CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> INSPECTION END

P1611 ID DISCORD, IMMU-ECM

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

P1611 ID DISCORD, IMMU-ECM

Description INFOID:0000000004231147

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

DTC Logic INFOID:0000000004231148

DTC DETECTION LOGIC

NOTE:

 If DTC P1611 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-168, "DTC Logic".

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

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

Turn ignition switch ON.

Check "Self Diagnostic Result" with CONSULT-III.

Is DTC detected?

YES >> Refer to SEC-169, "Diagnosis Procedure".

NO >> INSPECTION END

1. PERFORM INITIALIZATION

Diagnosis Procedure

Perform initialization with CONSULT-III. Re-register all ignition keys.

For initialization and registration of ignition key. Refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".

Can the system be initialized and can the engine be started with re-registered ignition key?

YES >> INSPECTION END (ID was unregistered.)

NO >> GO TO 2.

2.REPLACE BCM

Replace BCM. Refer to BCS-67, "Removal and Installation".

Perform initialization with CONSULT-III. Re-register all ignition keys. For initialization and registration of ignition key. Refer to "CONSULT-III Operation Manual NATS-IVIS/ NVIS".

Can the system be initialized and can the engine be started with re-registered ignition key?

>> INSPECTION END (BCM was malfunctioning.)

NO >> GO TO 3.

3.REPLACE ECM

Replace ECM. Refer to the following page.

- For CALIFONIA: Refer to EC-22, "BASIC INSPECTION: Special Repair Requirement".
- For USA (FEDERAL) and CANADA: Refer to EC-499, "BASIC INSPECTION: Special Repair Require-
- Perform initialization with CONSULT-III. Re-register all ignition keys.

For initialization and registration of ignition key. Refer to "CONSULT-III Operation Manual NATS-IVIS/

Can the system be initialized and can the engine be started with re-registered ignition key?

YES >> INSPECTION END (ECM was malfunctioning.)

NO >> GO TO 4.

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SEC-169 Revision: 2008 August

P1611 ID DISCORD, IMMU-ECM

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

4. CHECK INTERMITENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> INSPECTION END

P1612 CHAIN OF ECM-IMMU

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

P1612 CHAIN OF ECM-IMMU

Description INFOID:0000000004231150

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

DTC Logic INFOID:0000000004231151

DTC DETECTION LOGIC

NOTE:

 If DTC P1612 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-215, "DTC Index".

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

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

Turn ignition switch ON.

2. Check "Self Diagnostic Result" with CONSULT-III.

Is DTC detected?

YES >> Refer to <u>SEC-171</u>, "Diagnosis Procedure".

>> INSPECTION END NO

Diagnosis Procedure

1.REPLACE BCM

Replace BCM. Refer to BCS-67, "Removal and Installation". Perform initialization with CONSULT-III.

Does the engine start?

YES >> INSPECTION END (BCM was malfunctioning.)

NO

- >> ECM is malfunctioning.
 - Replace ECM. Refer to the following page.

For initialization, refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".

- For CALIFORNIA: Refer to EC-22, "BASIC INSPECTION: Special Repair Requirement".
- For USA (FEDERAL) and CANADA: Refer to EC-499, "BASIC INSPECTION: Special Repair Requirement".
- For MEXICO: Refer to EC-933, "BASIC INSPECTION: Special Repair Requirement".

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P1614 CHAIN OF IMMU-KEY

Description INFOID:000000004231153

Performs ID verification through BCM and NATS antenna amplifier when ignition knob switch is pressed. Prohibits the release of steering lock or start of engine when an unregistered ID of ignition key is used.

DTC Logic INFOID:0000000004231154

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1614	NATS ANTENNA AMP	 Inactive communication between NATS antenna amp. and BCM. Ignition key is malfunctioning. 	Harness or connectors (The NATS antenna amp. circuit is open or short) Ignition key NATS antenna amp. BCM

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Insert ignition key into key cylinder.
- 2. Turn ignition knob switch.
- 3. Check "Self Diagnostic Result" with CONSULT-III.

Is DTC detected?

YES >> Refer to <u>SEC-172</u>, "<u>Diagnosis Procedure</u>".

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004231155

1. CHECK NATS ANTENNA AMP. INSTALLATION

Check NATS antenna amp. installation. Refer to SEC-149, "Removal and Installation".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Reinstall NATS antenna amp. correctly.

2. CHECK IGNITION KEY

Start engine with another registered ignition key.

Does the engine start?

YES >> Replace ignition key. Perform initialization and registration of ignition key. Refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS"

NO >> GO TO 3.

3. CHECK NATS ANTENNA AMP. POWER SUPPLY

- 1. Turn ignition switch OFF.
- Disconnect NATS antenna amp. connector.
- Check voltage between NATS antenna amp. harness connector and ground.

(+) NATS antenna amp.		(-)	Voltage (V) (Approx.)
Connector	Terminal		(44)
M26	1	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

P1614 CHAIN OF IMMU-KEY

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

4. CHECK NATS ANTENNA AMP. GROUND CIRCUIT

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

NATS antenna amp.			Continuity
Connector	Terminal	Ground	Continuity
M26	3		Existed

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace circuit.

5. CHECK NATS ANTENNA AMP. SIGNAL CIRCUIT

Check voltage between NATS antenna amp. harness connector and ground.

(+) NATS antenna amp.		(-)	(–) Condition	Voltage (V) (Approx.)
Connector	Terminal			(/ .pp. 5///)
	2		Just after inserting ignition key in key cylinder.	Pointer of tester should move.
Mae	Mag	Cround	Other than above.	0
M26 Ground	Just after inserting ignition key in key cylinder.	Pointer of tester should move.		
			Other than above.	0

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace circuit.

6. CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> INSPECTION END

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P1615 DIFFRENCE OF KEY

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

P1615 DIFFRENCE OF KEY

Description INFOID:000000004231156

Performs ID verification through BCM when ignition knob switch is pressed.

Prohibits the release of steering lock or start of engine when an unregistered ID of ignition key is used.

DTC Logic (INFOID:000000004231157

DTC DETECTION LOGIC

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

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Insert ignition key into key cylinder.
- 2. Turn ignition knob switch.
- 3. Check "Self Diagnostic Result" with CONSULT-III.

Is DTC detected?

YES >> Refer to SEC-174, "Diagnosis Procedure".

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004231158

1.PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Re-register all ignition keys.

For initialization and registration of ignition key. Refer to "CONSULT-III Operation Manual NATS-IVIS/NVIS".

Can the system be initialized and can the engine be started with re-registered ignition key?

YES >> INSPECTION END (Ignition key was unregistered.)

NO >> BCM is malfunctioning.

- Replace BCM. Refer to BCS-67, "Removal and Installation".
- · Perform initialization again.

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM: Diagnosis Procedure

INFOID:0000000004231159

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1. CHECK FUSES AND FUSIBLE LINK

Check that the following fuses and fusible link are not fusing.

Terminal No.	Signal name	Fuses and fusible link No.
41	Pattery power supply	10 (10A)
57	Battery power supply	J (50A)
3	Ignition power supply	1 (10A)

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.
- Disconnect BCM connectors.
- 3. Check voltage between BCM harness connector and ground.

	Terminals		Ignition switch position		
(+)		ignition switch position		ı
В	СМ	(-)	OFF ACC	۸۵۵	ON
Connector	Terminal	=		ACC	ON
M65	3		Approx. 0 V	Approx. 0 V	Battery voltage
M66	41	Ground	Battery voltage	Battery voltage	Battery voltage
M67	57		Ballery Vollage	Battery Voltage	ballery vollage

Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM			Continuity	
Connector	Connector Terminal		Continuity	
M67	55		Existed	

Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.

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DOOR SWITCH

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

DOOR SWITCH

Description INFOID:000000004231160

Detects door open/closed condition.

Component Function Check

INFOID:0000000004231161

1. CHECK FUNCTION

(III) With CONSULT-III

Check door switches ("DOOR SW-DR", "DOOR SW-AS", "DOOR SW-RL", "DOOR SW-RR", "BACK DOOR SW") in "Data Monitor" mode with CONSULT-III.

Monitor item	Door condition	Display
DOOR SW-DR		
DOOR SW-AS		
DOOR SW-RL	$CLOSE \to OPEN$	$OFF \to ON$
DOOR SW-RR		
BACK DOOR		

Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to <u>SEC-176</u>, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000004231162

1. CHECK DOOR SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- Disconnect door switch connectors.
- 3. Check signal between door switch harness connector and ground with oscilloscope.

[WITHOUT INTELLIGENT KEY SYSTEM]

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	Door switch			Voltage (A.)	Α
(+)		Terminal	(-)	Voltage (V) (Approx.)	
Connector		Terriiriai		0.0	В
Front door switch (passenger side)	B27	2		(V) 15 10 5 0 JPMIA0586GB	C
Front door switch (driver side)	B34	2		(V) ₁₅ 10 5 0 → 10ms JPMIA0587GB	E
Rear door switch RH	B53	2	Ground	(V) 15 10 5 0 JPMIA0587GB	G H
Rear door switch LH	B71	2		(V) 15 10 5 0 JPMIA0594GB	J
Back door lock assembly (back door switch)	D190	3		(V) 15 10 5 0 JPMIA0593GB	L

Is the inspection result normal?

YES >> • Back door switch : GO TO 3.

• Door switch : GO TO 4.

NO >> GO TO 2.

2. CHECK DOOR SWITCH CIRCUIT

Disconnect BCM connectors.

Check continuity between BCM harness connector and door switch harness connector.

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[WITHOUT INTELLIGENT KEY SYSTEM]

BCM		Door switch	Continuity		
connector	Terminal	connector	Terminal	Continuity	
M65	12	B27	2		
IVIOS	13	B53	2		
	43	D190	3	Exists	
M66	47	B34	2		
	48	B71	1 2		

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal		Continuity	
M65	12			
WOS	13	Ground		
M66	43	Giodila	Does not exist	
	47			
	48			

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-67, "Exploded View".

NO >> Repair or replace harness.

3. CHECK BACK DOOR GROUND CIRCUIT

Check continuity between back door lock assembly harness connector and ground.

Back door lock a	assembly		Continuity
connector	Terminal	Ground	Continuity
D190	4		Exist

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK DOOR SWITCH

Check door switch.

Refer to <u>SEC-178</u>, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace door switch. Refer to <u>DLK-263, "Removal and Installation"</u>.

5. CHECK INTERMITTENT INCIDENT

Refer to GI-41, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000004231163

1. CHECK DOOR SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect door switch connector.
- Check door switch .

	Terminal		Condition	Continuity
Each door	2	Ground	Door switch pressed	Exists
Lacii dooi	2	Gloulia	Door switch released	Does not exist

DOOR SWITCH

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

	Terminal		Condition	Continuity
Back door	2	4	Back door open	Exists
Dack door	3	4	Back door close	Does not exist

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace door switch . Refer to <u>DLK-263</u>, "Removal and Installation".

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[WITHOUT INTELLIGENT KEY SYSTEM]

HORN

Description INFOID:000000004231164

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

Component Function Check

INFOID:0000000004231165

1. CHECK FUNCTION

- Select "HORN" in "Active Test" mode with CONSULT-III.
- 2. Check the horn (high/low) operation.

Test item		Description		
HORN	ON	Horn (high/low)	ON (for 20 ms)	

Is the operation normal?

YES >> INSPECTION END

NO >> Refer to <u>SEC-180</u>, "Diagnosis <u>Procedure"</u>.

Diagnosis Procedure

INFOID:0000000004231166

1. CHECK HORN FUNCTION

Check horn function with horn switch

Do the horns sound?

YES >> GO TO 2.

NO >> Refer to HRN-2, "EXCEPT FOR MEXICO: Wiring Diagram - HORN -".

2. CHECK HORN RELAY CIRCUIT

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

IPD	IPDM E/R		Horn relay	
Connector	Terminal	Connector	Terminal	Continuity
E15	57	E 5	1	Existed

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

IPDM E/R			Continuity
Connector	Terminal	Ground	Continuity
E15	57		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-28, "Removal and Installation".

NO >> Repair or replace harness.

VEHICLE SECURITY INDICATOR

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

VEHICLE SECURITY INDICATOR

Description INFOID:0000000004231167

- · Vehicle security indicator is built in combination meter.
- NVIS/NATS and vehicle security system conditions are indicated by blink or illumination of vehicle security indicator.

Component Function Check

1. CHECK FUNCTION

- 1. Perform "THEFT IND" in the "Active Test" mode with CONSULT-III.
- 2. Check vehicle security indicator operation.

Test it	em	Description		
THEFT IND	ON	Vahiala cogurity indicator	ON	
I HEFT IND	OFF	Vehicle security indicator	OFF	

Is the inspection result normal?

YES >> INSPECTION END

NO >> Refer to <u>SEC-181</u>, "Diagnosis Procedure".

Diagnosis Procedure

1. CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT

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

(+) Combination	n meter	(-)	Voltage (V) (Approx.)	
Connector	Terminal			
M34	1	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness.

2.CHECK SECURITY INDICATOR LAMP SIGNAL CIRCUIT

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

BCM		Combina	Continuity		
Connector	Terminal	Connector	Terminal	Continuity	
M65	23	M34	28	Existed	

Check continuity between combination meter harness connector and ground.

Combina	tion meter		Continuity	
Connector Terminal		Ground	Continuity	
M34	28		Not existed	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

${f 3.}$ CHECK BCM OUTPUT SIGNAL

1. Connect combination meter connector.

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VEHICLE SECURITY INDICATOR

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

Check voltage between BCM harness connector and ground.

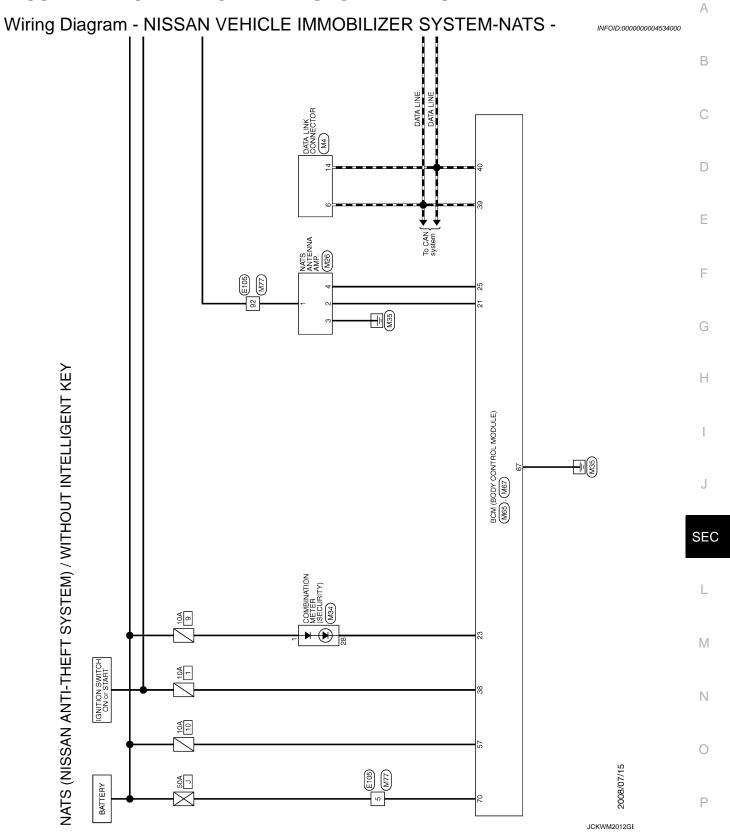
(B	+) CM	()	Voltage (V) (Approx.)	
Connector	Terminal			
M65	23	Ground	Battery voltage	

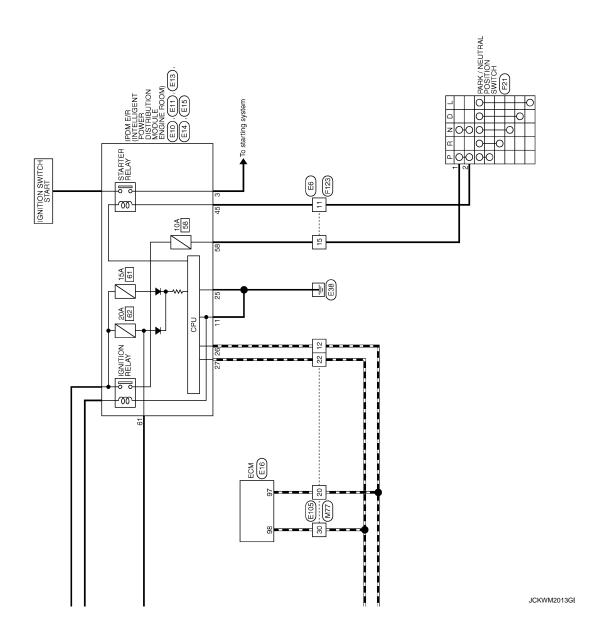
Is the inspection result normal?

YES

>> Replace BCM. Refer to <u>BCS-67</u>, "Removal and Installation". >> Replace combination meter. Refer to <u>MWI-86</u>, "Removal and Installation". NO

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS





NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

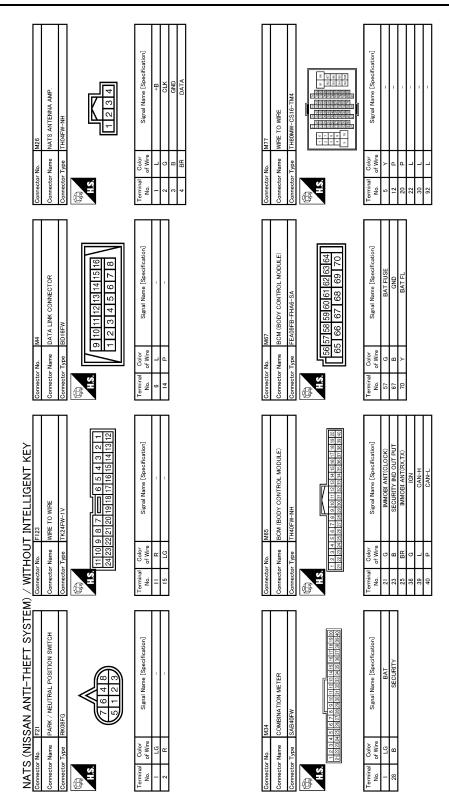
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PDM E-R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) MOGFB-LC 11 10 9 14 13 12	Signal Name [Specification]	106 109 109 110 110 110 110 110 110 110 110		E
Connector No. E11 Connector Name DISTRIBUTTON Connector Type MOGFB-LC H.S. H.S. III	Terminal Color Signs No. of Wire 11 B	Connector No. E16		G
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NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS

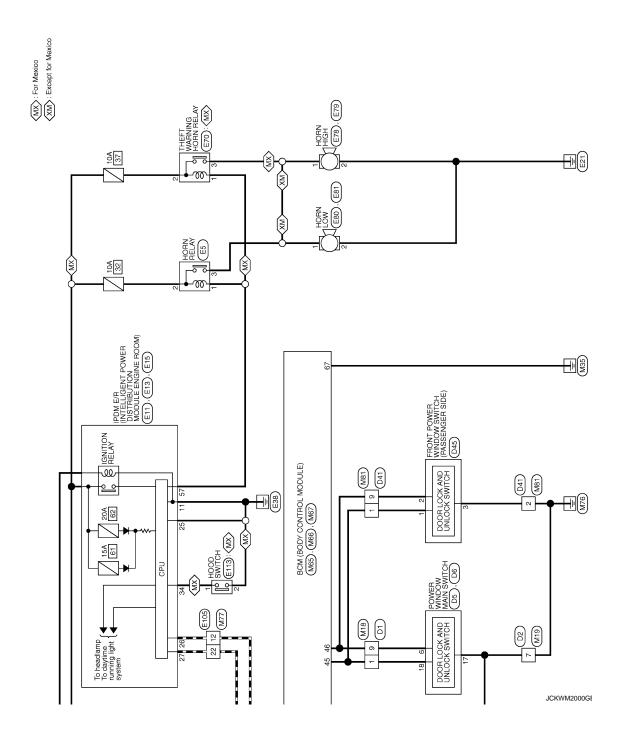
< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]



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VEHICLE SECURITY SYSTEM Α Wiring Diagram - VEHICLE SECURITY SYSTEM -INFOID:0000000004534001 В Without Intelligent Key (IK): With Intelligent Key (OI): Without Intelligent K INTELLIGENT KEY UNIT (M40): < IK UNLOCK BETWEEN FULL STROKE AND N FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE) (D9) DOOR KEY CYLINDER SWITCH C z D LOCK DATA LINK CONNECTOR (M4) Е FULL STROKE M18 D1 F BACK DOOR LOCK ASSEMBLY (BACK DOOR SWITCH) (0190) BCM (BODY CONTROL MODULE) (M65), (M66), (M67) G To CAN systen REMOTE KEYLESS ENTRY RECEIVER (M91): OI) Н SWITCH RH ·(ō) IGNITION SWITCH ACC or ON 10**A** J FRONT DOOR SWITCH (PASSENGER SIDE) [M] [M] COMBINATION METER (SECURITY) (M34) SEC 9 A REAR DOOR SWITCH LH R B71 L M77 50A VEHICLE SECURITY SYSTEM BATTERY 31 M FRONT DOOR SWITCH (DRIVER SIDE) 15 M13 IGNITION SWITCH ON or START 40<u></u> Ν 0 2008/07/15 Р



[WITHOUT INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

PRONT DOOR SWITCH (DRIVER SIDE) A03FW Signal Name [Specification]	WIRE TO WHEE MOMMW-LC 1 2 3 4 Signal Name [Specification]		A B
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Connector No. D6	Connector Name POWER WINDOW MAIN SWITCH Connector Type NSDSFW-CS	H.S. [171819]	Terminal Color Signal Name (Specification) 10 of Wile B	Connector Name WIRE TO WIRE Connector Name NSOFER-CS MIRE TO WIRE Connector Type MIS. 3	Terminal Color Ngre Signal Name [Specification]
Gonnector No. D5	Gennector Name POWER WINDOW MAIN SWITCH Gennector Type NS16FW-CS	H.S. 1 2 3 4 6 7 8 6 7 8 9 10111213141516	Terminal Color No. of Wire Signal Name (Specification) 6 BR -	Connector No. D45 Connector Name FRONT POWER WINDOW SWITCH	Terminal Color Signal Name [Specification]
Connector No. D2	Connector Name WIRE TO WIRE Connector Type NS16FW-CS	H.S.	Terminal Golor No. of Wire 7 BB	Connector No. D41 Connector Type THISPW-NH H.S. R Z E E A B Z T TELESTATION T T T T T T T T T	Terminal Color Signal Name [Specification] 1 P 2 B - 2 8 - 3 9 ER - 3
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[WITHOUT INTELLIGENT KEY SYSTEM]

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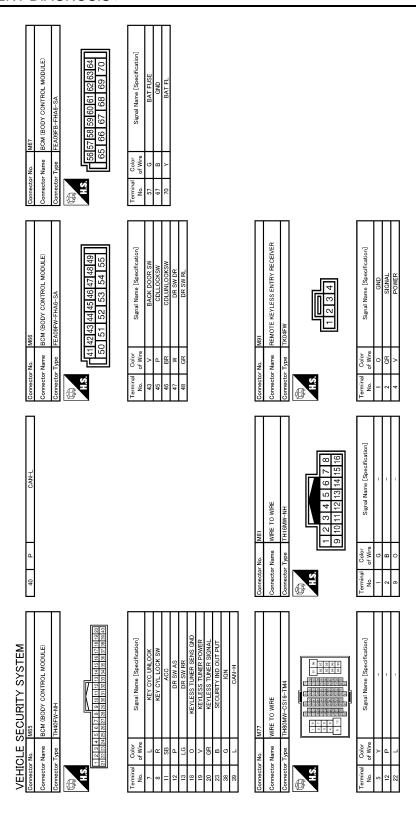
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[WITHOUT INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

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< ECU DIAGNOSIS >

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
IGN ON SW	Ignition switch OFF or ACC	Off
IGN ON SW	Ignition switch ON	On
KEY ON SW	Mechanical key is removed from key cylinder	Off
RET ON SW	Mechanical key is inserted to key cylinder	On
CDL LOCK SW	Door lock/unlock switch does not operate	Off
CDL LOCK SW	Press door lock/unlock switch to the lock side	On
CDL UNLOCK SW	Door lock/unlock switch does not operate	Off
CDL UNLOCK 3W	Press door lock/unlock switch to the unlock side	On
DOOD OW DD	Driver's door closed	Off
DOOR SW-DR	Driver's door opened	On
DOOD OW AC	Passenger door closed	Off
DOOR SW-AS	Passenger door opened	On
DOOD OW DD	Rear RH door closed	Off
DOOR SW-RR	Rear RH door opened	On
DOOD OW DI	Rear LH door closed	Off
DOOR SW-RL	Rear LH door opened	On
DACK DOOD CW	Back door closed	Off
BACK DOOR SW	Back door opened	On
KEY CYLLK CW	Other than driver door key cylinder LOCK position	Off
KEY CYL LK-SW	Driver door key cylinder LOCK position	On
KEY CYLLIN CM	Other than driver door key cylinder UNLOCK position	Off
KEY CYL UN-SW	Driver door key cylinder UNLOCK position	On
KENTESS FOOK	"LOCK" button of key fob is not pressed	Off
KEYLESS LOCK	"LOCK" button of key fob is pressed	On
KEVI ESS LINI OSK	"UNLOCK" button of key fob is not pressed	Off
KEYLESS UNLOCK	"UNLOCK" button of key fob is pressed	On
I-KEY LOCK	"LOCK" button of Intelligent Key or door request switch are not pressed	Off
	"LOCK" button of Intelligent Key or door request switch are pressed	On
I-KEY UNLOCK	"UNLOCK" button of Intelligent Key or door request switch are not pressed	Off
I-KEY UNLOCK	"UNLOCK" button of Intelligent Key or door request switch are pressed	On
ACC ON SW	Ignition switch OFF	Off
AGG ON GW	Ignition switch ACC or ON	On
REAR DEF SW	Rear window defogger switch OFF	Off
NEAN DEL 3W	Rear window defogger switch ON	On
LICHT SW 1ST	Lighting switch OFF	Off
LIGHT SW 1ST	Lighting switch 1ST	On

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Monitor Item	Condition	Value/Status
BUCKLE SW	The seat belt (driver side) is unfastened. [Seat belt switch (driver side) OFF]	Off
BUCKLE SW	The seat belt (driver side) is fastened. [Seat belt switch (driver side) ON]	On
KEVI ESS DANIC	PANIC button of key fob is not pressed	Off
KEYLESS PANIC	PANIC button of key fob is pressed	On
KEYLESS TRUNK	NOTE: The item is indicated, but not monitored.	Off
TRNK OPN MNTR	NOTE: The item is indicated, but not monitored.	Off
RKE LCK-UNLCK	LOCK/UNLOCK button of key fob is not pressed and held simultaneously	Off
RRE LOR-ONLOR	LOCK/UNLOCK button of key fob is pressed and held simultaneously	On
RKE KEEP UNLK	UNLOCK button of key fob is not pressed	Off
NNE NEEF UNLA	UNLOCK button of key fob is pressed and held	On
LI DEAM CVV	Lighting switch OFF	Off
HI BEAM SW	Lighting switch HI	On
LIEAD LAMB OWA	Lighting switch OFF	Off
HEAD LAMP SW 1	Lighting switch 2ND	On
LIEAD LAMB OW O	Lighting switch OFF	Off
HEAD LAMP SW 2	Lighting switch 2ND	On
AUTO LIGHT SW	NOTE: The item is indicated, but not monitored.	Off
D4 000110 0144	Other than lighting switch PASS	Off
PASSING SW	Lighting switch PASS	On
ED EOC CW	Front fog lamp switch OFF	Off
FR FOG SW	Front fog lamp switch ON	On
RR FOG SW	NOTE: The item is indicated, but not monitored.	Off
TURN SIGNAL R	Turn signal switch OFF	Off
TURN SIGNAL R	Turn signal switch RH	On
TUDNI CIONAL I	Turn signal switch OFF	Off
TURN SIGNAL L	Turn signal switch LH	On
ENGINE DUN	Engine stopped	Off
ENGINE RUN	Engine running	On
DICD CIM	Parking brake switch is OFF	Off
PKB SW	Parking brake switch is ON	On
CARGO LAMP SW	NOTE: The item is indicated, but not monitored.	Off
OPTICAL SENSOR	NOTE: The item is indicated, but not monitored.	0 V
ICNI SWI CANI	Ignition switch OFF or ACC	Off
IGN SW CAN	Ignition switch ON	On
ED WIDES !!!	Front wiper switch OFF	Off
FR WIPER HI	Front wiper switch HI	On
	Front wiper switch OFF	Off
FR WIPER LOW	Front wiper switch LO	On

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

	,	
IMITHOUT	INTELLIGENT K	(EY SYSTEM)

Monitor Item	Condition	Value/Status
ED WIDED INT	Front wiper switch OFF	Off
FR WIPER INT	Front wiper switch INT	On
ED MA OLIED OM	Front washer switch OFF	Off
FR WASHER SW	Front washer switch ON	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
ED WIDED OTOD	Any position other than front wiper stop position	Off
FR WIPER STOP	Front wiper stop position	On
VEHICLE SPEED	While driving	Equivalent to speedometer reading
	Rear wiper switch OFF	Off
RR WIPER ON	Rear wiper switch ON	On
	Rear wiper switch OFF	Off
RR WIPER INT	Rear wiper switch INT	On
	Rear washer switch OFF	Off
RR WASHER SW	Rear washer switch ON	On
	Rear wiper stop position	Off
RR WIPER STOP	Other than rear wiper stop position	On
RR WIPER STP2	NOTE: The item is indicated, but not monitored.	Off
H/L WASH SW	NOTE: The item is indicated, but not monitored.	Off
	Hazard switch OFF	Off
HAZARD SW	Hazard switch ON	On
DDAKE OW	Brake pedal is not depressed	Off
BRAKE SW	Brake pedal is depressed	On
E4N 0N 010	Blower fan motor switch OFF	Off
FAN ON SIG	Blower fan motor switch ON (other than OFF)	On
AIR COND SW	Compressor ON is not requested from auto amp. (A/C indicator OFF, blower fan motor switch OFF or etc.)	Off
AIR COND SW	Compressor ON is requested from auto amp. (A/C indicator ON and blower fan motor switch ON).	On
I-KEY TRUNK	NOTE: The item is indicated, but not monitored.	Off
I-KEY PW DWN	UNLOCK button of Intelligent Key is not pressed	Off
I-KLI FW DWN	UNLOCK button of Intelligent Key is pressed and held	On
I-KEY PANIC	PANIC button of Intelligent Key is not pressed	Off
I-KET PANIC	PANIC button of Intelligent Key is pressed	On
DUCH CW	Return to ignition switch to "LOCK" position	Off
PUSH SW	Press ignition switch	On
TONIC ODNID OW	When back door opener switch is not pressed	Off
TRNK OPNR SW	When back door opener switch is pressed	On
TRUNK CYL SW	NOTE: The item is indicated, but not monitored.	Off
HOOD SW	Close the hood NOTE: Vehicles of except for Mexico are OFF-fixed	Off
	Open the hood	On

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Monitor Item	Condition	Value/Status			
OIL PRESS SW	Ignition switch OFF or ACC Engine running	Off			
	Ignition switch ON	On			
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 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 REGGI FLI	ID of front LH tire transmitter is not registered	Yet			
ID REGST FR1	ID of front RH tire transmitter is registered	Done			
ID REGOT FRI	ID of front RH tire transmitter is not registered	Yet			
ID REGST RR1	ID of rear RH tire transmitter is registered	Done			
ID REGGI KKI	ID of rear RH tire transmitter is not registered	Yet			
ID REGST RL1	ID of rear LH tire transmitter is registered	Done			
ID REGOT KLI	ID of rear LH tire transmitter is not registered	Yet			
WARNING LAMP	Tire pressure indicator OFF	Off			
VVAINING LAWIF	Tire pressure indicator ON	On			
BUZZER	Tire pressure warning alarm is not sounding	Off			
DULLER	Tire pressure warning alarm is sounding	On			

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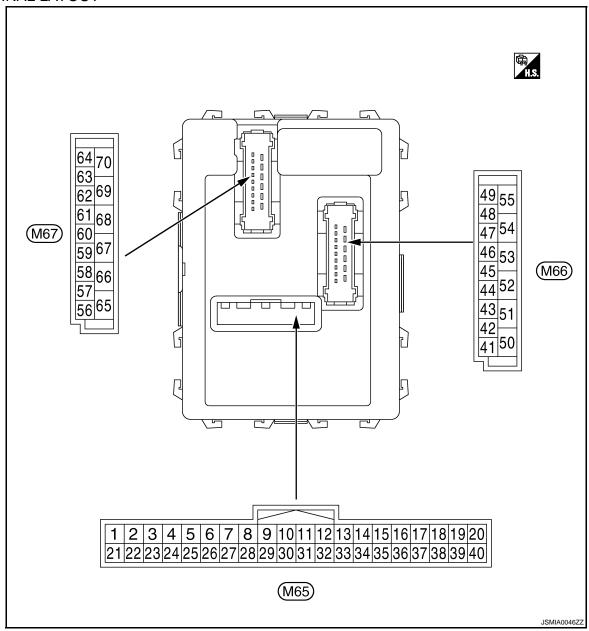
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TERMINAL LAYOUT



PHYSICAL VALUES

CAUTION:

 Check combination switch system terminal waveform under the loaded condition with lighting switch, turn signal switch and wiper switch OFF is not to be fluctuated by being overloaded.

Turn wiper intermittent dial position to 4 except when checking waveform or voltage of wiper intermittent dial position. Wiper intermittent dial position can be confirmed on CONSULT-III. Refer to BCS-27, "COMB SW: CONSULT-III Function (BCM - COMB SW)".

• BCM reads the status of the combination switch at 10 ms internal normally. Refer to BCS-9, "System Diagram".

	nal No.	Description				Value	
(Wire	color)	Signal name	Input/		Condition	(Approx.)	
+	_		Output				
1	Ground	Ignition key hole illu-	e illu- Output	Ignition key hole	OFF	Battery voltage	
(V)	Glound	mination control	Output	illumination	ON	0 V	

	nal No. color)	Description			Condition	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF	0 V
					Turn signal switch RH	
					Lighting switch HI	(V) 15
2 (G)	Ground	Combination switch INPUT 5	Input	Combination switch (Wiper intermit-	Lighting switch 1ST	10 5 0 10ms PKIB4959J 1.0 V
				tent dial 4)	Lighting switch 2ND	(V) 15 10 5 0 ++10ms PKIB4953J 2.0 V
					All switch OFF	0 V
		Combination switch INPUT 4	Input	Combination switch (Wiper intermit- tent dial 4)	Turn signal switch LH	-
					Lighting switch PASS	(V) 15
3	Ground				Lighting switch 2ND	10 5 0 ++10ms PKIB4959J 1.0 V
(Y)					Front fog lamp switch ON	(V) 15 10 5 0 ++10ms PKIB4955J 0.8 V
					All switch OFF	0 V
					Front wiper switch LO	40
4 (W)		Combination switch INPUT 3		Combination	Front wiper switch MIST	(V) 15
	Ground		Input	switch (Wiper intermit- tent dial 4)	Front wiper switch INT	10 5 0 +-10ms PKIB4959J 1.0 V

BCM (BODY CONTROL MODULE)

ECU	DIAGNO	SIS >			[WITHOUT INTE	LLIGENT KEY SYSTEM]
Terminal No. (Wire color)		Description			Condition	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF (Wiper intermittent dial 4)	0 V
					Front washer switch (Wiper intermittent dial 4)	(V) 15
					Rear washer ON (Wiper intermittent dial 4)	15 10 5
5 (R)	Ground	Combination switch INPUT 2	Input	Combination switch	Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	→ +10ms PKIB4959J
					Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 +-10ms PKIB4955J 0.8 V
					All switch OFF (Wiper intermittent dial 4)	0 V
					Front wiper switch HI (Wiper intermittent dial 4)	(V) 15
					Rear wiper switch INT (Wiper intermittent dial 4)	15 10 5 0
					Wiper intermittent dial 3 (All switch OFF)	+ 10ms PKIB4959J
						1.0 V
6 (P)	Ground	Combination switch INPUT 1	Input	Combination switch	Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2	(V) 15 10 5 0
						PKIB4952J
						(V) 15

Any of the condition below with all switch OFF

• Wiper intermittent dial 6 • Wiper intermittent dial 7

0

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0.8 V

	nal No.	Description				Value
+ (Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
7 (L)	Ground	Door key cylinder switch UNLOCK sig- nal	Input	Door key cylinder switch	NEUTRAL position	(V) 15 10 5 0 JPMIA0587GB 8.0 - 8.5 V
					UNLOCK position	0 V
8 (R)	Ground	Door key cylinder switch LOCK signal	Input	Door key cylin- der switch	NEUTRAL position	(V) 15 10 5 0 JPMIA0587GB
					10014 "	8.0 - 8.5 V
			Input	Stop lamp switch	LOCK position OFF (Brake pedal is not depressed)	0 V
9 (R)	Ground	Stop lamp switch			ON (Brake pedal is depressed)	Battery voltage
10	Ground	Rear window defog-	Input	Rear window	Not pressed	Battery voltage
(SB)		ger switch	<u> </u>	defogger switch	Pressed	0 V
11 (SB)	Ground	Ignition switch ACC	Input	Ignition switch Ol		0 V Battery voltage
12 (P)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closed)	(V) ₁₅ 10 5 0 JPMIA0586GB 7.5 - 8.0 V
					ON (When passenger door opened)	0 V
13 (LG)	Ground	Rear door switch RH	Input	Rear door switch RH	OFF (When rear door RH closed)	(V) ₁₅ 10 5 0 → 10ms JPMIA0587GB 8.0 - 8.5 V
					ON (When rear door RH opened)	0 V

< ECU DIAGNOSIS >

na signal (Clock)

(G)

Terminal No. (Wire color)		Description			-	Value	
+	-	Signal name	Input/ Output		Condition	(Approx.)	
15 [*] (O)	Ground	Tire pressure warning check switch	Input	Ignition switch OFF		(V) 15 10 5 0 JPMIA0588GB 1.5 V	
18 [*] (O)	Ground	Remote keyless entry receiver ground	Input	Ignition switch O	N	0 V	
				Without Intelligent Key system	At any condition	5 V	
19 [*] (V)	Ground	Remote keyless en- try receiver power supply	Input	With Intelligent	Ignition switch OFF For 3 seconds after ignition switch OFF to ON	0 V	
				Key system	3 seconds or later after ig- nition switch OFF to ON	5 V	
				Without Intelligent Key system	At any condition	(V) 15 10 5 0 JPMIA0589GB NOTE: The wave form changes accord-	
20 [*]		Remote keyless en-			Ignition switch OFF	ing to signal-receiving condition.	S
(GR)	Ground	try receiver signal	Input		For 3 seconds after ig- nition switch OFF to ON	0 V	
				With Intelligent		(V) ₁₅ 10 5	
				Key system	3 seconds or later after ig- nition switch OFF to ON	→ +2ms JPMIA0589GB	
						NOTE: The wave form changes according to signal-receiving condition.	
21 (G)	Ground	Immobilizer anten- na signal (Clock)	Input/ Output	Ignition switch O	FF	Battery voltage	

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Output

	nal No.	Description				Value
+ (Wire	color)	Signal name	Input/ Output	Condition		(Approx.)
					ON	0 V
23 (B)	Ground	Security indicator signal	Input	Security indicator	Blinking (Ignition switch OFF)	(V) 15 10 5 0 JPMIA0590GB
					OFF	12.0 V
25		Immobilizer anten-	Input/			Battery voltage
(BR)	Ground	na signal (Rx, Tx)	Output	Ignition switch OFF		Battery voltage
				Ignition switch OFF		
27 (Y)	Ground	A/C switch	Input	Input Ignition switch ON	A/C switch OFF	(V) ₁₅ 10 5 0 → 10ms JPMIA0591GB 1.6 V
					A/C switch ON	0 V
				Ignition switch O	FF	
28 (LG)	Ground	Blower fan switch	Input	Ignition switch ON	Blower fan switch OFF	(V) 15 10 5 0 JPMIA0592GB 7.0 - 7.5 V
					Blower fan switch ON	0 V
29					OFF	Battery voltage
(W)	Ground	Hazard switch	Input	Hazard switch	ON	0 V
30	Organia	Back door opener	lmt	Back door	Not pressed	Battery voltage
(G)	Ground	switch	Input	opener switch	Pressed	0 V

< ECU DIAGNOSIS >

	inal No.	Description				Value	А		
+ (VVire	e color)	Signal name	Input/ Output		Condition	(Approx.)	Α		
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 *** 10ms PKIB4960J 7.2 V	B C		
32 (BR)	Ground	Combination switch OUTPUT 5	Output	Combination switch	Front fog lamp switch ON (Wiper intermittent dial 4)				
					Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15 10 5	Е		
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2	0 → +10ms	F		
					Wiper intermittent dial 6Wiper intermittent dial 7	РКІВ4956J 1.0 V	G		
							All switch OFF	(V) 15 10 5 0	Н
					(Wiper intermittent dial 4)	→ 10ms PKIB4960J	I		
33	Ground	Combination switch	Output	Combination		7.2 V	J		
(GR)	O.Gaila	OUTPUT 4	o anpar	switch	Lighting switch 1ST (Wiper intermittent dial 4)	(V)			
					Rear wiper switch INT (Wiper intermittent dial 4)	15	SE		
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5	+10ms PKIB4958J	L		
					Wiper intermittent dial 6	1.2 V			

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	nal No.	Description				Value
+ (VVire	color)	Signal name	Input/ Output		Condition	(Approx.)
			<u> </u>		All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 +-10ms PKIB4960J 7.2 V
34 (L)	Ground	Combination switch OUTPUT 3	Output	Combination switch	Lighting switch 2ND (Wiper intermittent dial 4)	
, ,					Lighting switch HI (Wiper intermittent dial 4)	(V) 15 10
					Rear washer switch ON (Wiper intermittent dial 4)	0
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	PKIB4958J 1.2 V
25			Output	Combination switch (Wiper intermit-	All switch OFF	(V) 15 10 5 0 + 10ms PKIB4960J 7.2 V
35 (B)	Ground	Combination switch OUTPUT 2			Lighting switch 2ND	
				tent dial 4)	Lighting switch PASS	(V) 15
					Front wiper switch INT	10
					Front wiper switch HI	0 → +10ms PKIB4958J
36		Combination switch		Combination switch	All switch OFF	(V) 15 10 5 0 → 10ms PKIB4960J 7.2 V
(V)	Ground	OUTPUT 1	Output	(Wiper intermit- tent dial 4)	Turn signal switch RH	
				sidi 1)	Turn signal switch LH	(V) 15 10 5 0
					Front wiper switch LO (Front wiper switch MIST)	
					Front washer switch ON	+ 10ms
						PKIB4958J 1.2 V

< ECU DIAGNOSIS >

Signal name Output Signal name Output Input Inp	Terminal No. Description (Wire color)		Condition		Value				
Ground Key switch Input Ger Remove mechanical key from ignition key ovinage O V	-	-	Signal name	Input/ Output		Condition			
Remove methodical key from ignition key cylinder		Ground	Key switch	Innut			der		Battery voltage
Ground Ignition switch ON Input Ignition switch ON or START Battery voltage	(LG)	Glodila	Ney Switch	mpat		nical key from ignition key	0 V		
Ground CAN-H Input Output		Ground	Ignition switch ON	Input					
Canal Cana				-	Ignition switch C	ON or START	Battery voltage		
Ground Back door switch Input Back door switch 43 (V) Ground Back door switch Input Back door switch 44 (B) Ground Door lock and unlock switch LOCK signal (P) Door lock and unlock switch Input and the switch Input Switch Input Back door closed) 45 (P) Ground Door lock and unlock switch Input Input Input Switch Input Inpu		Ground	CAN-H			_	_		
43 (V) Ground Back door switch Input Back door switch Input Back door switch		Ground	CAN-L			_	_		
Ground Rear wiper auto stop Input Inpu		Ground	Back door switch	Input			10 5 0 **10ms JPMIA0593GB		
44 (B) Ground Rear wiper auto stop Input Input Input Principles (P) Ground Grou							0 V		
Any position other than rear wiper stop position Battery voltage	44				Ignition switch		0 V		
45 (P) Ground Door lock and unlock switch LOCK signal Input Unlock switch LOCK signal Input Unlock switch UNLOCK signal Unlock switch Unlo	(B)	Ground	Rear wiper auto stop	Input			Battery voltage		
Ground Ground Door lock and unlock switch UNLOCK signal Input Unlock switch UNLOCK signal Input Unlock switch UNLOCK Signal Input Unlock Switch UNLOCK Switc		Ground		Input		NEUTRAL position	10 5 0 ***10ms JPMIA0591GB		
46 (BR) Ground Switch UNLOCK signal Input Unlock switch Un						LOCK position	0 V		
		Ground	switch UNLOCK sig-	Input		NEUTRAL position	10 5 0 ++10ms JPMIA0591GB		
						LINILOCK position			

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	nal No.	Description				Value
(Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
47 (W)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closed)	(V) 15 10 5 0 JPMIA0587GB 8.0 - 8.5 V
					ON (When driver door opened)	0 V
48 (GR)	Ground	Rear door switch LH	Input	Rear door switch LH	OFF (When rear door LH closed)	(V) ₁₅ 10 5 0 *** 10ms JPMIA0594GB 8.5 - 9.0 V
					ON (When rear door LH opened)	0 V
49	Ground	Back door lamp con-	Output	Back door lamp switch DOOR	Back door is closed (Back door lamp turns OFF)	Battery voltage
(L)	Ground	trol	Carput	position	Back door is opened (Back door lamp turns ON)	0 V
53	Ground	Pack door open	Output	Back door	Not pressed (Back door actuator is activated)	0 V
(V)	Ground	Back door open	Output	opener switch	Pressed (Back door actuator is activated)	Battery voltage
55 (SB)	Ground	Rear wiper motor	Output	Ignition switch	Rear wiper switch OFF	0 V
(30)					Rear wiper switch ON interior room lamp battery	Battery voltage
56 (Y)	Ground	Interior room lamp power supply	Output	saver operation t		0 V
(1)		power supply		lamp battery save	ter passing the interior room er operation time	Battery voltage
57 (G)	Ground	Battery power sup- ply	Input	Ignition switch O	FF	Battery voltage
59	Ground	Driver door UN-	Output	Driver door	UNLOCK (Actuator is activated)	Battery voltage
(L)	Ground	LOCK		Dilver door	Other then UNLOCK (Actuator is not activated)	0 V

< ECU DIAGNOSIS >

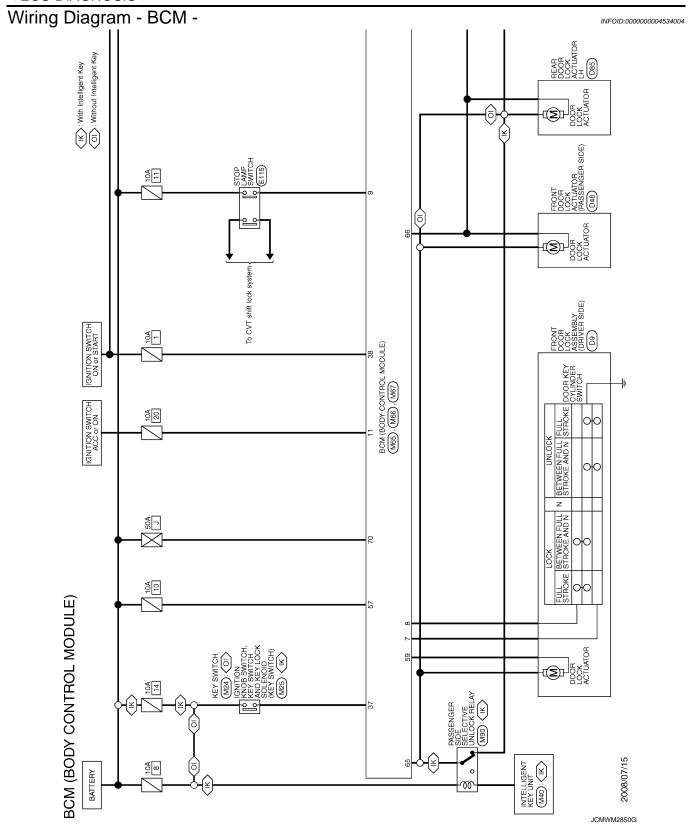
Terminal No. Descrip (Wire color)		Description				Value	
+	– color)	Signal name	Input/ Output		Condition	(Approx.)	Α
					Turn signal switch OFF	0 V	В
60 (BR)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1s 1s PKIC6370E	C
					Turn signal switch OFF	0 V	Е
61 (GR)	Ground	Turn signal RH	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 1s PKIC6370E 6.0 V	F
63		Interior room lamp	_	Interior room	OFF	Battery voltage	Н
(R)	Ground	timer control	Output	lamp	ON	0 V	
65	Ground	All doors LOCK	Output	All doors	LOCK (Actuator is activated)	Battery voltage	
(V)	Giodila	All doors LOCK	Output	All doors	Other then LOCK (Actuator is not activated)	0 V	
66	Ground	Passenger door and	() I I I I I	Passenger door and rear door	UNLOCK (Actuator is activated)	Battery voltage	J
(G)	Ground	rear door UNLOCK			Other then UNLOCK (Actuator is not activated)	0 V	SE
67 (B)	Ground	Ground	Output	Ignition switch O	N	0 V	
68 (L)	Ground	P/W power supply (RAP)	Output	Ignition switch O	N	Battery voltage	L
69 (P)	Ground	P/W power supply (BAT)	Output	Ignition switch O	FF	Battery voltage	N
70 (Y)	Ground	Battery power sup- ply	Input	Ignition switch O	FF	Battery voltage	1.0

^{*:} Except for Mexico

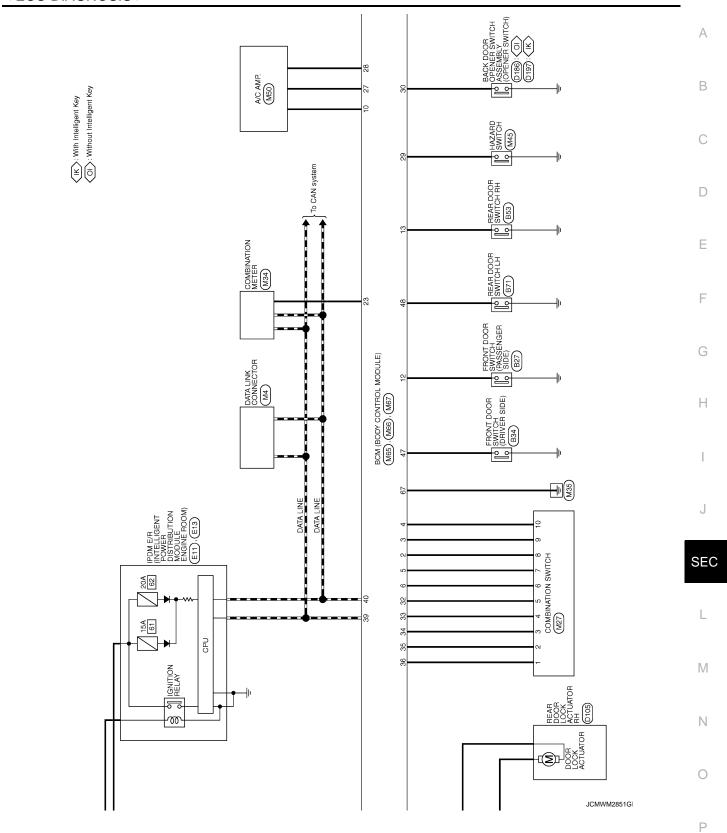
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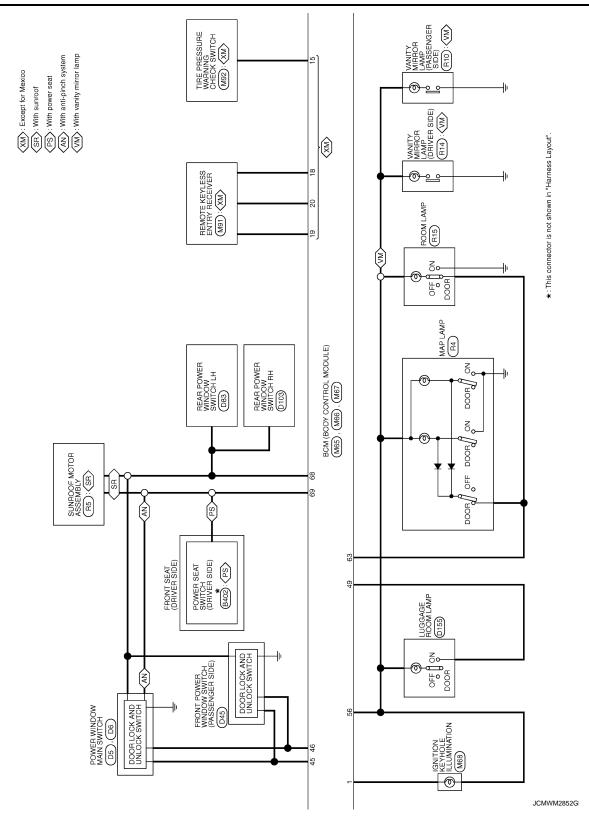
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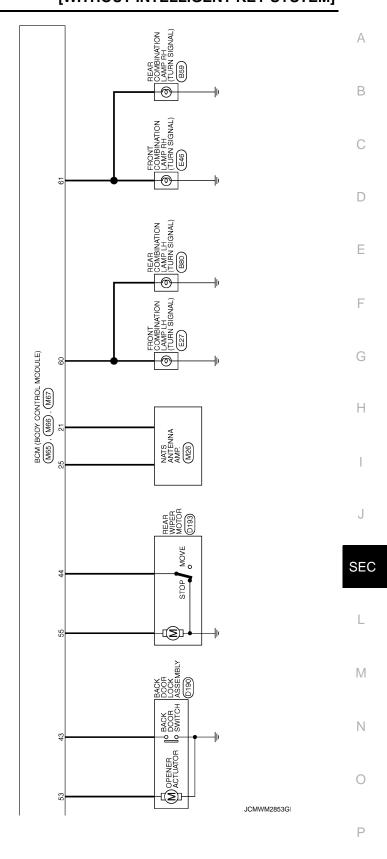
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[WITHOUT INTELLIGENT KEY SYSTEM]







3CM (BODY CONTROL MODULE) BCM (BODY CONTROL MODULE) BCM (BODY CONTROL MODULE) 3CM (BODY CONTROL MODULE)

JCMWM2854G

INFOID:0000000004534005

Fail-safe

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 more than 5 seconds while driving the rear wiper, BCM stops power supply to protect the rear wiper motor.

Condition of cancellation

BCM (BODY CONTROL MODULE)

[WITHOUT INTELLIGENT KEY SYSTEM]

- 1. Pass more than 1 minute after the rear wiper stop.
- 2. Turn the rear wiper switch OFF.

< ECU DIAGNOSIS >

Operate the rear wiper switch or rear washer switch.

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.

DTC Inspection Priority Chart

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

Priority	DTC	
1	U1000: CAN COMM CIRCUIT	
2	C1735: IGN CIRCUIT OPEN	
3	 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] RR C1711: [CHECKSUM ERR] FL C1712: [CHECKSUM ERR] FR C1714: [CHECKSUM ERR] FR C1715: [CHECKSUM ERR] RR C1716: [PRESS DATA ERR] FR C1717: [PRESS DATA ERR] FR C1718: [PRESS DATA ERR] FR C1719: [PRESS DATA ERR] RR C1720: [CODE ERR] FL C1721: [CODE ERR] FR C1721: [CODE ERR] RR C1722: [CODE ERR] RR C1723: [CODE ERR] RR C1724: [BATT VOLT LOW] FR C1725: [BATT VOLT LOW] FR C1726: [BATT VOLT LOW] RR C1727: [BATT VOLT LOW] RR C1729: VHCL SPEED SIG ERR 	

DTC Index

NOTE:

Details of time display

CRNT: Displays when there is a malfunction now or after returning to the normal condition until turning ignition switch OFF → ON again.

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

CONSULT display	Tire pressure monitor warning lamp ON	Reference
U1000: CAN COMM CIRCUIT	_	BCS-35

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CONSULT display	Tire pressure monitor warning lamp ON	Reference	
C1704: LOW PRESSURE FL	×		
C1705: LOW PRESSURE FR	×	W.T. 4.5	
C1706: LOW PRESSURE RR	×	<u>WT-15</u>	
C1707: LOW PRESSURE RL	×		
C1708: [NO DATA] FL	×		
C1709: [NO DATA] FR	×	VA/T 4.7	
C1710: [NO DATA] RR	×	<u>WT-17</u>	
C1711: [NO DATA] RL	×		
C1712: [CHECKSUM ERR] FL	×		
C1713: [CHECKSUM ERR] FR	×	WT 20	
C1714: [CHECKSUM ERR] RR	×	<u>WT-20</u>	
C1715: [CHECKSUM ERR] RL	×		
C1716: [PRESS DATA ERR] FL	×		
C1717: [PRESS DATA ERR] FR	×	WT 22	
C1718: [PRESS DATA ERR] RR	×	<u>WT-23</u>	
C1719: [PRESS DATA ERR] RL	×		
C1720: [CODE ERR] FL	×		
C1721: [CODE ERR] FR	×	WT 25	
C1722: [CODE ERR] RR	×	<u>WT-25</u>	
C1723: [CODE ERR] RL	×		
C1724: [BATT VOLT LOW] FL	_		
C1725: [BATT VOLT LOW] FR	_	<u>WT-28</u>	
C1726: [BATT VOLT LOW] RR	_		
C1727: [BATT VOLT LOW] RL	_		
C1729: VHCL SPEED SIG ERR	×	<u>WT-31</u>	
C1735: IGN CIRCUIT OPEN	_	BCS-36	

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) [WITHOUT INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

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

Reference Value INFOID:0000000004534008

VALUES ON THE DIAGNOSIS TOOL

Monitor Item		Condition	Value/Status
MOTOR FAN REQ	Engine idle speed	Changes depending on engine coolant temperature, air conditioner operation status, vehicle speed, etc.	1 - 4
		A/C switch OFF	Off
AC COMP REQ	Engine running	A/C switch ON (Compressor is operating)	On
TAIL & CLID DEC	Lighting switch OFF		Off
TAIL&CLR REQ	Lighting switch 1ST or 2N	ND .	On
III 10 PF0	Lighting switch OFF		Off
HL LO REQ	Lighting switch 2ND		On
	Lighting switch OFF		Off
HL HI REQ	Lighting switch HI (Light i	is illuminated)	On
FR FOG REQ		Front fog lamp switch OFF	Off
NOTE: This item is monitored only on the vehicle with front fog lamp.	Lighting switch 2ND	Front fog lamp switch ON	On
		Front wiper switch OFF	Stop
ED WID DEO	Ignition switch ON	Front wiper switch INT	1LOW
FR WIP REQ		Front wiper switch LO	Low
		Front wiper switch HI	Hi
		Front wiper stop position	STOP P
WIP AUTO STOP	Ignition switch ON	Any position other than front wiper stop position	ACT P
		Front wiper operates normally	Off
WIP PROT	Ignition switch ON	Front wiper stops at fail-safe operation	BLOCK
ST RLY REQ NOTE:	When Intelligent Key is of is pushed	utside the vehicle, and the push switch	Off
Vehicle without Intelligent Key system indicates only "ON", and it does not change.	When Intelligent Key is in pushed	On	
ION BLV	Ignition switch OFF or AC	CC	Off
IGN RLY	Ignition switch ON		On
		Rear window defogger switch OFF	Off
RR DEF REQ	Ignition switch ON	Rear window defogger switch ON (Rear window defogger is operating)	On
OIL B SW	Ignition switch OFF, ACC	or engine running	Open
OIL P SW	Ignition switch ON		Close
DTRL REQ	Daytime running light sys	stem is not operated.	Off
NOTE: This item is monitored only on the vehicle with the daytime running light system.	Daytime running light sys	On	

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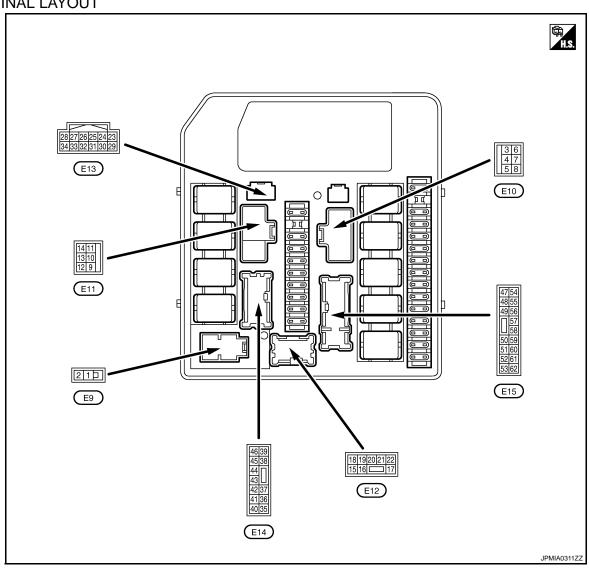
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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) [WITHOUT INTELLIGENT KEY SYSTÉM]

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
HOOD SW	Close the hood	Off
NOTE: This item is monitored only the vehicle for Mexico.	Open the hood	On
	Not operation	Off
THFT HRN REQ	Horn is activated with vehicle security system or panic alarm system.	On
HORN CHIRP	Not operation	Off
	Horn is activated with key fob LOCK operation.	On

TERMINAL LAYOUT



PHYSICAL VALUES

	nal No.	·			Value	
	(Wire color) Input/		Condition	(Approx.)		
+	_	_	Output			
1 (R)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage	
2 (G)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage	

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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) [WITHOUT INTELLIGENT KEY SYSTÉM]

< ECU DIAGNOSIS >

	nal No. color)	Description			Dan distan	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
3	Ground	Starter relay power supply	Output	When engine is clar	When engine is clanking	
(O)	Ground	Starter relay power supply	Output	When engine is not	clanking	0 V
4	Ground	Cooling fan relay-1 power	Output	Cooling fan opera-	OFF	0 V
(W)	Cround	supply	Catput	tion	MID or HI	Battery voltage
5	Ground	Ignition switch START	Input	Ignition switch OFF,	ACC or ON	0 V
(R)	Cround	ignition switch on the	mpat	Ignition switch STAF	RT	Battery voltage
6 (BR)	Ground	Battery power supply (Cooling fan relay)	Input	Ignition switch OFF		Battery voltage
7	Ground	Cooling fan motor-2 (HI)		Cooling fan opera-	OFF	Battery voltage
(P)	Ground	ground	_	tion	HI	0 V
8	Ground	Cooling fan relay-2 power	Output	Cooling fan opera-	OFF	0 V
(G)	Giodila	supply	Output	tion	HI	Battery voltage
11 (B)	Ground	Ground	_	Ignition switch ON		0 V
12	Ground	Rear window defogger re-	Output	Ignition switch ON	Rear window defogger switch OFF	0 V
(O)	Giodila	lay power supply	Output	Ignition switch ON	Rear window defogger switch ON	Battery voltage
15 ^{*1}	Cround	Daytime running light relay	Outnut	Daytime running	Not operated	Battery voltage
(SB)	Ground	control	Output	light system	Operated	0 V
16 ^{*2}	Ground	Front fog lamp (LH)	Output	Lighting switch	Front fog lamp switch OFF	0 V
(Y)	Giouna	Front log lamp (LH)	Output	2ND	Front fog lamp switch ON	Battery voltage
17 ^{*2}	Ground	Front fog lamp (RH)	Output	Lighting switch	Front fog lamp switch OFF	0 V
(W)	Giodila	Tront log lamp (IXTI)	Output	2ND Front fog lamp switch ON		Battery voltage
18	Ground	Headlamp LO (LH)	Output	Lighting switch OFF		0 V
(L)	Ground	ricadiamp EO (Ei i)	Output	Lighting switch 2ND		Battery voltage
20	Ground	Headlamp LO (RH)	Output	Lighting switch OFF		0 V
(SB)	Ground	ricadiamp EO (IVII)	Output	Lighting switch 2ND		Battery voltage
				Lighting switch OFF		0 V
21 (G)	Ground	Headlamp HI (LH)	Output	Lighting switch 2NLighting switch PA	ND and HI ASS	Battery voltage
				Daytime running ligh	nt system Operated*1	7.0 V
				Lighting switch OFF		0 V
22 (LG)	Ground	Headlamp HI (RH)	Output	Lighting switch 2NLighting switch PA		Battery voltage
				Daytime running light system Operated*1		7.0 V
23		01		1	Engine stopped	0 V
(W)	Ground	Oil pressure switch	Input	Ignition switch ON	Engine running	Battery voltage
0.1					Front wiper stop position	0 V
24 (Y)	Ground	Front wiper auto stop	Input	Ignition switch ON	Any position other than front wiper stop position	Battery voltage
25 (B)	Ground	Ground	_	Ignition switch ON		0 V
26 (P)	_	CAN-L	Input/ Output		_	

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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) [WITHOUT INTELLIGENT KEY SYSTÉM]

< ECU DIAGNOSIS >

	nal No.	Description				Value	
+ (vvire	color)	Signal name	Input/ Output	(Condition		
27 (L)	_	CAN-H	Input/ Output		_		
31	Ground	Cooling fan relay-4 control	Output	Cooling fan opera-	OFF	Battery voltage	
(LG)	Giodila	Cooling fair relay-4 control	Output	tion	LO	0 - 1.0 V	
32		Throttle control motor re-			kimately 2 seconds or more tion switch from ON to OFF	Battery voltage	
(V)	Ground	lay control	Input	 Ignition switch ON For approximately tion switch from C 	2 seconds after turning igni-	0 - 1.0 V	
				Ignition switch OFF		0 V	
33 (GR)	Ground	Fuel pump relay control	Input	Inviting position ON	Engine stopped	Battery voltage	
(011)				Ignition switch ON	Engine running	0.8 V	
34 ^{*3}	0	He and assistable	1	Close the hood		Battery voltage	
(W)	Ground	Hood switch	Input	Open the hood		0 V	
37	0	Tail, license plate lamps	0 1 1	Lighting switch OFF		0 V	
(R)	Ground	and illuminations	Output	Lighting switch 1ST		Battery voltage	
38	0	Dedication (III)	0 1 1	Lighting switch OFF		0 V	
(R)	Ground	Parking lamp (LH)	Output	Lighting switch 1ST		Battery voltage	
39		D 1: 1 (D1)		Lighting switch OFF		0 V	
(GR)	Ground	Parking lamp (RH)	Output	Lighting switch 1ST		Battery voltage	
40				Ignition switch OFF or ACC		0 V	
(BR)	Ground	Ignition relay power supply	Output	Ignition switch ON		Battery voltage	
41	0	126	0 1 1	Ignition switch OFF	or ACC	0 V	
(O)	Ground	Ignition relay power supply	Output	Ignition switch ON		Battery voltage	
42	Crawad	Front win or I II	Outsut	Front wiper switch OFF		0 V	
(L)	Ground	Front wiper HI	Output	Ignition switch ON	Front wiper switch HI	Battery voltage	
43	0	Ftin-a1-O	0	Inviting position ON	Front wiper switch OFF	0 V	
(G)	Ground	Front wiper LO	Output	Ignition switch ON	Front wiper switch LO	Battery voltage	
45					Selector lever "P" or "N"	Battery voltage	
45 (Y)	Ground	Starter relay power supply	Input	Ignition switch ON	Selector lever in any position other than "P" or "N"	0 V	
46	Ground	Fuel pump relay power	Output	Ignition switch OF After passing approafter turning the ignition	roximately 1 second or more	0 V	
(W)	Ground	supply	Output	 For approximately 1 second after turning the ignition switch ON Engine running 		Battery voltage	
47	_		_	After passing approximately 4 seconds or more after turning the ignition switch from ON to OFF Ignition switch ON For approximately 4 seconds after turning ignition switch from ON to OFF		0 V	
(BR)	Ground	ECM relay power supply	Output			Battery voltage	
48					kimately 4 seconds or more tion switch from ON to OFF	0 V	
(R)	Ground	ECM relay power supply	Output	Ignition switch ON For approximately tion switch from O	4 seconds after turning igni-	Battery voltage	

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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) < ECU DIAGNOSIS > [WITHOUT INTELLIGENT KEY SYSTEM]

	nal No.	Description				Value										
+ (vvire	color)	Signal name	Input/ Output	(Condition	(Approx.)										
50	Cround	Cooling for rolay E control	Output	Cooling fan opera-	OFF	Battery voltage										
(G)	Ground	Cooling fan relay-5 control	Output	tion	MID or HI	0 - 1.0 V										
51					kimately 4 seconds or more tion switch from ON to OFF	Battery voltage										
(L)	Ground	ECM relay control	Output	Ignition switch ON For approximately tion switch from C	4 seconds after turning igni-	0 - 1.0 V										
52		Throttle control motor re-			ximately 2 seconds or more tion switch from ON to OFF	0 V										
(P)	Ground	lay power supply	Output	Ignition switch ON For approximately tion switch from C	2 seconds after turning igni-	Battery voltage										
				Engine stopped		0 V										
55			Output		A/C switch OFF	0 V										
(O)	(-round //// rolay nowar cumply /	Output		Output	Output	Output	Output	Guipui	Odiput	Output	Output	Output	Output	Juiput	Engine running	A/C switch ON (A/C compressor is operating)
56	Ground	Ignition switch ON	Input	Ignition switch OFF	or ACC	0 V										
(SB)	Ground	Ignition switch ON	при	Ignition switch ON		Battery voltage										
57	Ground	Horn relay control	Output	The horn is not activ	vated	Battery voltage										
(V)	Orodria	Tioni relay control	Output	The horn is activated	d	0 V										
58	Ground	Ignition relay power supply	Output	Ignition switch OFF or ACC		0 V										
(LG)	Ground	igiliadir tolay power supply	Output	Ignition switch ON		Battery voltage										
59	Ground	Ignition relay power supply	Output	Ignition switch OFF or ACC		0 V										
(BR)	Ground	igiliadir tolay power supply	Output	Ignition switch ON		Battery voltage										
60	Ground	Ignition relay power supply	Output	Ignition switch OFF	or ACC	0 V										
(SB)	2.300	J 1212.) Politic Supply		Ignition switch ON		Battery voltage										
61 (R)	Ground	ECM power supply	Output	Ignition switch OFF		Battery voltage										

^{*1:} With daytime running light system

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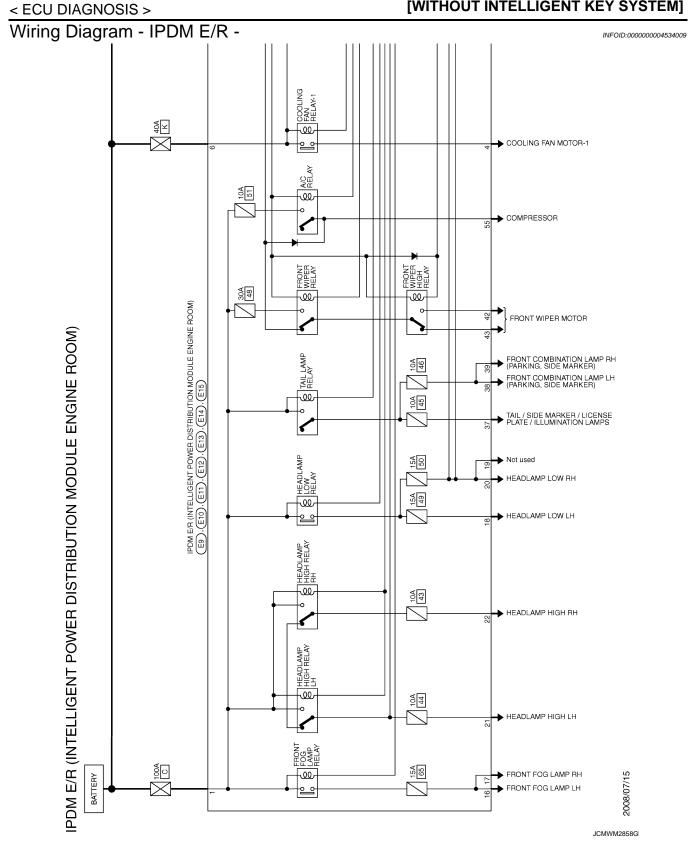
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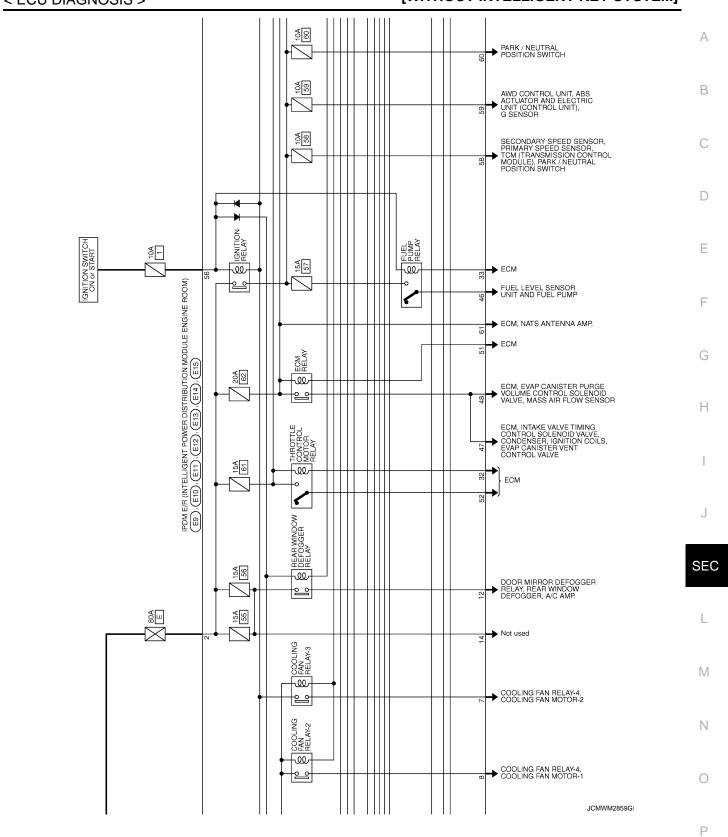
^{*2:} With front fog lamp system

^{*3:} For Mexico

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) =CU DIAGNOSIS > [WITHOUT INTELLIGENT KEY SYSTEM]

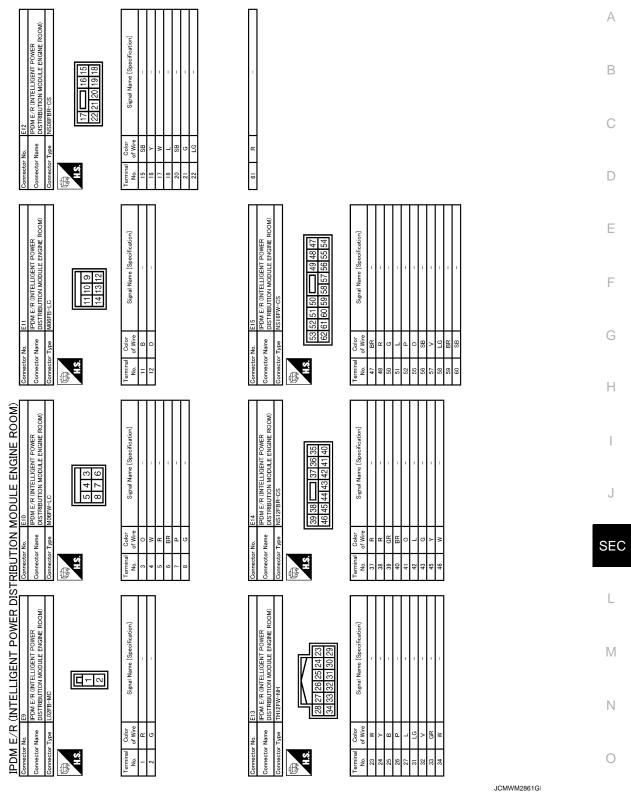


IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) < ECU DIAGNOSIS > [WITHOUT INTELLIGENT KEY SYSTEM]



IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) [WITHOUT INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >



Fail-safe INFOID:0000000004534010

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

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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) [WITHOUT INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

Control part	Fail-safe in operation
Cooling fan	 The cooling fan relay-1, the cooling fan relay-2, the cooling fan relay-3 and the cooling fan relay-5 turn ON when the ignition switch is turned ON The cooling fan relay-1, the cooling fan relay-2, the cooling fan relay-3 and the cooling fan relay-5 turn OFF when the ignition switch is turned OFF Cooling fan relay-4 OFF
A/C compressor	A/C relay OFF

If no CAN communication is available with BCM

Control part	Fail-safe in operation
Headlamp	 The headlamp low relay turns ON when the ignition switch is turned ON The headlamp low relay turns OFF when the ignition switch is turned OFF Headlamp high relay OFF
Parking lampsLicense plate lampsTail lampsIlluminations	 The tail lamp relay and the daytime running light relay* turn ON when the ignition switch is turned ON The tail lamp relay and the daytime running light relay* turn OFF when the ignition switch is turned OFF
Front wiper	 The status just before activation of fail-safe control is maintained until the ignition switch is turned OFF while the front wiper is operating at LO or HI speed. The front 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
Starter motor	Starter relay OFF
Rear window defogger	Rear window defogger relay OFF
Horn	Horn relay OFF

NOTE:

IGNITION RELAY MALFUNCTION DETECTION FUNCTION

- IPDM E/R monitors status of ignition relay by the voltage at ignition relay contact circuit inside it.
- IPDM E/R judges that the ignition relay is error, if status of the ignition relay and ignition switch ON signal
- If the ignition relay cannot turn OFF due to contact seizure, it activates the tail lamp relay and daytime running light relay* for 10 minutes to alert the user to the ignition relay malfunction when the ignition switch is turned OFF.

Detection		IDDM E/D judgment	Operation	
Ignition switch ON signal	Ignition relay	- IPDM E/R judgment	Operation	
ON	ON	Ignition relay normal	_	
OFF	OFF	Ignition relay normal	_	
OFF	ON	Ignition relay ON stuck	Turn on the tail lamp relay and daytime running light relay* for 10 minutes	
ON	OFF	Ignition relay OFF stuck	Detect DTC "B2099: IGN RELAY OFF"	

NOTE:

FRONT WIPER CONTROL

IPDM E/R detects the front wiper stop position with the front wiper stop position signal.

When the front wiper stop position signal is in the conditions listed below, IPDM E/R repeats a front wiper 10 seconds operation and 20 seconds stop five times.

^{*:} With daytime running light system

^{*:} With daytime running light system

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) [WITHOUT INTELLIGENT KEY SYSTEM] < ECU DIAGNOSIS >

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.

DTC Index INFOID:0000000004534011

CONSULT display	Fail-safe	Timin	g ^{NOTE}	Reference page
No DTC is detected. further testing may be required.	_	_	_	_
U1000: CAN COMM CIRCUIT	×	CRNT	PAST	PCS-13
B2099: IGN RELAY OFF	_	CRNT	PAST	PCS-14

NOTE:

The details of time display are as follows.

- CRNT: The malfunctions that are detected now.
- PAST: The number is indicated when it is normal at present and a malfunction was detected in the past.

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SECURITY CONTROL SYSTEM

< SYMPTOM DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

SYMPTOM DIAGNOSIS SECURITY CONTROL SYSTEM

Symptom Table

Function	Operation condition	Symptom	Reference page
	Lock all doors with key fob	Vehicle security system can not be set	SEC-230
VEHICLE SECURITY	Ignition switch turn OFF	Security indicator does not turn ON or flash	SEC-229
SYSTEM	In the armed phase, open the door	Vehicle security alarm does not activate	SEC-231
	When alarm sound, press key fob button	Vehicle security system can not be canceled	SEC-232

SECURITY INDICATOR DOES NOT TURN ON OR FLASH

< SYMPTOM DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

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SECURITY INDICATOR DOES NOT TURN ON OR FLASH Α Description INFOID:0000000004231183 NOTE: В • Before performing the diagnosis, check "Work Flow". Refer to SEC-6, "Work Flow". Diagnosis Procedure INFOID:0000000004231184 1. CHECK VEHICLE SECURITY INDICATOR Check vehicle security indicator. D Refer to SEC-181, "Component Function Check". Is the inspection result normal? YFS >> GO TO 2. Е NO >> Repair or replace the malfunctioning parts. 2.CONFIRM THE OPERATION Confirm the operation again. F Is the result normal? YES >> Check intermittent incident. Refer to GI-41, "Intermittent Incident". NO >> GO TO 1. Н SEC M

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VEHICLE SECURITY SYSTEM CAN NOT BE SET

< SYMPTOM DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

VEHICLE SECURITY SYSTEM CAN NOT BE SET

Description INFOID:000000004231185

NOTE:

• Before performing the diagnosis, check "Work Flow". Refer to SEC-6, "Work Flow".

Diagnosis Procedure

INFOID:0000000004231186

1. CHECK DOOR LOCK FUNCTION

Check door lock function.

Refer to DLK-276, "System Description".

s the inspection result normal?

YES >> GO TO 2.

NO >> Refer to <u>DLK-272</u>, "Work Flow".

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-41, "Intermittent Incident".

NO >> GO TO 1.

VEHICLE SECURITY ALARM DOES NOT ACTIVATE

< SYMPTOM DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

VEHICLE SECURITY ALARM DOES NOT ACTIVATE

Description INFOID:0000000004231187

NOTE:

Before performing the diagnosis, check "Work Flow". Refer to <u>SEC-6, "Work Flow".</u>

Diagnosis Procedure

INFOID:0000000004231188

1. CHECK DOOR SWITCH

Check door switch.

Refer to SEC-176, "Component Function Check".

Is the inspection results normal?

YES >> GO TO 2.

NO >> Repair or replace malfunction part.

2. CHECK HORN

Check horn.

Refer to SEC-62, "EXCEPT FOR MEXICO: Component Function Check".

Is the inspection results normal?

YES >> GO TO 3.

NO >> Repair or replace malfunction part.

3.CHECK HEADLAMP OPERATION

Check headlamp operation by lighting switch.

Does headlamp come on when turning switch ON?

YES >> GO TO 4.

NO >> Check headlamp system. Refer to EXL-6, "Work Flow". (XENON type), Refer to EXL-134, "Work Flow". (HALOGEN type)

4. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-41, "Intermittent Incident".

>> GO TO 1. NO

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VEHICLE SECURITY SYSTEM CAN NOT CANCELED

< SYMPTOM DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

VEHICLE SECURITY SYSTEM CAN NOT CANCELED

Description INFOID:000000004231189

NOTE:

• Before performing the diagnosis, check "Work Flow". Refer to SEC-151, "Work Flow".

Diagnosis Procedure

INFOID:0000000004231190

1. CHECK MULTI REMOTE CONTROL SYSTEM

Check multi remote control system.

Refer to DLK-281, "System Description".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check Work Flow. Refer to <u>DLK-272</u>, "Work Flow".

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-41, "Intermittent Incident".

NO >> GO TO 1.

PRECAUTIONS

< PRECAUTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

PRECAUTION

PRECAUTIONS

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

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the "SRS AIRBAG" and "SEAT BELT" of this Service Manual.

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the "SRS AIRBAG".
- Never 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.

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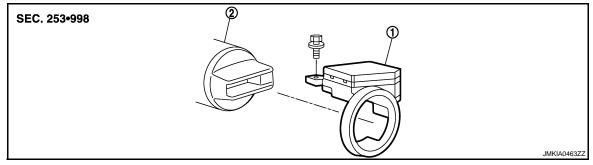
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ON-VEHICLE REPAIR

NATS ANTENNA AMP.

Exploded View

INFOID:0000000004231192



1. NATS antenna amp.

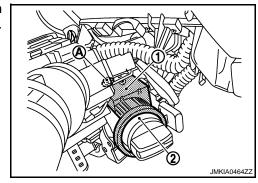
2. Steering lock assembly

Removal and Installation

INFOID:0000000004231193

REMOVAL

- Remove the steering column cover. Refer to <u>IP-13</u>, "<u>Removal and Installation</u>".
- 2. Remove the NATS antenna amp. mounting screw (A), and then remove NATS antenna amp. (1) from steering lock assembly (2).



INSTALLATION

Install in the reverse order of removal.