SECTION BCS
BODY CONTROL SYSTEM

CONTENTS

PRECAUTION

PRECAUTIONS

Precautions for Removing Battery Terminal

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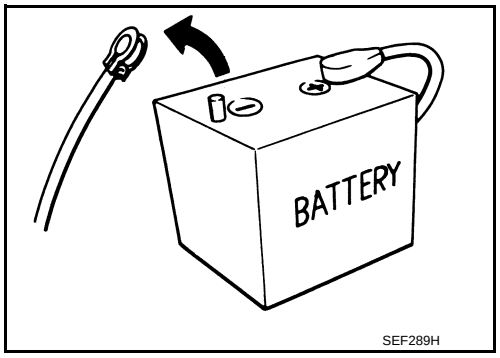

- When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.
  NOTE:
  ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.
- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.
  NOTE:
  If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.
- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.
  NOTE:
  The removal of 12V battery may cause a DTC detection error.

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

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

WARNING:

Always observe the following items for preventing accidental activation.

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see “SRS AIR BAG”.**
- **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.**

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

Always observe the following items for preventing accidental activation.

- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.**

SYSTEM DESCRIPTION

COMPONENT PARTS

BODY CONTROL SYSTEM

BODY CONTROL SYSTEM : Component Parts Location

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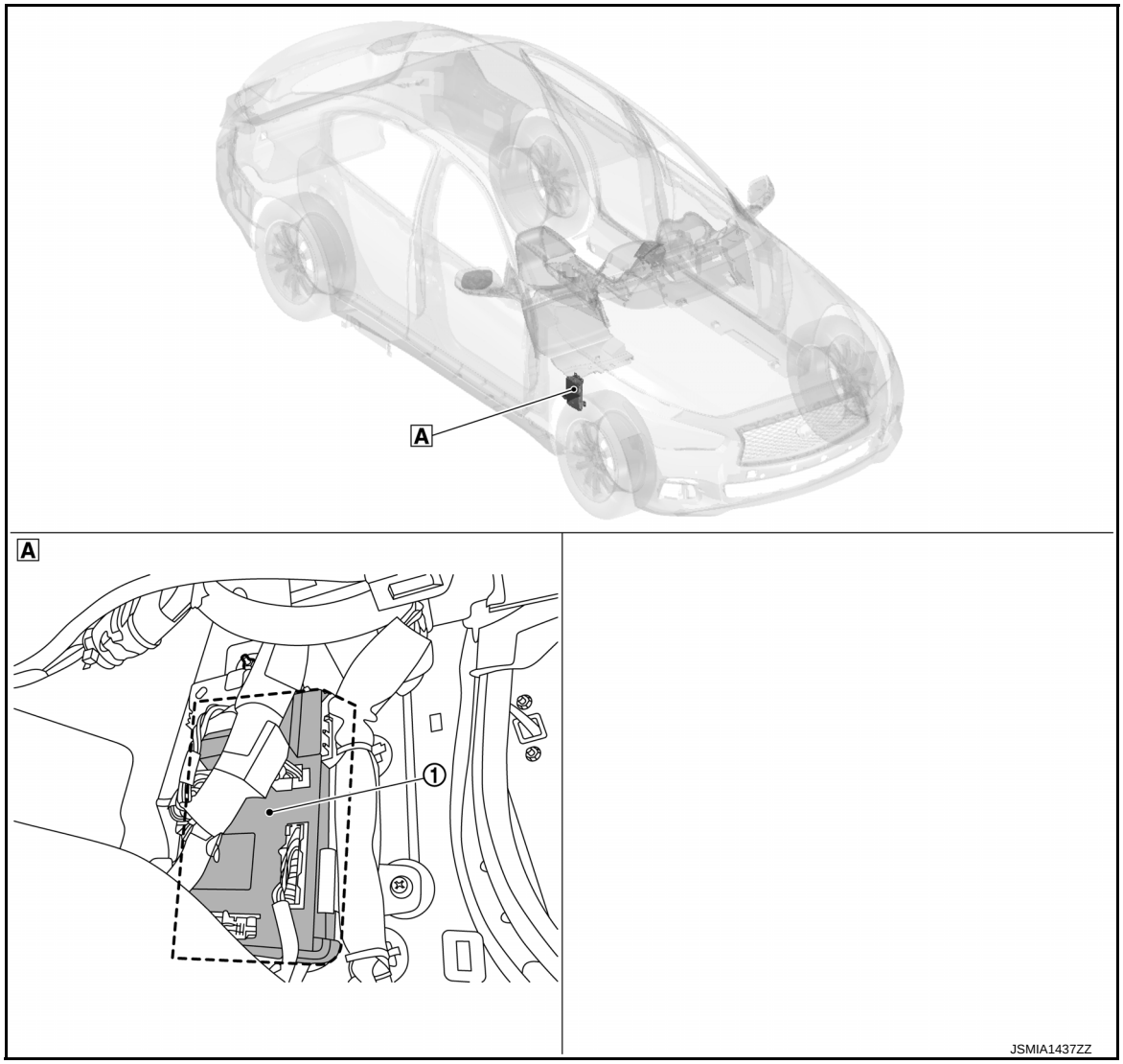
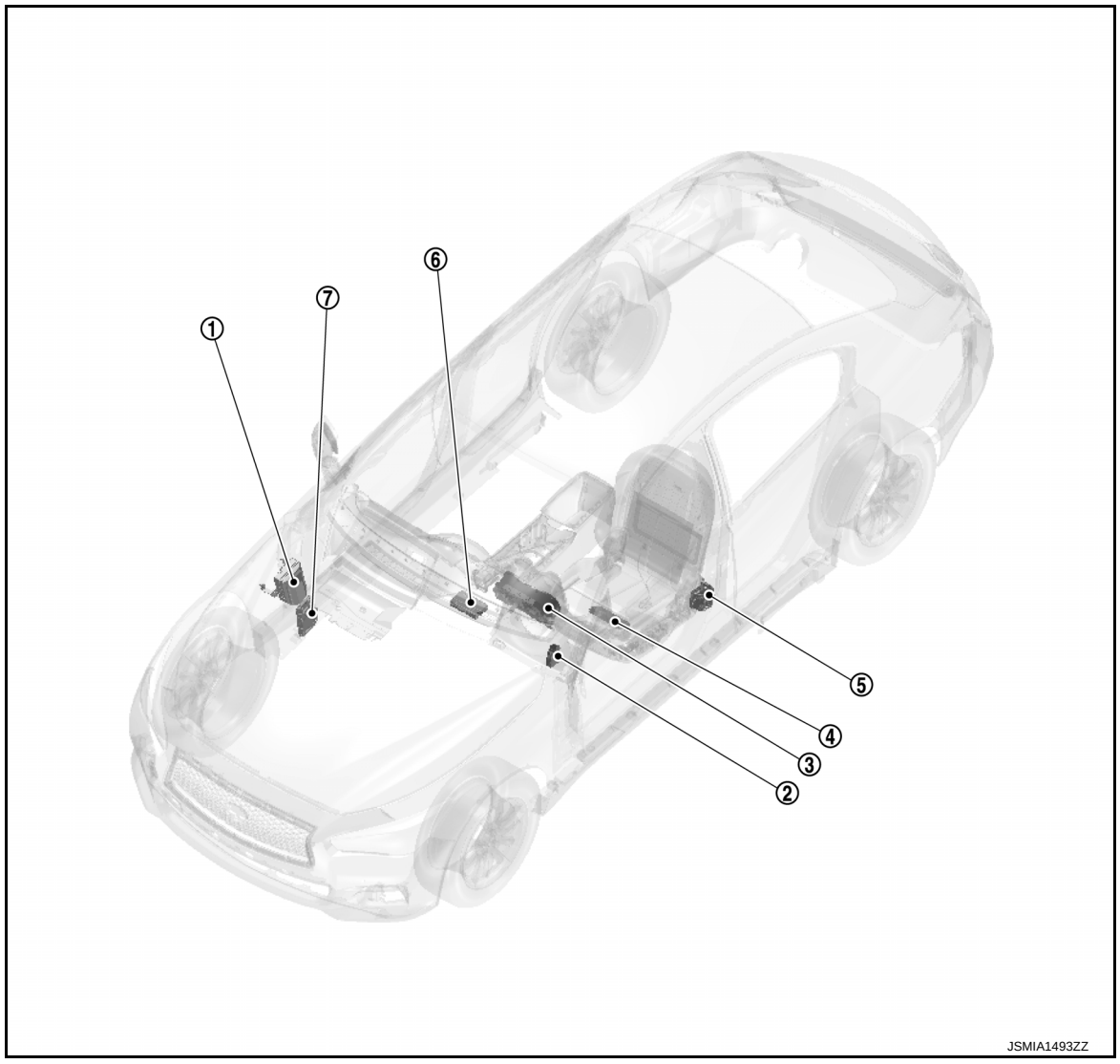


1. BCM
A. Behind of dash side finisher RH

POWER CONSUMPTION CONTROL SYSTEM

POWER CONSUMPTION CONTROL SYSTEM : Component Parts Location

INFOID:0000000011284322



① IPDM E/R
Refer to PCS-5, "Component Parts Location".

② CAN gateway
Refer to LAN-157, "Component Parts Location".

③ Combination meter

④ Driver seat control unit
Refer to ADP-6, "Component Parts Location".

⑤ Pre-crash seat belt control unit (driver side)
Refer to SBC-5, "PRE-CRASH SEAT BELT SYSTEM : Component Parts Location".

⑥ TCU
Refer to AV-521, "Component Parts Location".

⑦ BCM
Refer to BCS-4, "BODY CONTROL SYSTEM : Component Parts Location".

SYSTEM
BODY CONTROL SYSTEM
BODY CONTROL SYSTEM : System Description

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OUTLINE

- BCM (Body Control Module) controls the various electrical components. It inputs the information required to the control from CAN communication and the signal received from each switch and sensor.
- BCM has combination switch reading function for reading the operation status of combination switches (light, turn signal, wiper and washer) in addition to a function for controlling the operation of various electrical components. It also has the signal transmission function as the passed point of signal and the power saving control function that reduces the power consumption with the ignition switch OFF.
- BCM is equipped with the diagnosis function that performs the diagnosis with CONSULT and various settings.

BCM CONTROL FUNCTION LIST

System	Reference
Combination switch reading system	BCS-8, "COMBINATION SWITCH READING SYSTEM : System Description"
Signal buffer system	BCS-12, "SIGNAL BUFFER SYSTEM : System Description"
Power consumption control system	BCS-13, "POWER CONSUMPTION CONTROL SYSTEM : System Description"
Shipping mode control system	BCS-15, "SHIPPING MODE CONTROL SYSTEM : System Description"
Headlamp system	EXL-16, "HEADLAMP SYSTEM : System Description"
Auto light system	EXL-18, "AUTO LIGHT SYSTEM : System Description"
High beam assist system	EXL-21, "HIGH BEAM ASSIST SYSTEM : System Description"
Daytime running light system	EXL-24, "DAYTIME RUNNING LIGHT SYSTEM : System Description"
Turn signal and hazard warning lamp system	EXL-30, "TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM : System Description"
Parking, license plate side marker and tail lamps system	EXL-31, "PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM : System Description"
Front fog lamp system	EXL-38, "FRONT FOG LAMP SYSTEM : System Description"
Exterior lamp battery saver system	EXL-40, "EXTERIOR LAMP BATTERY SAVER SYSTEM : System Description"
Interior room lamp control system	INL-7, "INTERIOR ROOM LAMP CONTROL SYSTEM : System Description"
Interior room lamp battery saver system	INL-11, "INTERIOR ROOM LAMP BATTERY SAVER SYSTEM : System Description"
Illumination control system	INL-13, "ILLUMINATION CONTROL SYSTEM : System Description"
Front wiper and washer system	• WW-9, "FRONT WIPER AND WASHER SYSTEM (WITH RAIN SENSOR) : System Description" (With rain sensor) • WW-14, "FRONT WIPER AND WASHER SYSTEM (WITHOUT RAIN SENSOR) : System Description" (Without rain sensor)
Rear window defogger system	DEF-6, "System Description"
Warning chime system	WCS-5, "WARNING CHIME SYSTEM : System Description"
Power door lock system	DLK-16, "System Description"
Intelligent Key system	DLK-19, "INTELLIGENT KEY SYSTEM : System Description"
Trunk lid opener system	DLK-46, "System Description"

System		Reference
Intelligent Key system/Engine start function		SEC-9, "INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION : System Description"
Infiniti Vehicle Immobilizer System-NATS		SEC-14, "INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS : System Description"
Vehicle security system	Theft warning alarm	SEC-19, "VEHICLE SECURITY SYSTEM : System Description"
	Panic alarm	
Power window system		PWC-9, "System Description"
TPMS (Tire Pressure Monitoring System)		WT-10, "System Description"

BODY CONTROL SYSTEM : Fail-safe

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FAIL-SAFE CONTROL BY DTC

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

Display contents of CONSULT	Fail-safe	Cancellation
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI-SCANNING	Inhibit engine cranking	Ignition switch ON → OFF
B2198: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2608: STARTER RELAY	Inhibit engine cranking	500 ms after the following signal communication status becomes consistent • Starter motor relay control signal • Starter relay status signal (CAN)
B260F: ENG STATE SIG LOST	Inhibit engine cranking	When any of the following conditions are fulfilled • Ignition switch position changes to ACC • Receives engine status signal (CAN)
B26F1: IGN RELAY OFF	Inhibit engine cranking	When the following conditions are fulfilled • Ignition switch ON signal (CAN: Transmitted from BCM): ON • Ignition switch ON signal (CAN: Transmitted from IPDM E/R): ON
B26F2: IGN RELAY ON	Inhibit engine cranking	When the following conditions are fulfilled • Ignition switch ON signal (CAN: Transmitted from BCM): OFF • Ignition switch ON signal (CAN: Transmitted from IPDM E/R): OFF
B26F3: START CONT RLY ON	Inhibit engine cranking	When the following conditions are fulfilled • Starter control relay signal (CAN: Transmitted from BCM): OFF • Starter control relay signal (CAN: Transmitted from IPDM E/R): OFF
B26F4: START CONT RLY OFF	Inhibit engine cranking	When the following conditions are fulfilled • Starter control relay signal (CAN: Transmitted from BCM): ON • Starter control relay signal (CAN: Transmitted from IPDM E/R): ON
B26F7: BCM	Inhibit engine cranking by Intelligent Key system	When room antenna and trunk room antenna functions normally

FAIL-SAFE CONTROL BY RAIN SENSOR MALFUNCTION

BCM detects the rain sensor serial link error and the rain sensor malfunction.
BCM controls the following fail-safe when rain sensor has a malfunction.

- Front wiper switch AUTO and sensing rain drop: The condition just before the activation of fail-safe is maintained until the front wiper switch is turned OFF.
- Front wiper switch AUTO and not sensing rain drop: Front wiper is LO operation until the front wiper switch is turned off.

FAIL-SAFE CONTROL OF COMBINATION SWITCH READING FUNCTION CAUSED BY LOW POWER SUPPLY VOLTAGE

If voltage of battery power supply lower, BCM maintains combination switch reading to the status when input voltage is less than approximately 9 V.

NOTE:

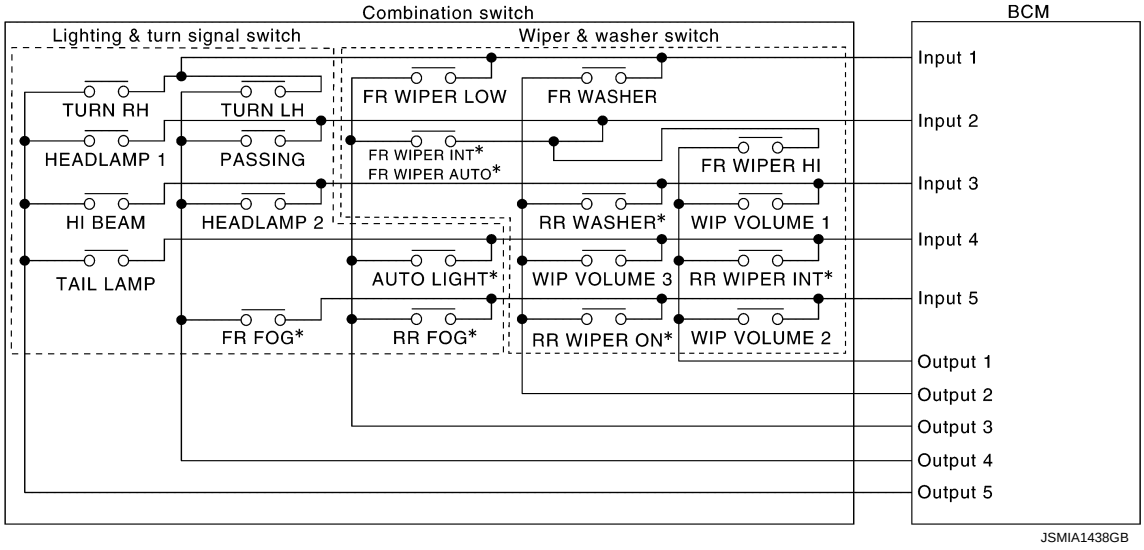
When voltage of battery power supply is approximately 9 V or more, combination switch reading function returns to normal operation.

COMBINATION SWITCH READING SYSTEM

COMBINATION SWITCH READING SYSTEM : System Description

INFOID:0000000011284325

SYSTEM DIAGRAM



NOTE:

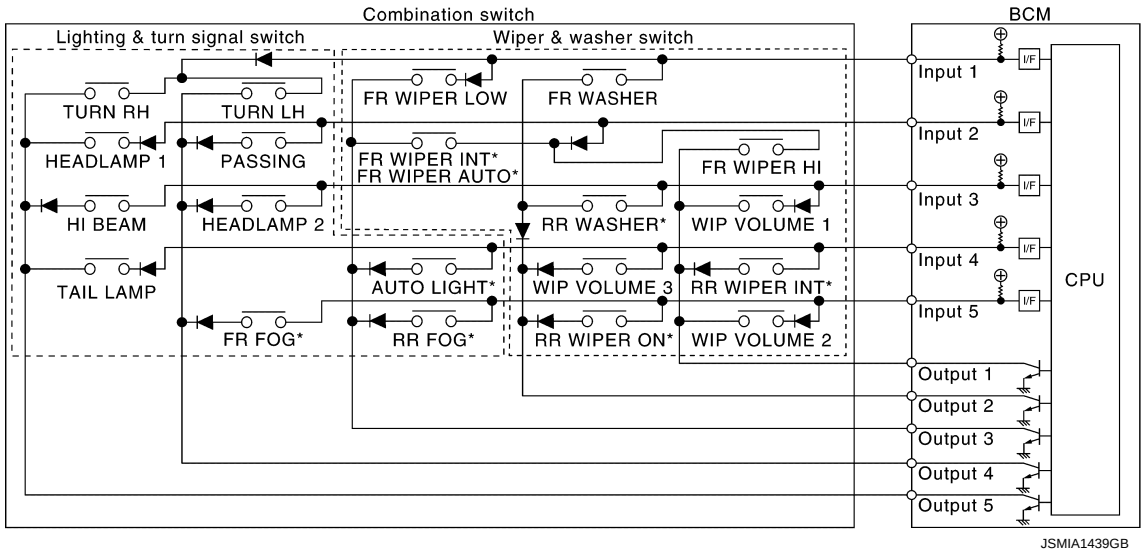
- *: If so equipped.
- TAIL LAMP switch links lighting switch 1ST and 2ND positions.

OUTLINE

- BCM reads the status of the combination switch (light, turn signal, wiper and washer) and recognizes the status of each switch.
- BCM has a combination of 5 output terminals (OUTPUT 1 - 5) and 5 input terminals (INPUT 1 - 5). It reads a maximum of 20 switch status.

COMBINATION SWITCH MATRIX

Combination switch circuit



NOTE:

- *: If so equipped.
- TAIL LAMP switch links lighting switch 1ST and 2ND positions.

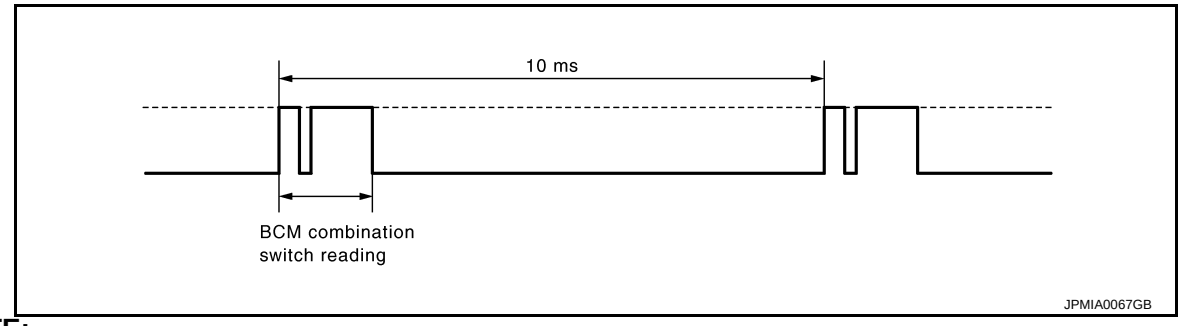
Combination switch INPUT-OUTPUT system list

System	OUTPUT 1	OUTPUT 2	OUTPUT 3	OUTPUT 4	OUTPUT 5
INPUT 1	—	FR WASHER	FR WIPER LOW	TURN LH	TURN RH
INPUT 2	FR WIPER HI	—	FR WIPER INT/AUTO*	PASSING	HEADLAMP 1
INPUT 3	WIP VOLUME 1	RR WASHER*	—	HEADLAMP 2	HI BEAM
INPUT 4	RR WIPER INT*	WIP VOLUME 3	AUTO LIGHT*	—	TAIL LAMP
INPUT 5	WIP VOLUME 2	RR WIPER ON*	RR FOG*	FR FOG*	—

NOTE:
- *: If so equipped.
- Headlamp has a dual system switch.

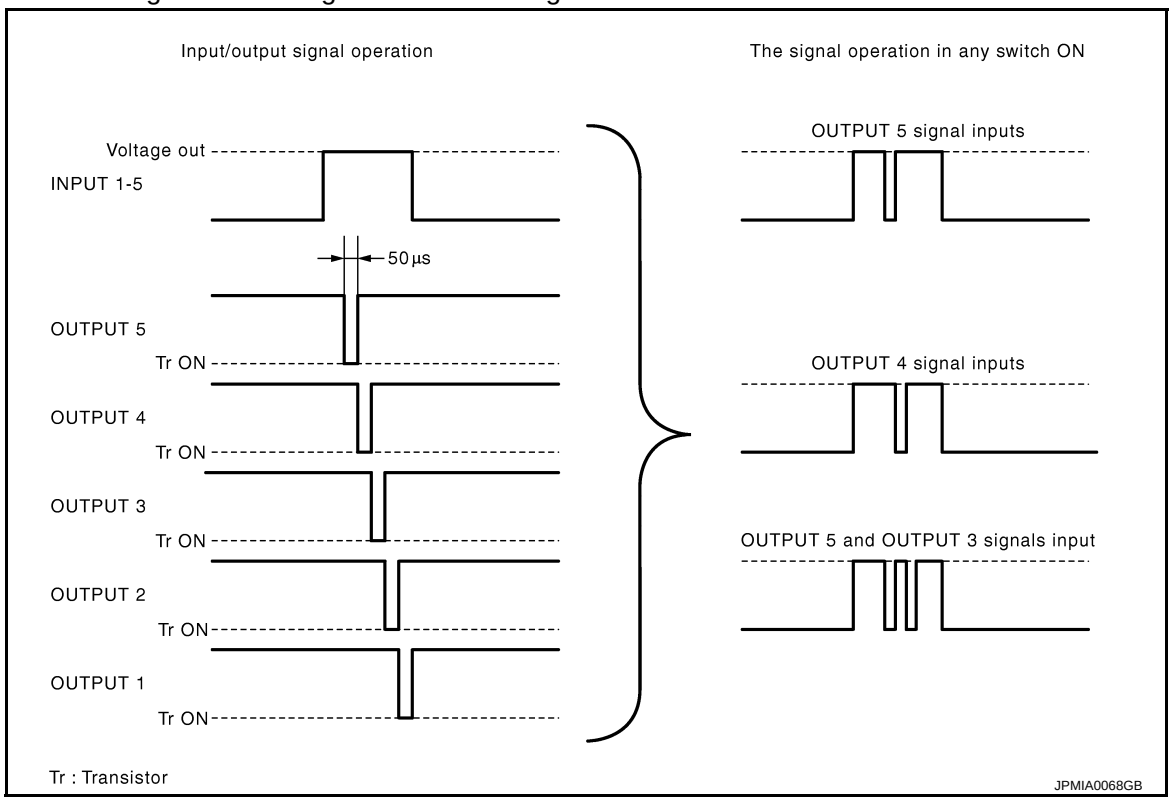
COMBINATION SWITCH READING FUNCTION

Description
- BCM reads the status of the combination switch at 10 ms interval normally.



NOTE:
BCM reads the status of the combination switch at 60 ms interval when BCM is controlled at low power consumption control mode.
- BCM operates as follows and judges the status of the combination switch.
- It operates the transistor on OUTPUT side in the following order: OUTPUT 5 → 4 → 3 → 2 → 1, and outputs voltage waveform.
- The voltage waveform of OUTPUT corresponding to the formed circuit is input into the interface on INPUT side if any (1 or more) switches are ON.

- It reads this change of the voltage as the status signal of the combination switch.

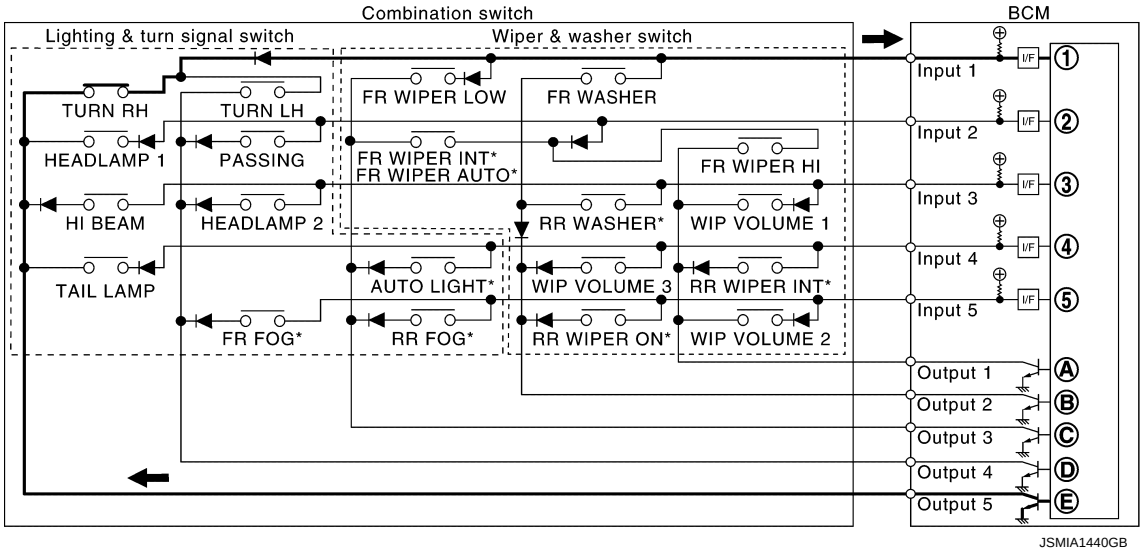


Operation Example

In the following operation example, the combination of the status signals of the combination switch is replaced as follows: INPUT 1 - 5 to “1 - 5” and OUTPUT 1 - 5 to “A - E”.

Example 1: When a switch (TURN RH switch) is turned ON

- The circuit between OUTPUT 4 and INPUT 5 is formed when the TAIL LAMP switch is turned ON.



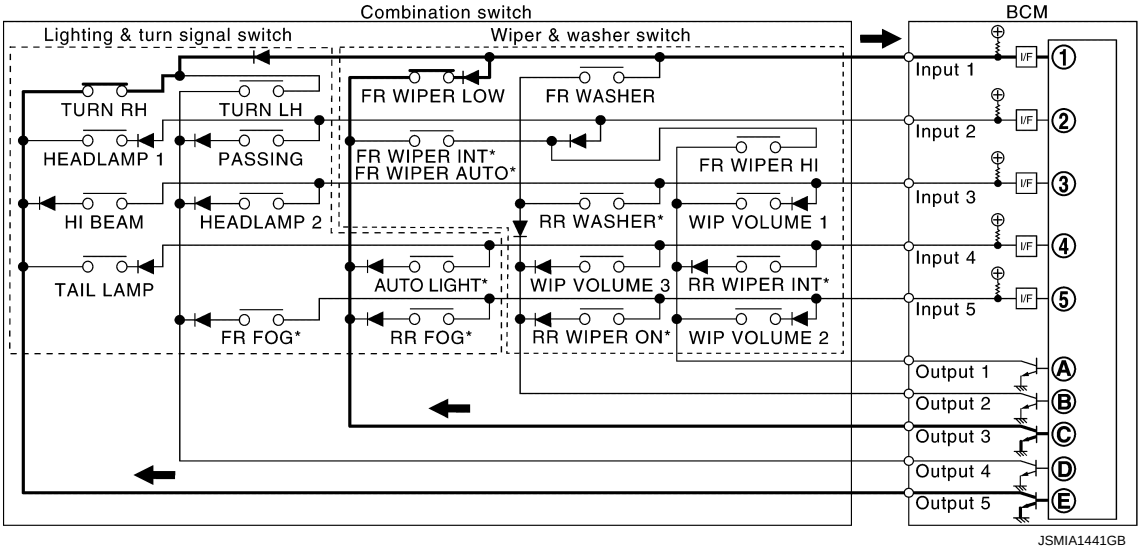
NOTE:

- *: If so equipped.
- TAIL LAMP switch links lighting switch 1ST and 2ND positions.

- BCM detects the combination switch status signal “1E” when the signal of OUTPUT 5 is input to INPUT 1.
- BCM judges that the TURN RH switch is ON when the signal “1E” is detected.

Example 2: When some switches (TURN RH switch, FR WIPER LOW switch) are turned ON

- The circuits between OUTPUT 5 and INPUT 1 and between OUTPUT 3 and INPUT 1 are formed when the TURN RH switch and FR WIPER LOW switch are turned ON.



NOTE:
- *: If so equipped.
- TAIL LAMP switch links lighting switch 1ST and 2ND positions.

- BCM detects the combination switch status signal “1CE” when the signals of OUTPUT 3 and OUTPUT 5 are input to INPUT 1.
- BCM judges that the TURN RH switch and FR WIPER LOW switch are ON when the signal “1CE” is detected.

WIPER VOLUME DIAL POSITION

BCM judges the INT VOLUME 1 - 7 by the status of WIP VOLUME 1, 2 and 3 switches.

CONSULT data monitor		Switch status		
Monitor item	Value/Status	WIP VOLUME 1	WIP VOLUME 2	WIP VOLUME 3
INT VOLUME	1	ON	ON	ON
	2	ON	ON	OFF
	3	ON	OFF	OFF
	4	OFF	OFF	OFF
	5	OFF	OFF	ON
	6	OFF	ON	ON
	7	OFF	ON	OFF

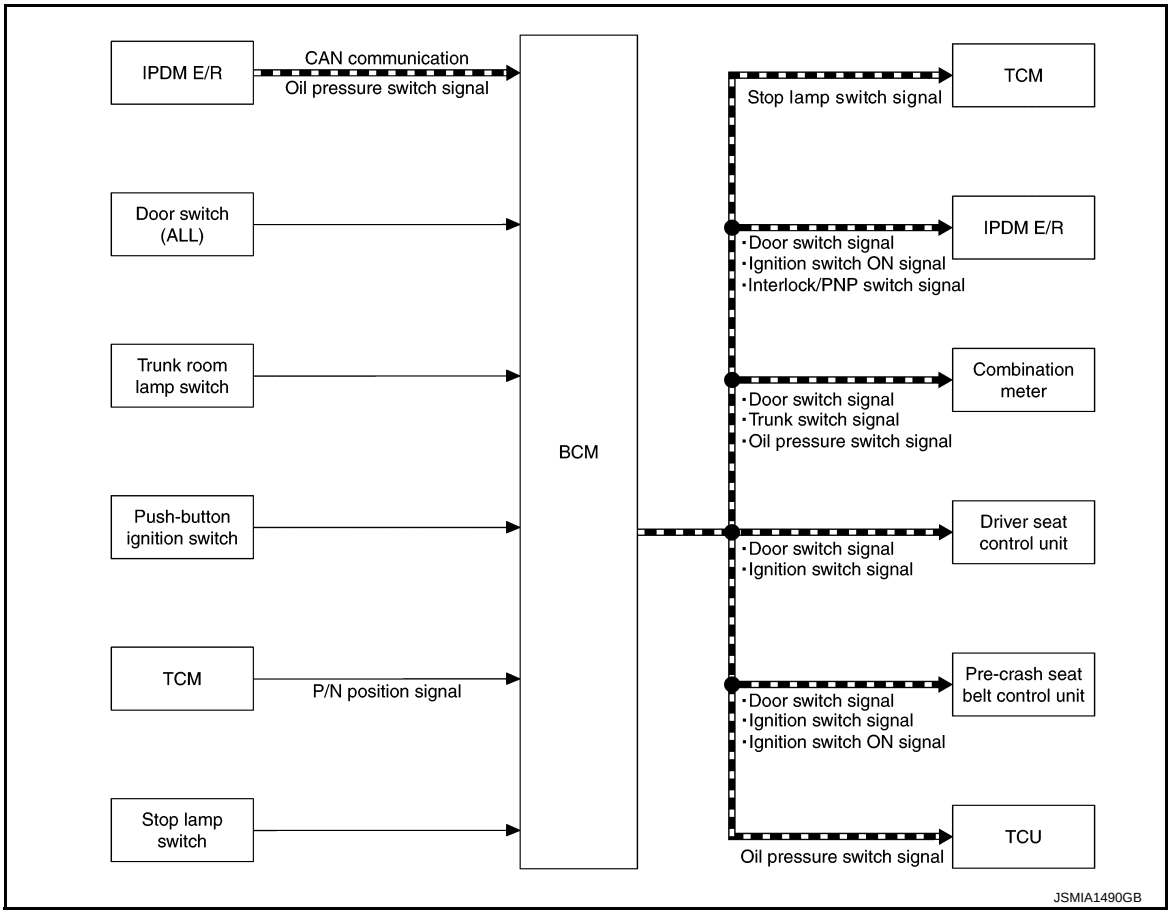
NOTE:
For details of wiper volume dial position, refer to WW-9, "FRONT WIPER AND WASHER SYSTEM (WITH RAIN SENSOR) : System Description" (with rain sensor) or WW-14, "FRONT WIPER AND WASHER SYSTEM (WITHOUT RAIN SENSOR) : System Description" (without rain sensor).

SIGNAL BUFFER SYSTEM

SIGNAL BUFFER SYSTEM : System Description

INFOID:0000000011284326

SYSTEM DIAGRAM



OUTLINE

BCM has the signal transmission function that outputs/transmits each input/received signal to each unit.

Signal transmission function list

Signal name	Input	Output	Description
Oil pressure switch signal	IPDM E/R (CAN)	• Combination meter (CAN) • TCU (CAN)	Transmits the received oil pressure switch signal via CAN communication.
Door switch signal	Any door switch	• Combination meter (CAN) • Driver seat control unit (CAN) • IPDM E/R (CAN) • Pre-crash seat belt control unit (CAN)	Inputs the door switch signal and transmits it via CAN communication.
Trunk switch signal	Trunk room lamp switch	Combination meter (CAN)	Inputs the trunk room lamp switch signal and transmits trunk switch signal via CAN communication.
• Ignition switch ON signal • Ignition switch signal	Push-button ignition switch (Push switch)	• Driver seat control unit (CAN) • IPDM E/R (CAN) • Pre-crash seat belt control unit (CAN)	Inputs the push-button ignition switch (push switch) signal and transmits the ignition switch status judged with BCM via CAN communication.

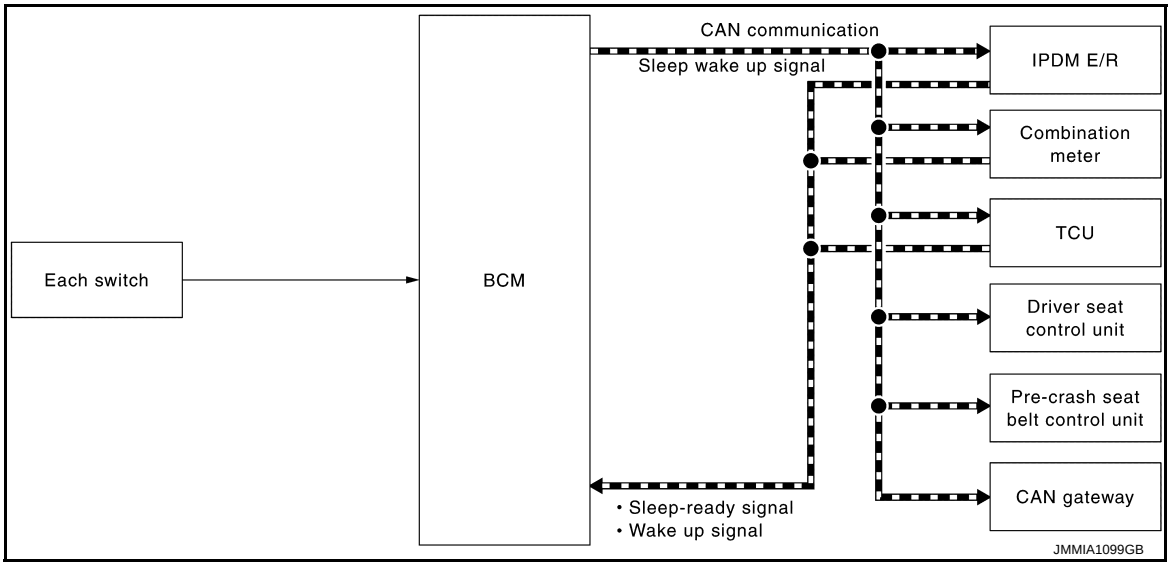
Signal name	Input	Output	Description
Interlock/PNP switch signal	TCM	IPDM E/R (CAN)	Inputs the P/N position signal via CAN communication.
Stop lamp switch signal	Stop lamp switch	TCM (CAN)	Inputs the stop lamp switch 1 signal and stop lamp switch 2 signal, and transmits it via CAN communication.

POWER CONSUMPTION CONTROL SYSTEM

POWER CONSUMPTION CONTROL SYSTEM : System Description

INFOID:0000000011284327

SYSTEM DIAGRAM



OUTLINE

- BCM incorporates a power saving control function that reduces the power consumption according to the vehicle status.
- BCM switches the status (control mode) by itself with the power saving control function. It performs the sleep request to each unit (IPDM E/R, combination meter, TCU, driver seat control unit, pre-crash seat belt control unit and CAN gateway) that operates with the ignition switch OFF.

Normal mode (wake-up)
- CAN communication is normally performed with other units
- Each control with BCM is operating properly

CAN communication sleep mode (CAN sleep)
- CAN transmission is stopped
- Control with BCM only is operating

Low power consumption mode (BCM sleep)
- Low power consumption control is active
- CAN transmission is stopped

LOW POWER CONSUMPTION CONTROL WITH BCM

BCM reduces the power consumption with the following operation in the low power consumption mode.
- The reading interval of the each switches changes from 10 ms interval to 60 ms interval.

Sleep mode activation

- BCM receives the sleep-ready signal (ready) from IPDM E/R and TCU via CAN communication.
- BCM transmits the sleep wake up signal (sleep) to each unit when all of the CAN sleep conditions are fulfilled.
- Each unit stops the transmission of CAN communication with the sleep wake up signal. BCM is in CAN communication sleep mode.

- BCM is in the low power consumption mode and perform the low power consumption control when all of the BCM sleep conditions are fulfilled with CAN sleep condition.

Sleep condition

CAN sleep condition	BCM sleep condition
• Receiving the sleep-ready signal (ready) from all units • 1 minute after turning Ignition switch OFF • Warning chime: Not operation • Intelligent Key warning buzzer: Not operation • Stop lamp switch: OFF • Turn signal indicator lamp: Not operation • Exterior lamp: OFF • Door lock status: No change • CONSULT communication status: Not communication • Meter display signal: Non-transmission • Door switch status: No change	• Interior room lamp battery saver: Time out* • Infiniti Vehicle Immobilizer System (IVIS) - NATS: Not operation • Remote keyless entry receiver communication status: No communication • RAP system: OFF

NOTE:
*: Refer to INL-11, "INTERIOR ROOM LAMP BATTERY SAVER SYSTEM : System Description" for details of the interior room lamp battery saver time.

Wake-up operation

- BCM transmits sleep wake up signal (wake up) to each unit when any condition listed below is established, and then goes into normal mode from low power consumption mode.
- Each unit starts transmissions with CAN communication by receiving sleep wake up signals. Each unit transmit wake up signals to BCM with CAN communication to convey the start of CAN communication.

Wake-up condition

BCM wake-up condition	CAN wake-up condition
• Door key cylinder switch: NEUTRAL → LOCK, NEUTRAL → UNLOCK • Door lock and unlock switch: NEUTRAL → LOCK, NEUTRAL → UNLOCK • Extended storage fuse switch: OFF → ON, ON → OFF • Trunk lid opener cancel switch: OFF → ON, ON → OFF • Front door lock assembly (driver side) (unlock sensor): OFF → ON, ON → OFF • One touch unlock sensor (driver door) signal: Receiving • One touch unlock sensor (passenger door) signal: Receiving • Power window or sunroof communication: Receiving	• Receiving the sleep-ready signal (Not-ready) from any units • Push-button ignition switch (push switch): OFF→ ON • Hazard switch: OFF → ON • HI BEAM switch: OFF → ON, ON → OFF • PASSING switch: OFF → ON, ON → OFF • HEADLAMP 1 switch: OFF → ON, ON → OFF • HEADLAMP 2 switch: OFF → ON, ON → OFF • TAIL LAMP switch: OFF → ON • FR FOG switch: OFF → ON, ON → OFF • Driver door switch: OFF → ON, ON → OFF • Passenger door switch: OFF → ON, ON → OFF • Rear RH door switch: OFF → ON, ON → OFF • Rear LH door switch: OFF → ON, ON → OFF • Trunk room lamp switch: OFF → ON, ON → OFF • Driver door request switch: OFF → ON • Passenger door request switch: OFF → ON • Trunk lid opener switch: OFF → ON • Trunk lid opener request switch: OFF → ON • Stop lamp switch: ON • Remote keyless entry receiver communication: Receiving

SHIPPING MODE CONTROL SYSTEM

SHIPPING MODE CONTROL SYSTEM : System Description

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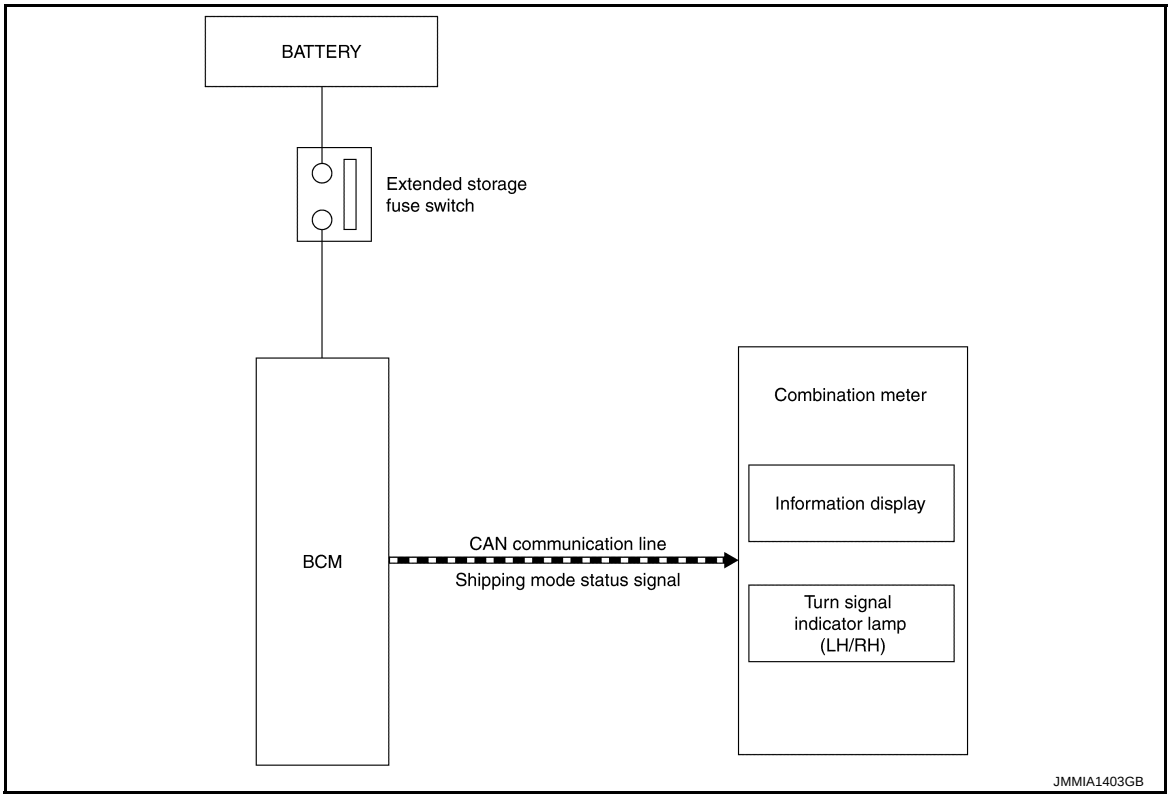
SYSTEM DIAGRAM



DESCRIPTION

- BCM switches the status (shipping mode or normal mode) by itself according to the extended storage fuse switch condition, and transmits shipping mode status signal to combination meter and each unit via CAN communication.
- When shipping mode function operates, each control unit does not detect DTCs.
- BCM control functions are limited in shipping mode. Refer to BCS-97, "Description".
- The combination meter displays extended storage fuse warning message* on the information display, and turns the turn signal indicator lamp (LH/RH) ON, when BCM is in shipping mode.

*: When shipping mode function operates, “SHIPPING MODE ON PUSH STORAGE FUSE” is displayed.

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

INFOID:0000000011284329

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

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

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

×: Applicable item

System	Sub system selection item	Diagnosis mode		
		Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER	×	×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
—	AIR CONDITONER*		×	×
• Intelligent Key system • Engine start system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
IVIS - NATS	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Trunk lid open	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	AIR PRESSURE MONITOR			×

*: This item is not used.

FREEZE FRAME DATA (FFD)
The BCM records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT.

CONSULT screen item	Indication/Unit	Description	
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected	
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected	
Vehicle Condition	SLEEP>LOCK	Power position status of the moment a particular DTC is detected*	While turning BCM status from low power consumption mode to normal mode (Power supply position is “LOCK”*)
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power supply position is “OFF”.)
	LOCK>ACC		While turning power supply position from “LOCK” *to “ACC”
	ACC>ON		While turning power supply position from “ACC” to “IGN”
	RUN>ACC		While turning power supply position from “RUN” to “ACC” (Vehicle is stopping and selector lever is except P position.)
	CRANK>RUN		While turning power supply position from “CRANKING” to “RUN” (From cranking up the engine to run it)
	RUN>URGENT		While turning power supply position from “RUN“ to “ACC” (Emergency stop operation)
	ACC>OFF		While turning power supply position from “ACC” to “OFF”
	OFF>LOCK		While turning power supply position from “OFF” to “LOCK”*
	OFF>ACC		While turning power supply position from “OFF” to “ACC”
	ON>CRANK		While turning power supply position from “IGN” to “CRANKING”
	OFF>SLEEP		While turning BCM status from normal mode (Power supply position is “OFF”.) to low power consumption mode
	LOCK>SLEEP		While turning BCM status from normal mode (Power supply position is “LOCK”*.) to low power consumption mode
	LOCK		Power supply position is “LOCK” (Ignition switch OFF)*
	OFF		Power supply position is “OFF” (Ignition switch OFF)
	ACC		Power supply position is “ACC” (Ignition switch ACC)
	ON		Power supply position is “IGN” (Ignition switch ON with engine stopped)
	ENGINE RUN		Power supply position is “RUN” (Ignition switch ON with engine running)
	CRANKING		Power supply position is “CRANKING” (At engine cranking)
IGN Counter	0 - 39	The number of times that ignition switch is turned ON after DTC is detected • The number is 0 when a malfunction is detected now. • The number increases like 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. • The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.	

NOTE:
*: Power supply position shifts to “LOCK” from “OFF”, when ignition switch is in the OFF position, selector lever is in the P position, and any of the following conditions are met.
- Closing door
- Opening door
- Door is locked using door request switch
- Door is locked using Intelligent Key

The power supply position shifts to “ACC” when the push-button ignition switch (push switch) is pushed at “LOCK”.

DOOR LOCK

DOOR LOCK : CONSULT Function (BCM - DOOR LOCK)

INFOID:0000000011561531

BCM CONSULT FUNCTION

CONSULT performs the following functions via CAN communication with BCM.

WORK SUPPORT

Monitor item	Description
DOOR LOCK-UNLOCK SET	Selective unlock function mode can be changed to operation with this mode • On: Operate • Off: Non-operation
AUTO UNLOCK TYPE	Automatic door lock/unlock function (unlock operation) mode can be selected from the following in this mode • MODE1: All doors are unlocked • MODE2: Only driver door is unlocked
AUTO LOCK FUNCTION	Automatic door lock/unlock function (lock operation) mode can be selected from the following in the mode • MODE1: All doors are locked when vehicle speed more than 24 km/h (15 MPH) • MODE2: All doors are locked when shifting the selector lever from P position to other than the P position • MODE3: Non-operation • Off: Non-operation
AUTO UNLOCK FUNCTION	Automatic door lock/unlock function (unlock operation) mode can be selected from the following in this mode • MODE1: All doors are unlocked when the power supply position is changed from ON to OFF • MODE2: All doors are unlocked when shifting the selector lever from any position other than the P to P position • MODE3: Non-operation • Off: Non-operation
SIGNATURE LIGHT SETTING	Signature light function can be changed to operation with this mode • On: Operate • Off: Non-operation

DATA MONITOR

NOTE:
The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor Item	Contents
REQ SW -DR	Indicated [On/Off] condition of door request switch (driver side)
REQ SW -AS	Indicated [On/Off] condition of door request switch (passenger side)
REQ SW -BD/TR	Indicated [On/Off] condition of trunk lid opener request switch
DOOR SW-DR	Indicated [On/Off] condition of front door switch (driver side)
DOOR SW-AS	Indicated [On/Off] condition of front door switch (passenger side)
DOOR SW-RR	Indicated [On/Off] condition of rear door switch RH
DOOR SW-RL	Indicated [On/Off] condition of rear door switch LH
DOOR SW-BK	**NOTE:** This item is displayed, but cannot be monitored
CDL LOCK SW	Indicated [On/Off] condition of lock signal from door lock and unlock switch
CDL UNLOCK SW	Indicated [On/Off] condition of unlock signal from door lock and unlock switch
KEY CYL LK-SW	Indicated [On/Off] condition of lock signal from door key cylinder switch
KEY CYL UN-SW	Indicated [On/Off] condition of unlock signal from door key cylinder switch
SHOCK SENSOR	**NOTE:** This item is displayed, but cannot be monitored

ACTIVE TEST

Test item	Description
DOOR LOCK	This test is able to check door lock/unlock operation • ALL LOCK: The all door lock actuators are locked. • ALL UNLK: The all door lock actuators are unlocked.

REAR WINDOW DEFOGGER

REAR WINDOW DEFOGGER : CONSULT Function (BCM - REAR DEFOGGER)

INFOID:0000000011561542

WORK SUPPORT

Service item	Setting item	Description
SET R-DEF TIMER	MODE1*	**NOTE:** Do not use this function.
	MODE2	
	MODE3	

*: Factory setting

DATA MONITOR

NOTE:
The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor Item	Description
PUSH SW	Indicates [On/Off] condition of push switch
REAR DEF SW	Displays “Press (On)/other (Off)” status determined with the rear window defogger switch

ACTIVE TEST

Test Item	Description
REAR DEFOGGER	Rear window defogger operates when “On” on CONSULT screen is touched

BUZZER

BUZZER : CONSULT Function (BCM - BUZZER)

INFOID:0000000011561543

CONSULT APPLICATION ITEMS

Test item	Diagnosis mode	Description
BUZZER	Self Diagnostic Result	Displays the diagnosis results judged by BCM.
	Data Monitor	Displays BCM input data in real time.
	Active Test	Operation of electrical loads can be checked by sending driving signal to them.
	Ecu Identification	The BCM part number is displayed.

SELF DIAG RESULT

Refer to BCS-62, "DTC Index".

DATA MONITOR

NOTE:
The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Display item [Unit]	Description
PUSH SW [On/Off]	Status of push-button ignition switch judged by BCM.
UNLK SEN-DR [On/Off]	Status of unlock sensor judged by BCM.
VEH SPEED 1 [km/h]	Value of vehicle speed signal received from combination meter with CAN communication line.
TAIL LAMP SW [On/Off]	Status of lighting switch judged by BCM using the combination switch readout function.

Display item [Unit]	Description
FR FOG SW [On/Off]	Status of front fog lamp switch judged by BCM using the combination switch readout function.
DOOR SW-DR [On/Off]	Status of driver side door switch judged by BCM.
CDL LOCK SW [On/Off]	Status of door lock unlock switch judged by BCM.

ACTIVE TEST

Display item [Unit]	Description
SEAT BELT WARN TEST	The seat belt warning chime operation can be checked by operating the relevant function (On/Off).
LIGHT WARN ALM	The light warning chime operation can be checked by operating the relevant function (On/Off).
REVERSE WARNING	This item is displayed, but cannot be monitored.

NOTE:
Some items are not available according to vehicle specification.

INT LAMP

INT LAMP : CONSULT Function (BCM - INT LAMP)

INFOID:0000000011561539

WORK SUPPORT

Service item	Setting item	Setting
SCENARIO LIGHTING SETTING	On	**NOTE:** Do not use this function since interior room lamp control is changed.
	Off*	
SET I/L D-UNLCK INTCON	On	Without interior room lamp timer function
	Off*	With interior room lamp timer function
FOG LAMP OVERRIDE	On	With front fog override function
	Off*	Without front fog override function

*: Factory setting

DATA MONITOR

NOTE:
The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item [Unit]	Description
REQ SW -DR [On/Off]	Indicated [On/Off] condition of door request switch (driver side)
REQ SW -AS [On/Off]	Indicated [On/Off] condition of door request switch (passenger side)
REQ SW -RR [On/Off]	**NOTE:** This item is displayed, but cannot be monitored
REQ SW -RL [On/Off]	**NOTE:** This item is displayed, but cannot be monitored
PUSH SW [On/Off]	Indicates [On/Off] condition of push-button ignition switch
UNLK SEN -DR [On/Off]	Indicates [On/Off] condition of driver door UNLOCK status
DOOR SW-DR [On/Off]	Indicated [On/Off] condition of front door switch (driver side)

Monitor item [Unit]	Description
DOOR SW-AS [On/Off]	Indicated [On/Off] condition of front door switch (passenger side)
DOOR SW-RR [On/Off]	Indicated [On/Off] condition of rear door switch RH
DOOR SW-RL [On/Off]	Indicated [On/Off] condition of rear door switch LH
DOOR SW-BK [On/Off]	**NOTE:** This item is displayed, but cannot be monitored
CDL LOCK SW [On/Off]	Indicated [On/Off] condition of lock signal from door lock and unlock switch
CDL UNLOCK SW [On/Off]	Indicated [On/Off] condition of unlock signal from door lock and unlock switch
KEY CYL LK-SW [On/Off]	Indicated [On/Off] condition of lock signal from door key cylinder switch
KEY CYL UN-SW [On/Off]	Indicated [On/Off] condition of unlock signal from door key cylinder switch
TRNK/HAT MNTR [On/Off]	Indicates [On/Off] condition of trunk room lamp switch
RKE-LOCK [On/Off]	Indicates [On/Off] condition of LOCK signal from Intelligent Key
RKE-UNLOCK [On/Off]	Indicates [On/Off] condition of UNLOCK signal from Intelligent Key

ACTIVE TEST

Test item	Operation	Description
INT LAMP	On	Outputs interior room lamp control signal.
	Off	Stops interior room lamp control signal.
STEP LAMP TEST	On	Outputs step lamp control signal.
	Off	Stops step lamp control signal.

HEADLAMP

HEADLAMP : CONSULT Function (BCM - HEAD LAMP)

INFOID:0000000011561537

WORK SUPPORT

Service item	Setting item	Setting
CUSTOM A/LIGHT SETTING	MODE 1*	Normal
	MODE 2	More sensitive setting than normal setting. (Turns ON earlier than normal operation.)
	MODE 3	More sensitive setting than MODE 2. (Turns ON earlier than MODE 2.)
	MODE 4	Less sensitive setting than normal setting. (Turns ON later than normal operation.)

Service item	Setting item	Setting	
ILL DELAY SET	MODE 1*	45 sec.	Sets delay timer function timer operation time. (All doors closed)
	MODE 2	Without delay timer function	
	MODE 3	30 sec.	
	MODE 4	60 sec.	
	MODE 5	90 sec.	
	MODE 6	120 sec.	
	MODE 7	150 sec.	
	MODE 8	180 sec.	
TWILIGHT On	MODE 1	Without twilight function	
	MODE 2*	With twilight ON function	
WIPER LINK	MODE 1	Without wiper link function	
	MODE 2	With wiper LO and HI	
	MODE 3*	With wiper INT, LO and HI	
	MODE 4	**NOTE:** This item is displayed, but cannot be used.	

*: Factory setting

DATA MONITOR

NOTE:
The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item [Unit]	Description
PUSH SW [On/Off]	Indicates [On/Off] condition of push-button ignition switch
ENGINE STATE [STOP/STALL/CRANK/RUN]	Indicates [STOP/STALL/CRANK/RUN] condition of engine states
VEH SPEED 1 [km/h]	Indicates [km/h] condition of vehicle speed signal from combination meter
TURN SIGNAL R [On/Off]	Each switch status that BCM judges from the combination switch reading function.
TURN SIGNAL L [On/Off]	
TAIL LAMP SW [On/Off]	
HI BEAM SW [On/Off]	
HEAD LAMP SW1 [On/Off]	
HEAD LAMP SW2 [On/Off]	
PASSING SW [On/Off]	
AUTO LIGHT SW [On/Off]	
FR FOG SW [On/Off]	
RR FOG SW [On/Off]	**NOTE:** This item is displayed, but cannot be monitored.

Monitor item [Unit]	Description
DOOR SW-DR [On/Off]	Indicated [On/Off] condition of front door switch (driver side)
DOOR SW-AS [On/Off]	Indicated [On/Off] condition of front door switch (passenger side)
DOOR SW-RR [On/Off]	Indicated [On/Off] condition of rear door switch RH
DOOR SW-RL [On/Off]	Indicated [On/Off] condition of rear door switch LH
DOOR SW-BK [On/Off]	**NOTE:** This item is displayed, but cannot be monitored.
OPTI SEN (DTCT) [V]	The value of outside brightness voltage input from the optical sensor
OPTI SEN (FILT) [V]	The value of outside brightness voltage filtered by BCM
OPTICAL SENSOR [On/Off/NG]	**NOTE:** This item is displayed, but cannot be monitored.

ACTIVE TEST

Test item	Operation	Description
FR FOG LAMP	On	Transmits the front fog light request signal to IPDM E/R via CAN communication to turn the front fog lamp ON.
	Off	Stops the front fog light request signal transmission.
RR FOG LAMP	On	**NOTE:** This item is displayed, but cannot be tested.
	Off	
DAYTIME RUNNING LIGHT	On	Transmits the daytime running light request signal to IPDM E/R via CAN communication to turn the daytime running light ON.
	Off	Stops the daytime running light request signal transmission.
ILL DIM SIGNAL	On	• Transmits the dimmer signal to combination meter via CAN communication and dims combination meter. • Transmits the dimmer signal to display control unit and dims display.
	Off	Stops the dimmer signal transmission.

WIPER

WIPER : CONSULT Function (BCM - WIPER)

INFOID:0000000011561541

WORK SUPPORT

Service item	Setting item	Description	
RAIN SENSOR*1	On*3	With rain sensor (Front wiper intermittent time linked with the rain sensor, vehicle speed, and AUTO dial position)	The setting of front wiper AUTO operation can be changed
	Off	Without rain sensor (Front wiper intermittent time linked with the vehicle speed and AUTO dial position)	
WIPER SPEED SETTING*2	On	Linked with vehicle speed (Front wiper intermittent time linked with the vehicle speed and wiper intermittent dial position.)	The setting of front wiper INT operation can be changed.
	Off*3	Not linked with vehicle speed (Front wiper intermittent time linked with the wiper intermittent dial position.)	

Service item	Setting item	Description	
FR RR DRIP	On*3	Front wiper drop wipe ON	The setting of drop wipe operation can be changed
	Off	Front wiper drop wipe OFF	

*1: With rain sensor

*2: Without rain sensor

*3: Factory setting

DATA MONITOR

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor Item [Unit]	Description
PUSH SW [Off/On]	The switch status input from push-button ignition switch.
VEH SPEED 1 [km/h]	Displays the value of the vehicle speed signal received from combination meter via CAN communication.
FR WIPER HI [Off/On]	Status of each switch judged by BCM using the combination switch reading function
FR WIPER LOW [Off/On]	
FR WASHER SW [Off/On]	
FR WIPER INT [Off/On]	
FR WIPER STOP [Off/On]	Displays the status of the front wiper position signal received from IPDM E/R via CAN communication.
INT VOLUME [1 – 7]	Status of each switch judged by BCM using the combination switch reading function
RR WIPER ON [Off/On]	**NOTE:** The item is indicated, but not monitored.
RR WIPER INT [Off/On]	**NOTE:** The item is indicated, but not monitored.
RR WASHER SW [Off/On]	**NOTE:** The item is indicated, but not monitored.
RR WIPER STOP [Off/On]	**NOTE:** The item is indicated, but not monitored.
H/L WSR SW [Off/On]	**NOTE:** This item is indicated, but not monitored
RAIN SENSOR* [OFF/LOW/HIGH/SPLASH/NG]	Request signal from rain sensor detected by BCM is displayed

*: For models without rain sensor, this item is displayed, but can not be monitored.

ACTIVE TEST

Test item	Operation	Description
FR WIPER	Hi	Transmits the front wiper request signal (HI) to IPDM E/R via CAN communication to operate the front wiper HI operation.
	Lo	Transmits the front wiper request signal (LO) to IPDM E/R via CAN communication to operate the front wiper LO operation.
	INT	Transmits the front wiper request signal (INT) to IPDM E/R via CAN communication to operate the front wiper INT operation.
	Off	Stops transmitting the front wiper request signal to stop the front wiper operation.

Test item	Operation	Description
RR WIPER	**NOTE:** The item is indicated, but not used.	
HEADLAMP WASHER	**NOTE:** The item is indicated, but not used.	

FLASHER

FLASHER : CONSULT Function (BCM - FLASHER)

INFOID:0000000011561538

WORK SUPPORT

Service item	Setting item	Setting
3-TIME FLASHER SETTING	On*	With 3-time flasher function
	Off	Without 3-time flasher function

*: Factory setting

DATA MONITOR

NOTE:
The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item [Unit]	Description
REQ SW -DR [On/Off]	Indicated [On/Off] condition of door request switch (driver side)
REQ SW -AS [On/Off]	Indicated [On/Off] condition of door request switch (passenger side)
PUSH SW [On/Off]	Indicates [On/Off] condition of push-button ignition switch
TURN SIGNAL R [On/Off]	Each switch status that BCM detects from the combination switch reading function.
TURN SIGNAL L [On/Off]	
HAZARD SW [On/Off]	The switch status input from the hazard switch.
RKE-LOCK [On/Off]	Indicates [On/Off] condition of LOCK signal from Intelligent Key
RKE-UNLOCK [On/Off]	Indicates [On/Off] condition of UNLOCK signal from Intelligent Key
RKE-PANIC [On/Off]	**NOTE:** This item is displayed, but cannot be monitored.

ACTIVE TEST

Test item	Operation	Description
FLASHER	RH	Outputs the voltage to blink the right side turn signal lamps.
	LH	Outputs the voltage to blink the left side turn signal lamps.
	Off	Stops the voltage to turn the turn signal lamps OFF.

INTELLIGENT KEY

INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY)

INFOID:0000000011561532

WORK SUPPORT

Monitor item	Description
INSIDE ANT DIAGNOSIS	This function allows inside key antenna self-diagnosis
LOCK/UNLOCK BY I-KEY	Door lock function (door request switch) mode can be changed to operation in this mode • On: Operate • Off: Non-operation
ENGINE START BY I-KEY	Engine start function mode can be changed to operation with this mode • On: Operate • Off: Non-operation
TRUNK/GLASS HATCH OPEN	Reminder function (trunk lid opener request switch) mode can be changed to operation with this mode • On: Operate • Off: Non-operation
AUTO LOCK SET	Auto door lock operation time can be changed in this mode • MODE 1: OFF • MODE 2: 30 sec. • MODE 3: 1 minute • MODE 4: 2 minutes • MODE 5: 3 minutes • MODE 6: 4 minutes • MODE 7: 5 minutes
SHORT CRANKING OUTPUT	Starter motor can operate during the times below • 70 msec • 100 msec • 200 msec
CONFIRM KEY FOB ID	It can be checked whether Intelligent Key ID code is registered or not in this mode
RETRACTABLE MIRROR SET	**NOTE:** This item is displayed, but cannot be used
TOUCH SENSOR UNLOCK FUNCTION SETTING	One touch unlock function can be changed to operation with this mode • On: Operate • Off: Non-operation
IGN/ACC BATTERY SAVER	Ignition battery saver system mode can be changed to operation with this mode • On: Operate • Off: Non-operation
REMOTE ENGINE STARTE	**NOTE:** This item is displayed, but cannot be used
INTELLIGENT KEY LINK SET	**NOTE:** This item is displayed, but cannot be used
ANSWER BACK	Reminder function (door request switch and Intelligent Key) mode can be selected from the following with this mode • On: S mode (buzzer or horn reminder non-operation) • Off: C mode (buzzer or horn operate)
ANSWER BACK I-KEY LOCK UN-LOCK	Reminder function (door request switch) mode can be selected from the following with this mode • BUZZER: Sound Intelligent Key warning buzzer • HORN: Sound horn • Off: Only hazard warning lamp operate • INVALID: This item is displayed, but cannot be used
ANSWERBACK KEYLESS LOCK UNLOCK	Reminder function (Intelligent Key) mode can be selected from the following with this mode • On: Horn and hazard warning lamp operate • Off: Only hazard warning lamp operate
WELCOME LIGHT OP SET	**NOTE:** This item is displayed, but cannot be used

SELF-DIAG RESULT

Refer to BCS-62, "DTC Index".

DATA MONITOR

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor Item	Condition
REQ SW -DR	Indicates [On/Off] condition of front door request switch (driver side)
REQ SW -AS	Indicates [On/Off] condition of front door request switch (passenger side)
REQ SW -BD/TR	Indicates [On/Off] condition of trunk lid opener request switch
PUSH SW	Indicates [On/Off] condition of push-button ignition switch
SHFTLCK SLNID PWR SPLY	Indicates [On/Off] condition of the power supply from BCM to shift lock solenoid
CLUCH SW	**NOTE:** This item is displayed, but cannot be monitored
BRAKE SW 1	Indicates [On/Off]* condition of stop lamp switch power supply
BRAKE SW 2	Indicates [On/Off] condition of stop lamp switch
DETE/CANCL SW	Indicates [On/Off] condition of P position
SFT PN/N SW	Indicates [On/Off] condition of P or N position
UNLK SEN -DR	Indicates [On/Off] condition of driver door UNLOCK status
PUSH SW -IPDM	Indicates [On/Off] condition of push-button ignition switch
IGN RLY1 -F/B	Indicates [On/Off] condition of ignition relay 1
DETE SW -IPDM	Indicates [On/Off] condition of P position
SFT PN -IPDM	Indicates [On/Off] condition of P or N position
SFT P -MET	Indicates [On/Off] condition of P position
SFT N -MET	Indicates [On/Off] condition of N position
ENGINE STATE	Indicates [STOP/STALL/CRANK/RUN] condition of engine states
VEH SPEED 1	Display the vehicle speed signal received from combination meter by numerical value [km/h]
VEH SPEED 2	Display the vehicle speed signal received from ABS or VDC or TCM by numerical value [km/h]
DOOR STAT-DR	Indicates [LOCK/READY/UNLK] condition of driver door status
DOOR STAT-AS	Indicates [LOCK/READY/UNLK] condition of passenger door status
DOOR STAT-RR	Indicates [LOCK/READY/UNLK] condition of rear door RH status
DOOR STAT-RL	Indicates [LOCK/READY/UNLK] condition of rear door LH status
BK DOOR STATE	**NOTE:** This item is displayed, but cannot be monitored
ID OK FLAG	Indicates [Set/Reset] condition of Intelligent Key ID
PRMT ENG STRT	Indicates [Set/Reset] condition of engine start possibility
PRMT RKE STRT	**NOTE:** This item is displayed, but cannot be monitored
I-KEY OK FLAG	Indicates [KEY On/NOT On] condition of Intelligent Key ID and Intelligent Key is detected inside vehicle
PRBT ENG STRT	Indicates whether or not the engine is in start prohibited status
ID AUTHENT CANCEL TIMER	Indicates whether or not it is in engine start possible status when Intelligent Key verification is unnecessary
ACC BATTERY SAVER	Indicates [On/Off] whether or not ignition battery saver is in operation
CRNK PRBT TMR	Indicates [On/Off] whether or not in cranking prohibited status due to starter motor protection function operation
AUT CRANK TMR	Indicates [On/Off] whether or not in AUTO CRANKING MODE status
CRNK PRBT TME	Indicates the time for changing from cranking prohibited status to cranking possible status
AUT CRANK TMR	Indicates the time that AUTO CRANKING MODE operates
CRANKING TME	Indicates the cranking operation time

Monitor Item	Condition
SHORT CRANK	**NOTE:** This item is displayed, but not used
DETE SW PWR	Indicates [On/Off] condition of the power supply from BCM to the A/T shift selector (detention switch)
IGN RLY3-REQ	Indicates [On/Off] condition of blower relay control signal
ACC RLY-REQ	Indicates [On/Off] condition of accessory relay control signal
RKE OPE COUN1	When remote keyless entry receiver receives the signal transmitted while operating on Intelligent Key, the numerical value start changing
RKE OPE COUN2	**NOTE:** This item is displayed, but cannot be monitored
TRNK/HAT MNTR	Indicates [On/Off] condition of trunk room lamp switch
RKE-LOCK	Indicates [On/Off] condition of LOCK signal from Intelligent Key
RKE-UNLOCK	Indicates [On/Off] condition of UNLOCK signal from Intelligent Key
RKE-TR/BD	Indicates [On/Off] condition of trunk open signal from Intelligent Key
RKE-PANIC	Indicates [On/Off] condition of panic alarm signal from Intelligent Key
RKE-MODE CHG	**NOTE:** This item is displayed, but cannot be monitored
RKE PBD	**NOTE:** This item is displayed, but cannot be monitored

*: OFF is displayed when brake pedal is depressed while brake switch power supply is OFF.

ACTIVE TEST

Test item	Description
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation • On: Operates • Off: Non-operation
INSIDE BUZZER	This test is able to check warning chime in combination meter operation • Take Out: Take away warning chime sounds when CONSULT screen is touched • Key: Key warning chime sounds when CONSULT screen is touched • Knob: OFF position warning chime sounds when CONSULT screen is touched • Off: Non-operation
INDICATOR	This test is able to check information display (combination meter) operation • KEY ON: [Intelligent Key system malfunction] displays when CONSULT screen is touched • KEY IND: [Steering lock unit ID registration complete] displays when CONSULT screen is touched • Off: Non-operation
INT LAMP	This test is able to check interior room lamp operation • On: Operates • Off: Non-operation
FLASHER	This test is able to check hazard warning lamp operation The hazard warning lamps are activated after “LH/RH/Off” on CONSULT screen is touched
HORN	This test is able to check horn operation • On: Operates
IGN CONT2	This test is able to operate the blower relay in fuse block (J/B) • On: Operates • Off: Non-operation
ENGINE SW ILLUMI	This test is able to check push-ignition switch illumination operation Push-ignition switch illumination illuminates when “On” on CONSULT screen is touched
PUSH SWITCH INDICATOR	This test is able to check push-ignition switch indicator operation when “On” on CONSULT screen is touched
ACC CONT	This test is able to operate the accessory relay in fuse block (J/B) • On: Operates • Off: Non-operation

Test item	Description
IGN CONT1	This test is able to operate the ignition relay in IPDM E/R • On: Operates • Off: Non-operation
IGNITION RELAY	This test is able to operate the ignition relay in fuse block (J/B) • On: Operates • Off: Non-operation
ST CONT LOW	This test is able to operate the starter relay in IPDM E/R • On: Non-operation • Off: Operates
BATTERY SAVER	This test is able to check interior room lamp battery saver operation • On: Outputs interior room lamp power supply to turn interior room lamps ON. • Off: Cuts interior room lamp power supply to turn interior room lamps OFF.
TRUNK/BACK DOOR	This test is able to check trunk lid open operation. This actuator opens when “Open” on CONSULT screen is touched.
RETRACTABLE MIRROR	**NOTE:** This item is displayed, but cannot be used
INTELLIGENT KEY LINK(CAN)	**NOTE:** This item is displayed, but cannot be used
REVERSE LAMP TEST	**NOTE:** This item is displayed, but cannot be used
DOOR HANDLE LAMP TEST	This test is able to check outside handle lamp operation • On: Operates • Off: Non-operation
DR SEAT LAMP TEST	**NOTE:** This item is displayed, but cannot be used
AS SEAT LAMP TEST	**NOTE:** This item is displayed, but cannot be used
SHIFT SPOT LAMP TEST	**NOTE:** This item is displayed, but cannot be used
TRUNK/LUGGAGE LAMP TEST	This test is able to check trunk room lamp operation • On: Operates • Off: Non-operation
KEYFOB P/W TEST	This test is able to check keyless power window up/down operation • Up: Non-operation • Down*: Power window and sunroof open • Off: Non-operation
SHIFTLOCK SORENOID TEST	**NOTE:** This item is displayed, but cannot be used

*: When ignition switch is OFF, driver door opened, power window and sunroof is closed.

COMB SW

COMB SW : CONSULT Function (BCM - COMB SW)

INFOID:0000000011284338

DATA MONITOR

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item [UNIT]	Description
FR WIPER HI [Off/On]	Displays the status of the FR WIPER HI switch in combination switch judged by BCM with the combination switch reading function.
FR WIPER LOW [Off/On]	Displays the status of the FR WIPER LOW switch in combination switch judged by BCM with the combination switch reading function.

Monitor item [UNIT]	Description
FR WASHER SW [Off/On]	Displays the status of the FR WASHER switch in combination switch judged by BCM with the combination switch reading function.
FR WIPER INT [Off/On]	Displays the status of the FR WIPER INT/AUTO switch in combination switch judged by BCM with the combination switch reading function.
INT VOLUME [1 - 7]	Displays the status of wiper volume dial position judged by BCM with the combination switch reading function.
RR WIPER ON [Off/On]	**NOTE:** This item is displayed, but cannot be monitored
RR WIPER INT [Off/On]	**NOTE:** This item is displayed, but cannot be monitored
RR WASHER SW [Off/On]	**NOTE:** This item is displayed, but cannot be monitored
TURN SIGNAL R [Off/On]	Displays the status of the TURN RH switch in combination switch judged by BCM with the combination switch reading function.
TURN SIGNAL L [Off/On]	Displays the status of the TURN LH switch in combination switch judged by BCM with the combination switch reading function.
TAIL LAMP SW [Off/On]	Displays the status of the TAIL LAMP switch in combination switch judged by BCM with the combination switch reading function.
HI BEAM SW [Off/On]	Displays the status of the HI BEAM switch in combination switch judged by BCM with the combination switch reading function.
HEAD LAMP SW 1 [Off/On]	Displays the status of the HEADLAMP 1 switch in combination switch judged by BCM with the combination switch reading function.
HEAD LAMP SW 2 [Off/On]	Displays the status of the HEADLAMP 2 switch in combination switch judged by BCM with the combination switch reading function.
PASSING SW [Off/On]	Displays the status of the PASSING switch in combination switch judged by BCM with the combination switch reading function.
AUTO LIGHT SW [Off/On]	Displays the status of the AUTO LIGHT switch in combination switch judged by BCM with the combination switch reading function.
FR FOG SW [Off/On]	Displays the status of the FR FOG switch in combination switch judged by BCM with the combination switch reading function.
RR FOG SW [Off/On]	**NOTE:** This item is displayed, but cannot be monitored

BCM

BCM : CONSULT Function (BCM - BCM)

INFOID:0000000011284339

WORK SUPPORT

Item	Description
RESET SETTING VALUE	Return a value set with Work Support of each system to a default value in factory shipment.

IMMU

IMMU : CONSULT Function (BCM - IMMU)

INFOID:0000000011561535

DATA MONITOR

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item	Content
CONFRM ID ALL	Indicates [Yet] at all time. Switches to [Done] when a registered Intelligent Key backside is contacted to push-button ignition switch.
CONFIRM ID4	
CONFIRM ID3	
CONFIRM ID2	
CONFIRM ID1	
NOT REGISTERED	Indicates [ID OK] when key ID that is registered is received or is not yet received. Indicates [ID NG] when key ID that is not registered is received.
TP 4	Indicates the number of IDs that are registered.
TP 3	
TP 2	
TP 1	
PUSH SW	Indicates [On/Off] condition of push-button ignition switch.

ACTIVE TEST

Test item	Description
THEFT IND	This test is able to check security indicator lamp operation. Security indicator lamp is turned on when “On” on CONSULT screen touched.

BATTERY SAVER

BATTERY SAVER : CONSULT Function (BCM - BATTERY SAVER)

INFOID:0000000011561540

DATA MONITOR

NOTE:
The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item [Unit]	Description
REQ SW -DR [On/Off]	Indicated [On/Off] condition of door request switch (driver side)
REQ SW -AS [On/Off]	Indicated [On/Off] condition of door request switch (passenger side)
REQ SW -RR [On/Off]	**NOTE:** This item is displayed, but cannot be monitored
REQ SW -RL [On/Off]	**NOTE:** This item is displayed, but cannot be monitored
PUSH SW [On/Off]	Indicates [On/Off] condition of push-button ignition switch
UNLK SEN -DR [On/Off]	Indicates [On/Off] condition of driver door UNLOCK status
DOOR SW-DR [On/Off]	Indicated [On/Off] condition of front door switch (driver side)
DOOR SW-AS [On/Off]	Indicated [On/Off] condition of front door switch (passenger side)
DOOR SW-RR [On/Off]	Indicated [On/Off] condition of rear door switch RH
DOOR SW-RL [On/Off]	Indicated [On/Off] condition of rear door switch LH
DOOR SW-BK [On/Off]	**NOTE:** This item is displayed, but cannot be monitored

Monitor item [Unit]	Description
CDL LOCK SW [On/Off]	Indicated [On/Off] condition of lock signal from door lock and unlock switch
CDL UNLOCK SW [On/Off]	Indicated [On/Off] condition of unlock signal from door lock and unlock switch
KEY CYL LK-SW [On/Off]	Indicated [On/Off] condition of lock signal from door key cylinder switch
KEY CYL UN-SW [On/Off]	Indicated [On/Off] condition of unlock signal from door key cylinder switch
TRNK/HAT MNTR [On/Off]	Indicates [On/Off] condition of trunk room lamp switch
RKE-LOCK [On/Off]	Indicates [On/Off] condition of LOCK signal from Intelligent Key
RKE-UNLOCK [On/Off]	Indicates [On/Off] condition of UNLOCK signal from Intelligent Key

ACTIVE TEST

Test item	Operation	Description
BATTERY SAVER	Off	Outputs interior room lamp power supply.
	On	Stops interior room lamp power supply.

TRUNK

TRUNK : CONSULT Function (BCM - TRUNK)

INFOID:0000000011284342

DATA MONITOR

NOTE:
The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor Item	Contents
PUSH SW	Indicates [On/Off] condition of push-button ignition switch
UNLK SEN -DR	Indicates [On/Off] condition of unlock sensor
VEH SPEED 1	Indicates [km/h] condition of vehicle speed signal from combination meter
KEY CYL SW-TR	**NOTE:** This item is displayed, but cannot be monitored
TR CANCEL SW	Indicates [On/Off] condition of trunk lid opener cancel switch
TR/BD OPEN SW	Indicates [On/Off] condition of trunk lid opener switch
TRNK/HAT MNTR	Indicates [On/Off] condition of trunk room lamp switch
RKE-TR/BD	Indicates [On/Off] condition of trunk open signal from Intelligent Key

THEFT ALM

THEFT ALM : CONSULT Function (BCM - THEFT)

INFOID:0000000011561534

DATA MONITOR

NOTE:
The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitored Item	Description
REQ SW -DR	Indicates [On/Off] condition of door request switch (driver side).
REQ SW -AS	Indicates [On/Off] condition of door request switch (passenger side).

Monitored Item	Description
REQ SW -RR	**NOTE:** This item is indicated, but not monitored.
REQ SW -RL	**NOTE:** This item is indicated, but not monitored.
REQ SW -BD/TR	Indicates [On/Off] condition of trunk lid opener request switch.
PUSH SW	Indicates [On/Off] condition of push-button ignition switch
UNLK SEN -DR	Indicates [On/Off] condition of driver door UNLOCK status.
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.
DOOR SW-BK	**NOTE:** This item is indicated, but not monitored.
CDL LOCK SW	Indicates [On/Off] condition of lock signal from door lock/unlock switch.
CDL UNLOCK SW	Indicates [On/Off] condition of unlock signal from door lock/unlock switch.
KEY CYL LK-SW	Indicates [On/Off] condition of lock signal from door key cylinder switch.
KEY CYL UN-SW	Indicates [On/Off] condition of unlock signal from door key cylinder switch.
KEY CYL SW-TR	**NOTE:** This item is indicated, but not monitored.
TR/BD OPEN SW	Indicates [On/Off] condition of trunk lid opener switch.
TRNK/HAT MNTR	Indicates [On/Off] condition of trunk room lamp switch.
SEN CANCEL SW	**NOTE:** This item is indicated, but not monitored.
RKE-LOCK	Indicates [On/Off] condition of LOCK signal from Intelligent Key.
RKE-UNLOCK	Indicates [On/Off] condition of UNLOCK signal from Intelligent Key.
RKE-TR/BD	Indicates [On/Off] condition of TRUNK OPEN signal from Intelligent Key.

WORK SUPPORT

Service Item	Description
SECURITY ALARM SET	This mode is able to confirm and change security alarm “On” - “Off” setting.

ACTIVE TEST

Test Item	Description
FLASHER	This test is able to check turn signal lamp operation. Turn signal lamp is activated after “LH” or “RH” on CONSULT screen is touched.
THEFT IND	This test is able to check security indicator lamp operation. Security indicator lamp is turned on when “On” on CONSULT screen is touched.
VEHICLE SECURITY HORN	This test is able to check horn operation. Horn is activated for 0.5 seconds after “On” on CONSULT screen is touched.
HEADLAMP(HI)	This test is able to check headlamps operation. Headlamps are turned on when “On” on CONSULT screen is touched.

RETAIND PWR

RETAIND PWR : CONSULT Function (BCM - RETAINED PWR)

INFOID:0000000011561536

Data monitor

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor Item	Description
DOOR SW-DR	Indicates [ON/OFF] condition of driver side door switch.
DOOR SW-AS	Indicates [ON/OFF] condition of passenger side door switch.

SIGNAL BUFFER

SIGNAL BUFFER : CONSULT Function (BCM - SIGNAL BUFFER)

INFOID:0000000011284345

DATA MONITOR

NOTE:
The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item [UNIT]	Description
PUSH SW [Off/On]	Displays the status of the push-button ignition switch (push switch) judged by BCM.

ACTIVE TEST

Test item	Operation	Description
OIL PRESSURE SW	Off	OFF
	On	BCM transmits the oil pressure switch signal to the combination meter via CAN communication, which illuminates the oil pressure warning lamp in the combination meter.

AIR PRESSURE MONITOR

AIR PRESSURE MONITOR : CONSULT Function (BCM-AIR PRESSURE MONITOR)

INFOID:0000000011561530

APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
Active Test	Send the drive signal from CONSULT to the actuator. The operation check can be performed.

ACTIVE TEST

Test Item	Description
FLASHER	This test is able to check turn signal lamp operation [Off/LH/RH].
HORN	This test is able to check horn operation [On].
WARNING LAMP	This test is able to check tire pressure warning lamp operation [On/Off].
ID REGIST WARNING	This test is able to check ID regist warning chime operation [On/Off].
RUN FLAT TIRE W/L	This item is displayed, but cannot be use this item.
RUN FLAT/T WARN BUZZER	This test is able to run flat tire warning chime operation [On/Off].

ECU DIAGNOSIS INFORMATION

BCM

Reference Value

INFOID:0000000011284347

VALUES ON THE DIAGNOSIS TOOL

NOTE:
The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

CONSULT MONITOR ITEM

Monitor Item	Condition	Value/Status
CONFRM ID ALL	The Intelligent Key ID that the NATS antenna amp. receives is not recognized by any Intelligent Key ID registered to BCM.	Yet
	The Intelligent Key ID that the NATS antenna amp. receives is recognized by any Intelligent Key ID registered to BCM.	Done
CONFIRM ID4	The Intelligent Key ID that the NATS antenna amp. receives is not recognized by the fourth Intelligent Key ID registered to BCM.	Yet
	The Intelligent Key ID that the NATS antenna amp. receives is recognized by the fourth Intelligent Key ID registered to BCM.	Done
CONFIRM ID3	The Intelligent Key ID that the NATS antenna amp. receives is not recognized by the third Intelligent Key ID registered to BCM.	Yet
	The Intelligent Key ID that the NATS antenna amp. receives is recognized by the third Intelligent Key ID registered to BCM.	Done
CONFIRM ID2	The Intelligent Key ID that the NATS antenna amp. receives is not recognized by the second Intelligent Key ID registered to BCM.	Yet
	The Intelligent Key ID that the NATS antenna amp. receives is recognized by the second Intelligent Key ID registered to BCM.	Done
CONFIRM ID1	The Intelligent Key ID that the NATS antenna amp. receives is not recognized by the first Intelligent Key ID registered to BCM.	Yet
	The Intelligent Key ID that the NATS antenna amp. receives is recognized by the first Intelligent Key ID registered to BCM.	Done
NOT REGISTERED	BCM detects registered Intelligent Key ID, or BCM does not detect Intelligent Key ID.	ID OK
	BCM detects non-registration Intelligent Key ID.	ID NG
TP 4	The ID of fourth Intelligent Key is not registered to BCM	Yet
	The ID of fourth Intelligent Key is registered to BCM	Done
TP 3	The ID of third Intelligent Key is not registered to BCM	Yet
	The ID of third Intelligent Key is registered to BCM	Done
TP 2	The ID of second Intelligent Key is not registered to BCM	Yet
	The ID of second Intelligent Key is registered to BCM	Done
TP 1	The ID of first Intelligent Key is not registered to BCM	Yet
	The ID of first Intelligent Key is registered to BCM	Done
REQ SW -DR	Driver door request switch is not pressed	Off
	Driver door request switch is pressed	On
REQ SW -AS	Passenger door request switch is not pressed	Off
	Passenger door request switch is pressed	On
REQ SW -RR	**NOTE:** The item is indicated, but not monitored.	Off
REQ SW -RL	**NOTE:** The item is indicated, but not monitored.	Off

Monitor Item	Condition		Value/Status
REQ SW -BD/TR	Trunk lid opener request switch is not pressed		Off
	Trunk lid opener request switch is pressed		On
PUSH SW	Push-button ignition switch (push switch) is not pressed		Off
	Push-button ignition switch (push switch) is pressed		On
SHFTLCK SLNID PWR SPLY	When BCM is not supplying power to shift lock solenoid		Off
	When BCM is supplying power to shift lock solenoid		On
CLUCH SW	**NOTE:** The item is indicated, but not monitored.		Off
BRAKE SW 1	The brake pedal is not depressed		Off
	The brake pedal is depressed		On
BRAKE SW 2	The brake pedal is depressed when No. 19 fuse is blown		Off
	The brake pedal is not depressed when No. 19 fuse is blown, or No. 10 fuse is normal		On
DETE/CANCL SW	Selector lever in P position	Release selector button	Off
		Push selector button	On
	Selector lever in any position other than P		
SFT PN/N SW	Selector lever in any position other than P or N		Off
	Selector lever in P or N position		On
S/L -LOCK	**NOTE:** The item is indicated, but not monitored.		Off
S/L -UNLOCK	**NOTE:** The item is indicated, but not monitored.		Off
S/L RELAY-F/B	**NOTE:** The item is indicated, but not monitored.		Off
S/L LIMIT SW1	**NOTE:** The item is indicated, but not monitored.		Off
S/L LIMIT SW2	**NOTE:** The item is indicated, but not monitored.		Off
UNLK SEN -DR	Driver door is locked		Off
	Driver door is unlocked		On
PUSH SW -IPDM	Push-button ignition switch (push-switch) is not pressed		Off
	Push-button ignition switch (push-switch) is pressed		On
IGN RLY1 -F/B	Ignition switch in OFF or ACC position		Off
	Ignition switch in ON position		On
DETE SW -IPDM	Selector lever in any position other than P		Off
	Selector lever in P position	Push selector button	
		Release selector button	On
SFT PN -IPDM	Selector lever in any position other than P or N		Off
	Selector lever in P or N position		On
SFT P -MET	Selector lever in any position other than P		Off
	Selector lever in P position		On
SFT N -MET	Selector lever in any position other than N		Off
	Selector lever in N position		On
ENGINE STATE	Engine stopped		STOP
	While the engine stalls		STALL
	At engine cranking		CRANK
	Engine running		RUN

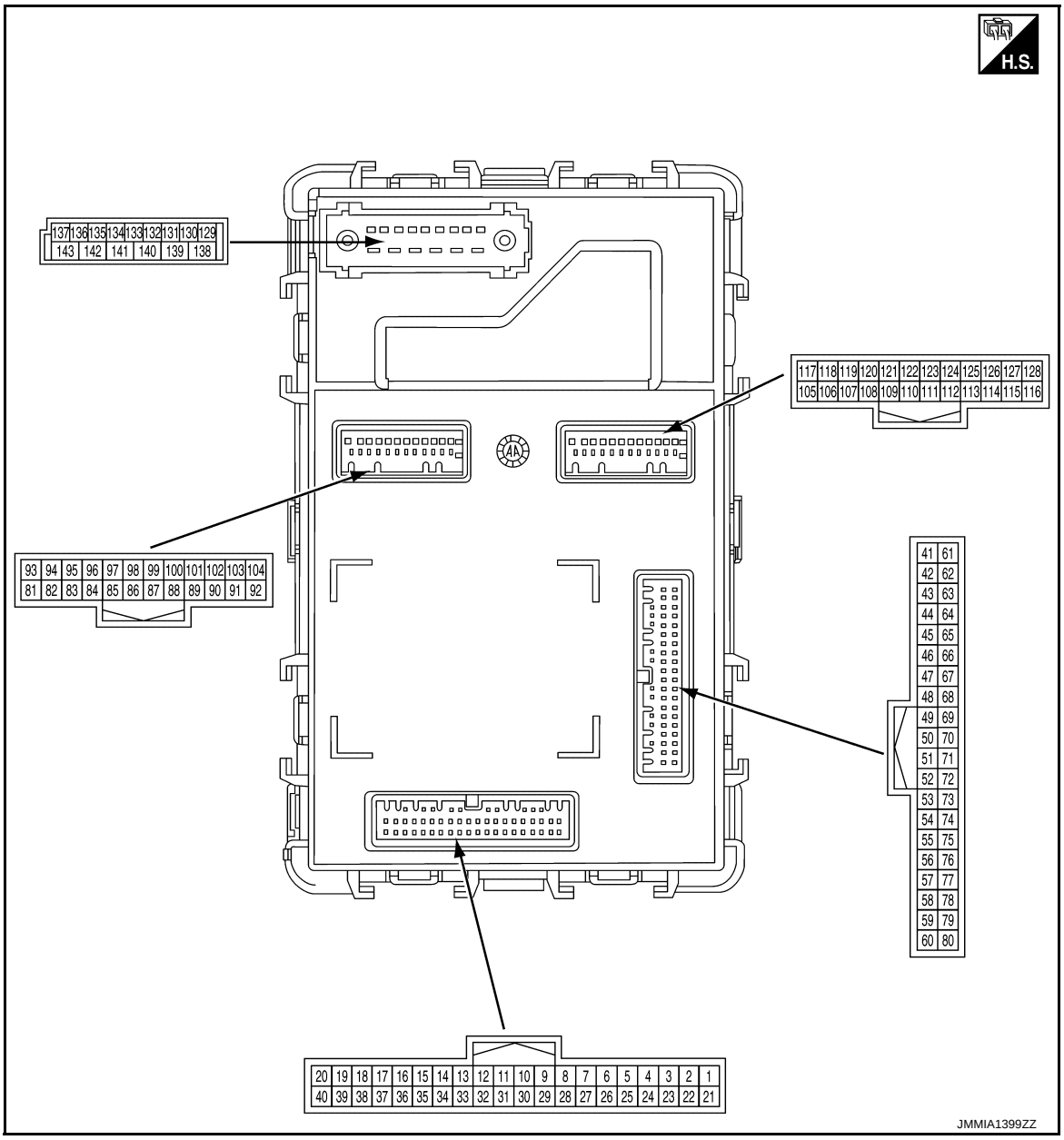
Monitor Item	Condition	Value/Status
S/L LOCK-IPDM	**NOTE:** The item is indicated, but not monitored.	Off
S/L UNLK-IPDM	**NOTE:** The item is indicated, but not monitored.	Off
S/L RELAY-REQ	**NOTE:** The item is indicated, but not monitored.	Off
VEH SPEED 1	While driving	Equivalent to speed-ometer reading
VEH SPEED 2	While driving	Equivalent to speed-ometer reading
S/L ACK	**NOTE:** The item is indicated, but not monitored.	STAT
DOOR STAT-DR	Driver door is locked	LOCK
	Driver door is unlocked	UNLOCK
DOOR STAT-AS	Passenger door is locked	LOCK
	Passenger door is unlocked	UNLOCK
DOOR STAT-RR	Rear door RH is locked	LOCK
	Rear door RH is unlocked	UNLOCK
DOOR STAT-RL	Rear door LH is locked	LOCK
	Rear door LH is unlocked	UNLOCK
BK DOOR STATE	Trunk lid is locked	LOCK
	Trunk lid is unlocked	UNLOCK
ID OK FLAG	**NOTE:** The item is indicated, but not monitored.	Reset
PRMT ENG STRT	When the engine start is prohibited	Reset
	When the engine start is permitted	Set
PRMT RKE STRT	**NOTE:** The item is indicated, but not monitored.	Reset
I-KEY OK FLAG	Intelligent Key ID and Intelligent Key is detected outside vehicle	NOT On
	Intelligent Key ID and Intelligent Key is detected inside vehicle	KEY On
PRBT S/L LOCK	**NOTE:** The item is indicated, but not monitored.	Reset
PRBT ENG STRT	Not activated fail safe function	Reset
	Engine start is prohibited by fail safe function	SET
ID AUTHENT CANCEL TIMER	Engine start is prohibited without Intelligent Key	STOP
	Engine start is permitted without Intelligent Key	OPRAT
ACC BATTERY SAVER	ACC battery saver timer is stop	STOP
	ACC battery saver timer is running	OPRAT
CRNK PRBT TMR	Cranking is permitted	Off
	Cranking is prohibited	On
AUT CRANK TMR	Not auto cranking	Off
	During auto cranking	On
CRNK PRBT TME	Cranking prohibit timer	sec
AUT CRANK TMR	Auto cranking timer	sec
CRANKING TME	Cranking timer	sec
SHORT CRANK	**NOTE:** The item is indicated, but not monitored.	—

Monitor Item	Condition	Value/Status
ST RLY-REQ	**NOTE:** The item is indicated, but not monitored.	Off
IGN RLY1 -REQ	**NOTE:** The item is indicated, but not monitored.	Off
IGN RLY2 -REQ	**NOTE:** The item is indicated, but not monitored.	Off
DETE SW PWR	**NOTE:** The item is indicated, but not monitored.	Off
IGN RLY3-REQ	**NOTE:** The item is indicated, but not monitored.	Off
S/L PWR	**NOTE:** The item is indicated, but not monitored.	Off
ACC RLY-REQ	**NOTE:** The item is indicated, but not monitored.	Off
RKE OPE COUN1	During the operation of the Intelligent Key	Operation frequency of the key
RKE OPE COUN2	**NOTE:** The item is indicated, but not monitored.	—
FR WIPER HI	Other than front wiper switch HI	Off
	Front wiper switch HI	On
FR WIPER LOW	Other than front wiper switch LO	Off
	Front wiper switch LO	On
FR WASHER SW	Front washer switch OFF	Off
	Front washer switch ON	On
FR WIPER INT	Other than front wiper switch INT/AUTO	Off
	Front wiper switch INT/AUTO	On
FR WIPER STOP	Front wiper is not in STOP position	Off
	Front wiper is in STOP position	On
INT VOLUME	Wiper volume dial is in a dial position 1 - 7	Wiper volume dial position
RR WIPER ON	**NOTE:** The item is indicated, but not monitored.	Off
RR WIPER INT	**NOTE:** The item is indicated, but not monitored.	Off
RR WASHER SW	**NOTE:** The item is indicated, but not monitored.	Off
RR WIPER STOP	**NOTE:** The item is indicated, but not monitored.	Off
TURN SIGNAL R	Other than turn signal switch RH	Off
	Turn signal switch RH	On
TURN SIGNAL L	Other than turn signal switch LH	Off
	Turn signal switch LH	On
TAIL LAMP SW	Other than lighting switch 1ST or 2ND	Off
	Lighting switch 1ST or 2ND	On
HI BEAM SW	Other than lighting switch HI	Off
	Lighting switch HI	On
HEAD LAMP SW 1	Other than lighting switch 2ND	Off
	Lighting switch 2ND	On

Monitor Item	Condition	Value/Status
HEAD LAMP SW 2	Other than lighting switch 2ND	Off
	Lighting switch 2ND	On
PASSING SW	Other than lighting switch PASS	Off
	Lighting switch PASS	On
AUTO LIGHT SW	Other than lighting switch AUTO	Off
	Lighting switch AUTO	On
FR FOG SW	Front fog lamp switch OFF	Off
	Front fog lamp switch ON	On
RR FOG SW	**NOTE:** The item is indicated, but not monitored.	Off
DOOR SW-DR	Driver door closed	Off
	Driver door opened	On
DOOR SW-AS	Passenger door closed	Off
	Passenger door opened	On
DOOR SW-RR	Rear RH door closed	Off
	Rear RH door opened	On
DOOR SW-RL	Rear LH door closed	Off
	Rear LH door opened	On
DOOR SW-BK	**NOTE:** The item is indicated, but not monitored.	Off
CDL LOCK SW	Other than power door lock switch LOCK	Off
	Power door lock switch LOCK	On
CDL UNLOCK SW	Other than power door lock switch UNLOCK	Off
	Power door lock switch UNLOCK	On
KEY CYL LK-SW	Other than driver door key cylinder LOCK position	Off
	Driver door key cylinder LOCK position	On
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK position	Off
	Driver door key cylinder UNLOCK position	On
KEY CYL SW-TR	**NOTE:** The item is indicated, but not monitored.	Off
HAZARD SW	Hazard switch is OFF	Off
	Hazard switch is ON	On
REAR DEF SW	Rear window defogger switch OFF	Off
	Rear window defogger switch ON	On
H/L WSR SW	**NOTE:** The item is indicated, but not monitored.	Off
TR CANCEL SW	Trunk lid opener cancel switch OFF	Off
	Trunk lid opener cancel switch ON	On
TR/BD OPEN SW	Trunk lid opener switch OFF	Off
	While the trunk lid opener switch is turned ON	On
TRNK/HAT MNTR	Trunk lid closed	Off
	Trunk lid opened	On
FAN ON SIG	**NOTE:** The item is indicated, but not monitored.	Off
AIR COND SW	**NOTE:** The item is indicated, but not monitored.	Off

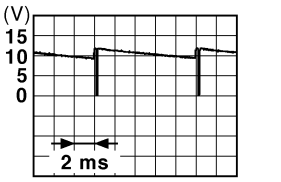
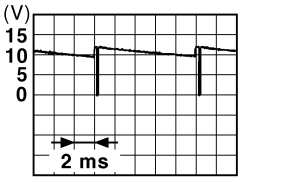
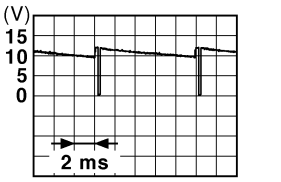
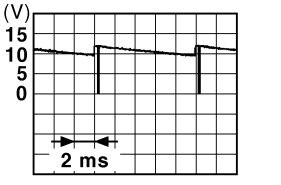
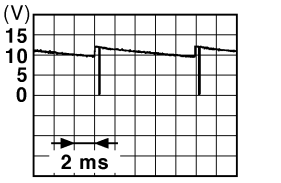
Monitor Item	Condition	Value/Status
SEN CANCEL SW	**NOTE:** The item is indicated, but not monitored.	Off
THERMO AMP	**NOTE:** The item is indicated, but not monitored.	Off
RKE-LOCK	LOCK button of the Intelligent Key is not pressed	Off
	LOCK button of the Intelligent Key is pressed	On
RKE-UNLOCK	UNLOCK button of the Intelligent Key is not pressed	Off
	UNLOCK button of the Intelligent Key is pressed	On
RKE-TR/BD	TRUNK OPEN button of the Intelligent Key is not pressed	Off
	TRUNK OPEN button of the Intelligent Key is pressed	On
RKE-PANIC	**NOTE:** The item is indicated, but not monitored.	Off
RKE-MODE CHG	**NOTE:** The item is indicated, but not monitored.	Off
RKE PBD	**NOTE:** The item is indicated, but not monitored.	Off
SHOCK SENSOR	Air bag signal (NORMAL) is detected.	NOMAL
	Air bag signal (AIR BAG OPEN) is detected.	On
	Air bag signal is not detected.	Off
OPTI SEN (DTCT)	Bright outside of the vehicle	Close to 5 V
	Dark outside of the vehicle	Close to 0 V
OPTI SEN (FILT)	Bright outside of the vehicle (Lighting switch AUTO)	Close to 5 V
	Dark outside of the vehicle (Lighting switch AUTO)	Close to 1.50 V
OPTICAL SENSOR	**NOTE:** The item is indicated, but not monitored.	Off
RAIN SENSOR	No rain (or very light rain)	Off
	Light rain	LOW
	Heavy rain	HIGH
	When liquid is splashed on the front window	SPLSH
	Rain sensor internal error	NG

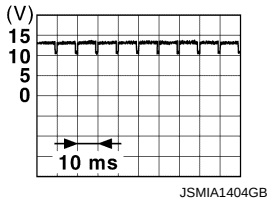
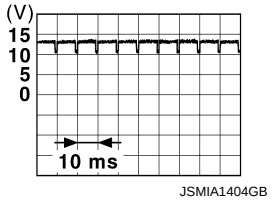
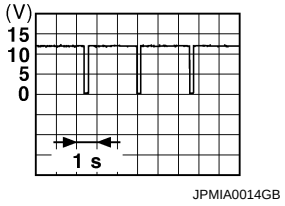
TERMINAL LAYOUT

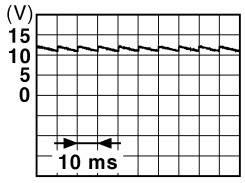
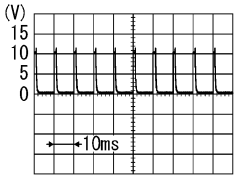
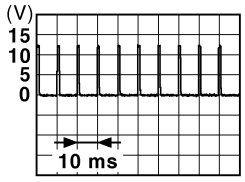
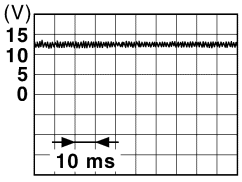


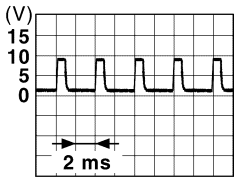
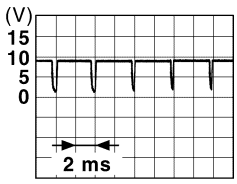
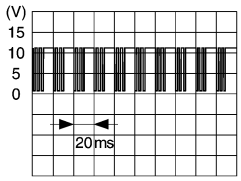
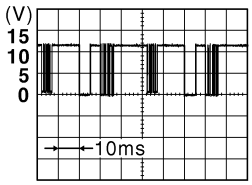
PHYSICAL VALUES

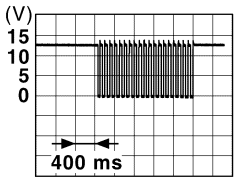
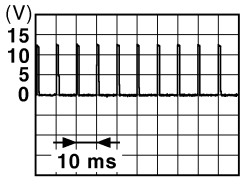
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
1 (R)	Ground	Push-button ignition switch (Push switch)	Input	Push-button ignition switch (push switch)	Pressed	0 – 1.5 V
					Not pressed	9 – 16 V
3 (Y)	Ground	Sensor power supply	Output	Ignition switch	OFF	0 V
					ON	4.65 - 5.5 V
4 (BG)	Ground	Optical sensor	Input	Ignition switch ON	When bright outside of the vehicle	Close to 5 V
					When dark outside of the vehicle	Close to 0 V
5*1 (LG)	Ground	Shock status	Input	—		—

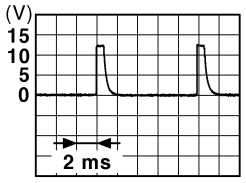
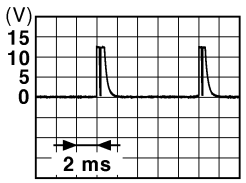
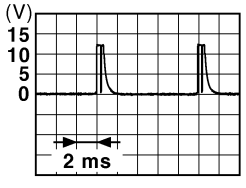
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
10 (W)	Ground	Combination switch OUTPUT 5	Output	Combination switch	All switches OFF	0 V
					Turn signal switch RH Lighting switch 1ST Lighting switch 2ND Lighting switch HI	 JPMIA0031GB 10.7 V
11 (SB)	Ground	Combination switch OUTPUT 4	Output	Combination switch	All switches OFF	0 V
					Turn signal switch LH Lighting switch 2ND Lighting switch PASS Front fog lamp switch ON	 JPMIA0035GB 10.7 V
12 (L)	Ground	Combination switch OUTPUT 3	Output	Combination switch	All switches OFF	0 V
					Front wiper switch LO Front wiper switch MIST Front wiper switch INT/ AUTO Lighting switch AUTO	 JPMIA0034GB 10.7 V
13 (G)	Ground	Combination switch OUTPUT 2	Output	Combination switch	All switches OFF	0 V
					Front washer switch ON Any of the condition below with all switches OFF • INT VOLUME 1 • INT VOLUME 5 • INT VOLUME 6 **NOTE:** "INT VOLUME" in "DATA MONITOR" mode of "BCM" using CONSULT.	 JPMIA0033GB 10.7 V
14 (P)	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switches OFF	0 V
					Front wiper switch HI Any of the condition below with all switches OFF • INT VOLUME 1 • INT VOLUME 2 • INT VOLUME 3 • INT VOLUME 6 • INT VOLUME 7 **NOTE:** "INT VOLUME" in "DATA MONITOR" mode of "BCM" using CONSULT.	 JPMIA0032GB 10.7 V

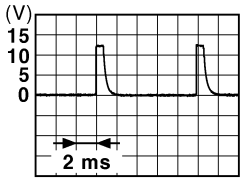
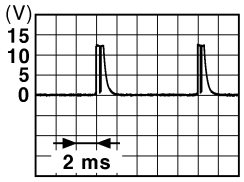
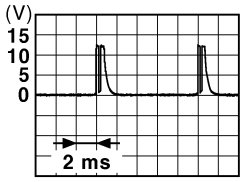
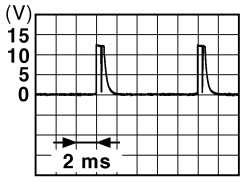
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
15 (G)	Ground	One touch unlock sensor (driver door)	Input	Driver door outside handle grip (backside)	Touch	 JSMIA1404GB
					Other than the above	9 – 16 V
16 (G)	Ground	One touch unlock sensor (passenger door)	Input	Passenger door outside handle grip (backside)	Touch	 JSMIA1404GB
					Other than the above	9 – 16 V
17 (P)	Ground	Receiver and sensor ground	Input	Ignition switch OFF		0 V
18 (L)	Ground	Security indicator lamp control	Output	Security indicator lamp	ON	0 V
					Blinking (Ignition switch OFF)	 JPMIA0014GB 11.3 V
					OFF	12 V
20 (R)	Ground	Detention switch	Input	Selector lever	P position (Release selector button)	0 – 1.5 V
					Any position other than P	9 – 16 V
21 (SB)	Ground	Step lamp and foot lamp control	Output	Step lamp and foot lamp	ON	0 – 1.5 V
					OFF	9 – 16 V
25 (R)	Ground	Stop lamp switch 2	Input	Ignition switch OFF		9 – 16 V
26 (R)	Ground	Extended storage fuse switch	Input	Extended storage fuse switch	ON (Ignition switch OFF)	9 – 16 V
					OFF	0 V
27 (P)	Ground	Stop lamp switch 1	Input	Stop lamp switch	OFF (Brake pedal is not depressed)	0 V
					ON (Brake pedal is depressed)	9 - 16 V

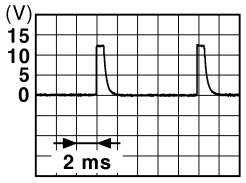
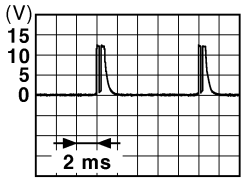
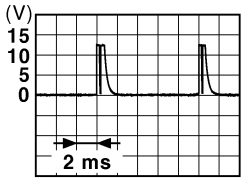
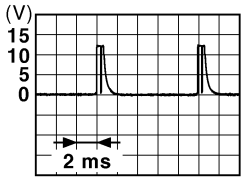
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
30 (W)	Ground	Front door lock assembly driver side (Unlock sensor)	Input	Driver door	LOCK status (Unlock sensor switch OFF)	 JPMIA0011GB 11.8 V
					UNLOCK status (Unlock sensor switch ON)	0 V
33*2 (V)	Ground	Trunk lid opener cancel switch	Input	Trunk lid opener cancel switch	ON	0 V
					OFF	 PKIB4956J
36 (G)	Ground	Hazard switch	Input	Hazard switch	Pressed	0 V
					Not pressed	 JPMIA0012GB 1.1 V
39 (BR)	Ground	P/N position	Input	Selector lever	P or N position	 JSMIA1472GB
					Except P and N positions	0 V

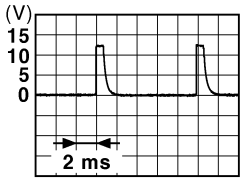
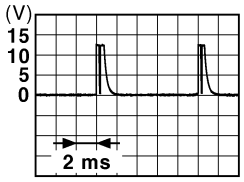
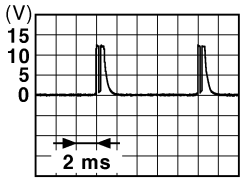
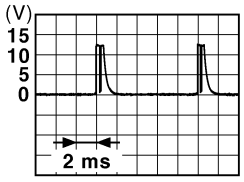
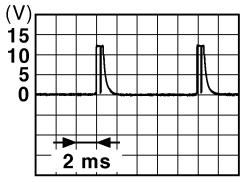
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
48 (R)	Ground	Push-button ignition switch illumination power supply	Output	Push-button ignition switch	OFF	0 V
					ACC **NOTE:** The pulse cycle changes depending on illumination at push-button ignition switch.	 JMMIA1405GB ↑ ↓  JMMIA1406GB
					ON	9 V
52*3 (G)	Ground	Dongle link	Input/ Output	Ignition switch OFF		5 V
54 (V)	Ground	Communication line	Input/ Output	Ignition switch ON		 PKIA7023E 9.0 - 10 V
55 (R)	Ground	Rain sensor serial link	Input/ Output	Ignition switch OFF		12 V
				Ignition switch ON		 JPMIA0156GB 8.7 V
59 (P)	Ground	CAN-L	Input/ Output	—		—
60 (L)	Ground	CAN-H	Input/ Output	—		—
61 (G)	Ground	Rear window defogger relay control	Output	Ignition switch ON	Rear window defogger is not activated	9 – 16 V
					Rear window defogger is activated	0 – 1.5 V
62 (R)	Ground	Starter relay control	Output	Ignition switch ON	When selector lever is in P or N position	9 – 16 V
					When selector lever is not in P or N position	0 – 0.5 V

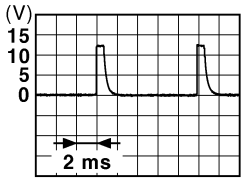
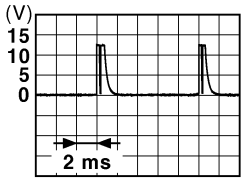
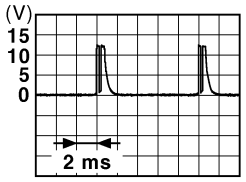
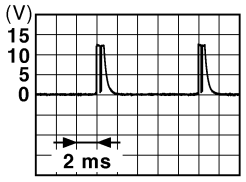
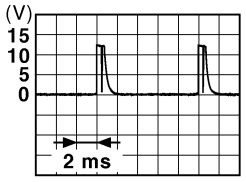
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
64 (V)	Ground	Intelligent Key warning buzzer	Output	Intelligent Key warning buzzer		0 – 0.5 V
					Sounding **NOTE:** The pulse cycle changes depending on buzzer sounds.	 JMMIA1407GB
					Not sounding	9 – 16 V
65 (B)	Ground	Outside handle lamp control	Output	Outside handle lamp	ON	0 – 0.5 V
					OFF	9 – 16 V
66 (B)	Ground	Blower relay control	Output	Ignition switch	OFF or ACC	0 – 0.5 V
					ON	9 – 16 V
67 (W/B)	Ground	Ignition relay (F/B) control	Output	Ignition switch	OFF or ACC	0 – 0.5 V
					ON	9 – 16 V
68 (R)	Ground	Dimmer signal	Output	Ignition switch ON	Either of the following conditions • Lighting switch OFF • The area around the vehicle is bright (Shine a light on the optical sensor)	0 V
					The area around the vehicle is dark (Block the light from the optical sensor)	12 V
69 (GR)	Ground	Detention switch power supply	Output	Ignition switch	ACC or ON	9 – 16 V
					For 15 seconds after ignition switch OFF	
					After 15 seconds after ignition switch OFF	0 – 0.5 V
70 (B)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	9 – 16 V
					ON	0 – 0.5 V
71 (G)	Ground	Driver door request switch	Input	Driver door request switch	ON (Pressed)	0 – 1.5 V
					OFF (Not pressed)	9 – 16 V
72 (SB)	Ground	Passenger door request switch	Input	Passenger door request switch	ON (Pressed)	0 – 1.5 V
					OFF (Not pressed)	 JPMIA0016GB 1.0 V

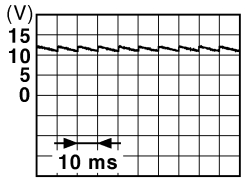
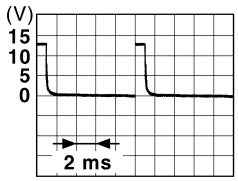
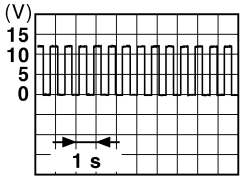
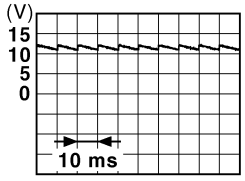
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
75 (BR)	Ground	Combination switch INPUT 5	Input	Combination switch	All switches OFF	 JPMIA0041GB 1.4 V
					Front fog lamp switch ON	 JPMIA0037GB 1.3 V
					Any of the condition below with all switches OFF • INT VOLUME 1 • INT VOLUME 2 • INT VOLUME 6 • INT VOLUME 7 **NOTE:** “INT VOLUME” in “DATA MONITOR” mode of “BCM” using CONSULT.	 JPMIA0040GB 1.3 V

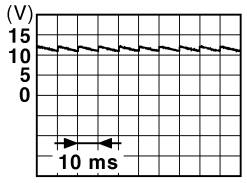
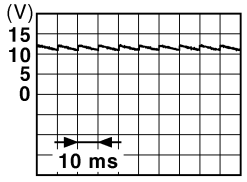
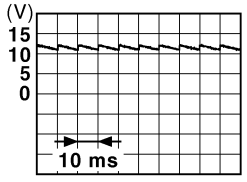
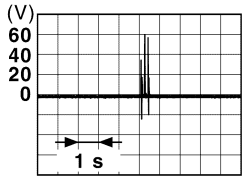
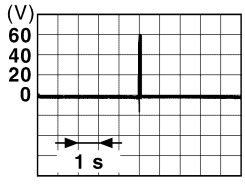
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
76 (BG)	Ground	Combination switch INPUT 4	Input	Combination switch	All switches OFF	 JPMIA0041GB 1.4 V
					Lighting switch AUTO	 JPMIA0038GB 1.3 V
					Lighting switch 1ST	 JPMIA0036GB 1.3 V
					Any of the condition below with all switches OFF • INT VOLUME 1 • INT VOLUME 5 • INT VOLUME 6 **NOTE:** “INT VOLUME” in “DATA MONITOR” mode of “BCM” using CONSULT.	 JPMIA0039GB 1.3 V

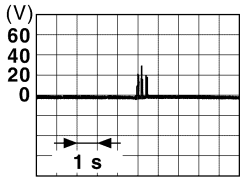
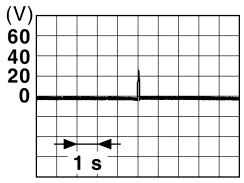
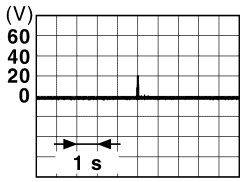
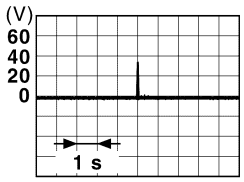
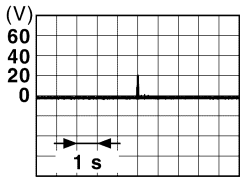
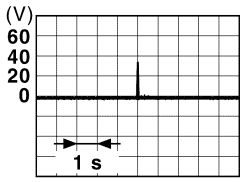
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
77 (V)	Ground	Combination switch INPUT 3	Input	Combination switch	All switches OFF	 JPMIA0041GB 1.4 V
					Lighting switch HI	 JPMIA0036GB 1.3 V
					Lighting switch 2ND	 JPMIA0037GB 1.3 V
					Any of the condition below with all switches OFF • INT VOLUME 1 • INT VOLUME 2 • INT VOLUME 3 **NOTE:** “INT VOLUME” in “DATA MONITOR” mode of “BCM” using CONSULT.	 JPMIA0040GB 1.3 V

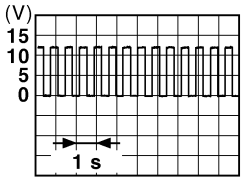
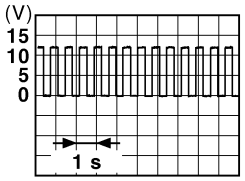
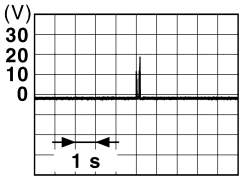
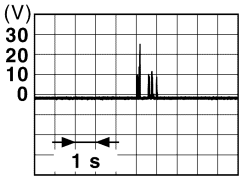
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
78 (Y)	Ground	Combination switch INPUT 2	Input	Combination switch	All switches OFF	 JPMIA0041GB 1.4 V
					Lighting switch PASS	 JPMIA0037GB 1.3 V
					Lighting switch 2ND	 JPMIA0036GB 1.3 V
					Front wiper switch INT/ AUTO	 JPMIA0038GB 1.3 V
					Front wiper switch HI	 JPMIA0040GB 1.3 V

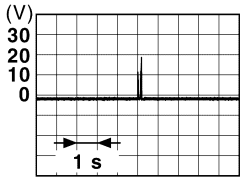
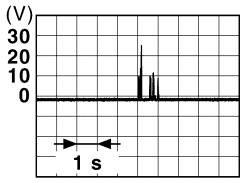
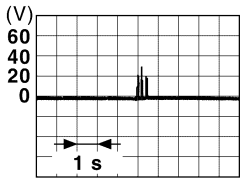
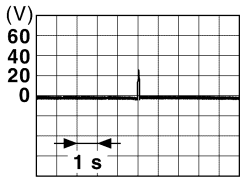
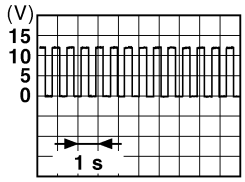
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
79 (LG)	Ground	Combination switch INPUT 1	Input	Combination switch	All switches OFF	 JPMIA0041GB 1.4 V
					Turn signal switch LH	 JPMIA0037GB 1.3 V
					Turn signal switch RH	 JPMIA0036GB 1.3 V
					Front wiper switch LO	 JPMIA0038GB 1.3 V
					Front washer switch ON	 JPMIA0039GB 1.3 V
80 (L)	Ground	Trunk lid opener switch	Input	Trunk lid opener switch	ON (Pressed)	0 – 1.5 V
					OFF (Not pressed)	9 – 16 V

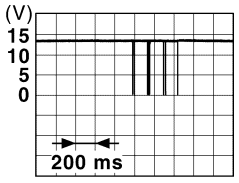
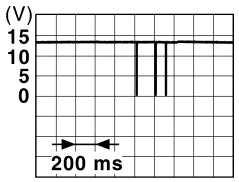
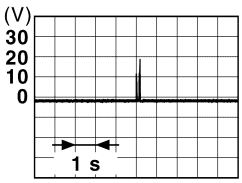
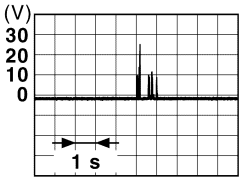
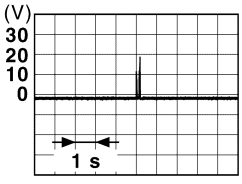
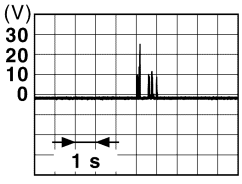
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
82 (W)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (When rear LH door closed)	 JPMIA0011GB 11.8 V
					ON (When rear door LH opened)	0 V
83 (L)	Ground	Trunk lid opener request switch	Input	Trunk lid opener request switch	ON (Pressed)	0 – 1.5 V
					OFF (Not pressed)	 JMMIA1408GB
85 (P)	Ground	Trunk room lamp control	Output	Trunk room lamp	OFF	9 – 16 V
					ON	0 – 1 V
91 (GR)	Ground	Trunk lid open	Output	Trunk lid	OFF (Actuator is not activated)	0 V
					OPEN (Actuator is activated)	9 – 16 V
92 (W)	Ground	Turn signal RH output (Side and rear)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	 PKID0926E 6.5 V (Turn signal lamp turn on: 9 - 16 V)
93 (G)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (When rear RH door closed)	 JPMIA0011GB 11.8 V
					ON (When rear door RH opened)	0 V

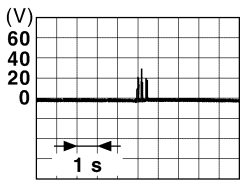
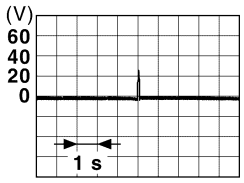
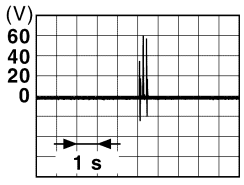
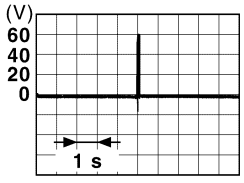
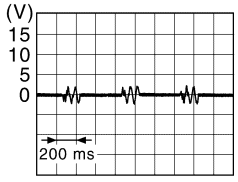
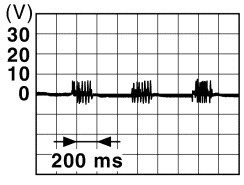
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
94 (GR)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closed)	 JPMIA0011GB 11.8 V
					ON (When passenger door opened)	0 V
96 (V)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closed)	 JPMIA0011GB 11.8 V
					ON (When driver door opened)	0 V
97 (R)	Ground	Trunk room lamp switch	Input	Trunk room lamp switch	OFF (When trunk lid closed)	 JPMIA0011GB 11.8 V
					ON (When trunk lid opened)	0 V
99 (GR)	Ground	Inside key antenna (Trunk room) (-)	Output	Ignition switch ON and any door is open	When Intelligent Key is not in the antenna detection area	 JSMIA1413GB
					When Intelligent Key is in the antenna detection area	 JSMIA1414GB

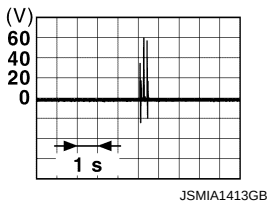
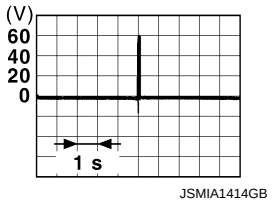
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
100 (W)	Ground	Inside key antenna (Trunk room) (+)	Output	Ignition switch ON and any door is open	When Intelligent Key is not in the antenna detection area	 JSMIA1348GB
					When Intelligent Key is in the antenna detection area	 JSMIA1406GB
101 (BG)	Ground	Rear bumper antenna (-)	Output	When pressing the trunk lid opener request switch with all doors are locked and ignition switch OFF	When Intelligent Key is not in the antenna detection area	 JSMIA1504GB
					When Intelligent Key is in the antenna detection area	 JSMIA1505GB
102 (LG)	Ground	Rear bumper antenna (+)	Output	When pressing the trunk lid opener request switch with all doors are locked and ignition switch OFF	When Intelligent Key is not in the antenna detection area	 JSMIA1504GB
					When Intelligent Key is in the antenna detection area	 JSMIA1505GB

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
103 (Y)	Ground	Turn signal LH output (Side and rear)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 PKID0926E 6.5 V (Turn signal lamp turn on: 9 - 16 V)
105 (V)	Ground	Turn signal RH output (Front)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	 PKID0926E 6.5 V (Turn signal lamp turn on: 9 - 16 V)
107 (P)	Ground	Push-button ignition switch illumination ground	Input	Ignition switch ON		0 V
111 (Y)	Ground	ACC/ON indicator lamp	Output	Ignition switch	OFF	9 – 16 V
					ACC or ON	0 – 1.5 V
113 (SB)	Ground	Accessory relay control	Output	Ignition switch	OFF	0 – 0.5 V
					ACC or ON	9 – 16 V
114 (LG)	Ground	Passenger door antenna (+)	Output	When pressing the front door request switch (passenger side) with all doors are locked and ignition switch OFF	When Intelligent Key is not in the antenna detection area	 JSMIA1506GB
					When Intelligent Key is in the antenna detection area	 JSMIA1507GB

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
115 (V)	Ground	Passenger door antenna (-)	Output	When pressing the front door request switch (passenger side) with all doors are locked and ignition switch OFF	When Intelligent Key is not in the antenna detection area	 JSMIA1506GB
					When Intelligent Key is in the antenna detection area	 JSMIA1507GB
116 (BR)	Ground	Inside key antenna (Console) (+)	Output	Ignition switch ON and any door is open	When Intelligent Key is not in the antenna detection area	 JSMIA1348GB
					When Intelligent Key is in the antenna detection area	 JSMIA1406GB
117 (W/B)	Ground	Turn signal LH output (Front)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 PKID0926E 6.5 V (Turn signal lamp turn on: 9 - 16 V)

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
119 (L)	Ground	Remote keyless entry receiver communication	Input	Ignition switch ON	Waiting	 JMMIA1409GB
					When operating either button on Intelligent Key	 JMMIA1410GB
121 (SB)	Ground	Driver door antenna (-)	Output	When pressing the front door request switch (driver side) with all doors are locked and ignition switch OFF	When Intelligent Key is not in the antenna detection area	 JSMIA1506GB
					When Intelligent Key is in the antenna detection area	 JSMIA1507GB
122 (BG)	Ground	Driver door antenna (+)	Output	When pressing the front door request switch (driver side) with all doors are locked and ignition switch OFF	When Intelligent Key is not in the antenna detection area	 JSMIA1506GB
					When Intelligent Key is in the antenna detection area	 JSMIA1507GB

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
123 (R)	Ground	Inside key antenna (Instrument lower) (+)	Output	Ignition switch ON and any door is open	When Intelligent Key is not in the antenna detection area	 JSMIA1348GB
					When Intelligent Key is in the antenna detection area	 JSMIA1406GB
124 (G)	Ground	Inside key antenna (Instrument lower) (-)	Output	Ignition switch ON and any door is open	When Intelligent Key is not in the antenna detection area	 JSMIA1413GB
					When Intelligent Key is in the antenna detection area	 JSMIA1414GB
126 (B)	Ground	NATS antenna amp.	Input/ Output	Intelligent Key: Intelligent Key battery is removed	Brake pedal: Depressed	 JSKIA3178ZZ
127 (W)	Ground	NATS antenna amp.	Input/ Output	Intelligent Key: Intelligent Key battery is removed	Brake pedal: Depressed	 JSMIA1415GB

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
128 (GR)	Ground	Inside key antenna (Console) (-)	Output	Ignition switch ON and any door is open	When Intelligent Key is not in the antenna detection area	 JSMIA1413GB
					When Intelligent Key is in the antenna detection area	 JSMIA1414GB
129 (LG)	Ground	Interior room lamp power supply	Output	Interior room lamp battery saver is activated. (Cuts the interior room lamp power supply)		0 V
				Interior room lamp battery saver is not activated. (Outputs the interior room lamp power supply)		9 – 16 V
130 (P)	Ground	Passenger door UNLOCK	Output	Passenger door	UNLOCK (Actuator is activated)	9 – 16 V
					Other then UNLOCK (Actuator is not activated)	0 V
131 (Y)	Ground	Battery power supply	Input	Ignition switch OFF		9 – 16 V
132 (V)	Ground	Rear door LH/RH LOCK	Output	Rear door LH/ RH	LOCK (Actuator is activated)	9 – 16 V
					Other then LOCK (Actuator is not activated)	0 V
133 (BR)	Ground	Rear door LH/RH UNLOCK	Output	Rear door LH/ RH	UNLOCK (Actuator is activated)	9 – 16 V
					Other then UNLOCK (Actuator is not activated)	0 V
134 (B)	Ground	Ground	Output	Ignition switch OFF		0 V
135 (V)	Ground	Front doors and fuel lid LOCK	Output	Front doors and fuel lid	LOCK (Actuator is activated)	9 – 16 V
					Other then LOCK (Actuator is not activated)	0 V
136 (V)	Ground	Interior room lamp control	Output	Map lamp and personal lamp (Door position)	When all doors are closed (Interior room lamp is turned OFF)	0 V
					Any doors opens (Interior room lamp is turned ON)	9 – 16 V
137 (LG)	Ground	Driver door and fuel lid UNLOCK	Output	Driver door and fuel lid	UNLOCK (Actuator is activated)	9 – 16 V
					Other then UNLOCK (Actuator is not activated)	0 V

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
		Signal name	Input/ Output		
+	–				
138 (P)	Ground	Rear doors lock actuator power supply	Input	Ignition switch ON	9 – 16 V
139 (W)	Ground	Battery power supply (F/L)	Input	Ignition switch OFF	9 – 16 V
140 (BR)	Ground	Ignition switch ON	Output	Ignition switch OFF	0 V
				Within 45 second after ignition switch is turned OFF	9 – 16 V
				Ignition switch ON	
141 (R)	Ground	Power supply (BAT)	Output	Ignition switch OFF	9 – 16 V
142 (R)	Ground	Front door and fuel filler lid lock actuator power supply	Input	Ignition switch ON	9 – 16 V
143 (B)	Ground	Ground	Output	Ignition switch OFF	0 V

*1: This harness is connected but not used.
*2: Except for Mexico
*3: For Canada

Fail-safe

INFOID:0000000011284348

FAIL-SAFE CONTROL BY DTC

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

Display contents of CONSULT	Fail-safe	Cancellation
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI-SCANNING	Inhibit engine cranking	Ignition switch ON → OFF
B2198: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2608: STARTER RELAY	Inhibit engine cranking	500 ms after the following signal communication status becomes consistent • Starter motor relay control signal • Starter relay status signal (CAN)
B260F: ENG STATE SIG LOST	Inhibit engine cranking	When any of the following conditions are fulfilled • Ignition switch position changes to ACC • Receives engine status signal (CAN)
B26F1: IGN RELAY OFF	Inhibit engine cranking	When the following conditions are fulfilled • Ignition switch ON signal (CAN: Transmitted from BCM): ON • Ignition switch ON signal (CAN: Transmitted from IPDM E/R): ON
B26F2: IGN RELAY ON	Inhibit engine cranking	When the following conditions are fulfilled • Ignition switch ON signal (CAN: Transmitted from BCM): OFF • Ignition switch ON signal (CAN: Transmitted from IPDM E/R): OFF
B26F3: START CONT RLY ON	Inhibit engine cranking	When the following conditions are fulfilled • Starter control relay signal (CAN: Transmitted from BCM): OFF • Starter control relay signal (CAN: Transmitted from IPDM E/R): OFF
B26F4: START CONT RLY OFF	Inhibit engine cranking	When the following conditions are fulfilled • Starter control relay signal (CAN: Transmitted from BCM): ON • Starter control relay signal (CAN: Transmitted from IPDM E/R): ON
B26F7: BCM	Inhibit engine cranking by Intelligent Key system	When room antenna and trunk room antenna functions normally

FAIL-SAFE CONTROL BY RAIN SENSOR MALFUNCTION

BCM detects the rain sensor serial link error and the rain sensor malfunction.
BCM controls the following fail-safe when rain sensor has a malfunction.

- Front wiper switch AUTO and sensing rain drop: The condition just before the activation of fail-safe is maintained until the front wiper switch is turned OFF.
- Front wiper switch AUTO and not sensing rain drop: Front wiper is LO operation until the front wiper switch is turned off.

FAIL-SAFE CONTROL OF COMBINATION SWITCH READING FUNCTION CAUSED BY LOW POWER SUPPLY VOLTAGE

If voltage of battery power supply lower, BCM maintains combination switch reading to the status when input voltage is less than approximately 9 V.

NOTE:
When voltage of battery power supply is approximately 9 V or more, combination switch reading function returns to normal operation.

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	B2562: LOW VOLTAGE
2	• U1000: CAN COMM • U1010: CONTROL UNIT (CAN)
3	• B2192: ID DISCORD BCM-ECM • B2193: CHAIN OF BCM-ECM • B2195: ANTI-SCANNING • B2196: DONGLE NG • B2198: NATS ANTENNA AMP
4	• B2555: STOP LAMP • B2556: PUSH-BTN IGN SW • B2557: VEHICLE SPEED • B2601: SHIFT POSITION • B2602: SHIFT POSITION • B2603: SHIFT POSI STATUS • B2604: PNP/CLUTCH SW • B2605: PNP/CLUTCH SW • B2608: STARTER RELAY • B260F: ENG STATE SIG LOST • B2614: BCM • B2615: BCM • B2616: BCM • B2618: BCM • B261A: PUSH-BTN IGN SW • B261E: VEHICLE TYPE • B26F1: IGN RELAY OFF • B26F2: IGN RELAY ON • B26F3: START CONT RLY ON • B26F4: START CONT RLY OFF • B26F6: BCM • B26F7: BCM • B26F8: BCM • B26FC: KEY REGISTRATION • B26FF: INTELLIGENT TUNER COMM ERROR • U0415: VEHICLE SPEED

Priority	DTC
5	• C1704: LOW PRESSURE FL • C1705: LOW PRESSURE FR • C1706: LOW PRESSURE RR • C1707: LOW PRESSURE RL • C1708: [NO - DATA] - FL • C1709: [NO - DATA] - FR • C1710: [NO - DATA] - RR • C1711: [NO - DATA] - RL • C1716: [PRESSDATA ERR] FL • C1717: [PRESSDATA ERR] FR • C1718: [PRESSDATA ERR] RR • C1719: [PRESSDATA ERR] RL • C1729: VHCL SPEED SIG ERR • C1730: FLAT TIRE FL • C1731: FLAT TIRE FR • C1732: FLAT TIRE RR • C1733: FLAT TIRE RL • C1734: CONTROL UNIT • C1761: TEMPERATURE DATA FL • C1762: TEMPERATURE DATA FR • C1763: TEMPERATURE DATA RR • C1764: TEMPERATURE DATA RL • C1769: CONFIG SETTING • C1770: G SENSOR FL • C1771: G SENSOR FR • C1772: G SENSOR RL • C1773: G SENSOR RR
6	• B2621: INSIDE ANTENNA • B2622: INSIDE ANTENNA • B2623: INSIDE ANTENNA
7	• B259A: ROOM LAMP FUSE BLOWN • B259B: DR TOUCH SENSOR • B259C: PASS TOUCH SENSOR • B2626: OUTSIDE ANTENNA • B2627: OUTSIDE ANTENNA • B2628: OUTSIDE ANTENNA

DTC Index

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NOTE:
The details of time display are as follows.
- CRNT: A malfunction is detected now.
- PAST: A malfunction was detected in the past.

IGN counter is displayed on Freeze Frame Data. For details of Freeze Frame Data, refer to BCS-16, "COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)".

×:Applicable

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning display	Security indicator lamp ON	Low pressure warning lamp ON	Reference
No DTC is detected. further testing may be required.	—	—	—	—	—	—
U1000: CAN COMM	—	—	—	—	—	BCS-85
U1010: CONTROL UNIT (CAN)	—	—	—	—	—	BCS-86
U0415: VEHICLE SPEED	—	—	×	—	—	BCS-87
B2192: ID DISCORD BCM-ECM	×	—	—	×	—	SEC-63
B2193: CHAIN OF BCM-ECM	×	—	—	×	—	SEC-64

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning display	Security indicator lamp ON	Low pressure warning lamp ON	Reference
B2195: ANTI-SCANNING	×	—	—	×	—	SEC-65
B2196: DONGLE NG	×	—	—	—	—	SEC-66
B2198: NATS ANTENNA AMP	×	—	—	×	—	SEC-68
B2555: STOP LAMP	—	×	×	—	—	SEC-70
B2556: PUSH-BTN IGN SW	—	×	×	—	—	SEC-73
B2557: VEHICLE SPEED	×	×	×	—	—	SEC-75
B2562: LOW VOLTAGE	—	×	—	—	—	BCS-88
B259A: ROOM LAMP FUSE BLOWN	—	—	—	—	—	BCS-89
B259B: DR TOUCH SENSOR	—	×	—	—	—	DLK-77
B259C: PASS TOUCH SENSOR	—	×	—	—	—	DLK-79
B2601: SHIFT POSITION	×	×	×	—	—	SEC-77
B2602: SHIFT POSITION	×	×	×	—	—	SEC-79
B2603: SHIFT POSI STATUS	×	×	×	—	—	SEC-82
B2604: PNP/CLUTCH SW	×	×	×	—	—	SEC-86
B2605: PNP/CLUTCH SW	×	×	×	—	—	SEC-89
B2608: STARTER RELAY	×	×	×	—	—	SEC-91
B260F: ENG STATE SIG LOST	×	×	×	—	—	SEC-93
B2614: BCM	—	×	×	—	—	PCS-64
B2615: BCM	—	×	×	—	—	PCS-67
B2616: BCM	—	×	×	—	—	PCS-70
B2618: BCM	—	×	×	—	—	PCS-73
B261A: PUSH-BTN IGN SW	—	×	×	—	—	PCS-75
B2621: INSIDE ANTENNA	—	×	—	—	—	DLK-81
B2622: INSIDE ANTENNA	—	×	—	—	—	DLK-84
B2623: INSIDE ANTENNA	—	×	—	—	—	DLK-87
B2626: OUTSIDE ANTENNA	—	×	—	—	—	DLK-90
B2627: OUTSIDE ANTENNA	—	×	—	—	—	DLK-92
B2628: OUTSIDE ANTENNA	—	×	—	—	—	DLK-94
B26F1: IGN RELAY OFF	×	×	×	—	—	PCS-77
B26F2: IGN RELAY ON	×	×	×	—	—	PCS-79
B26F3: START CONT RLY ON	×	×	×	—	—	SEC-95
B26F4: START CONT RLY OFF	×	×	×	—	—	SEC-97
B26F6: BCM	—	×	×	—	—	PCS-81
B26F7: BCM	×	×	×	—	—	SEC-99
B26F8: BCM	—	×	×	—	—	SEC-100
B26FC: KEY REGISTRATION	—	×	×	—	—	SEC-101
B26FF: INTELLIGENT TUNER COMM ERROR	—	×	×	—	—	DLK-96
C1704: LOW PRESSURE FL	—	—	—	—	×	WT-38
C1705: LOW PRESSURE FR	—	—	—	—	×	WT-38
C1706: LOW PRESSURE RR	—	—	—	—	×	WT-38

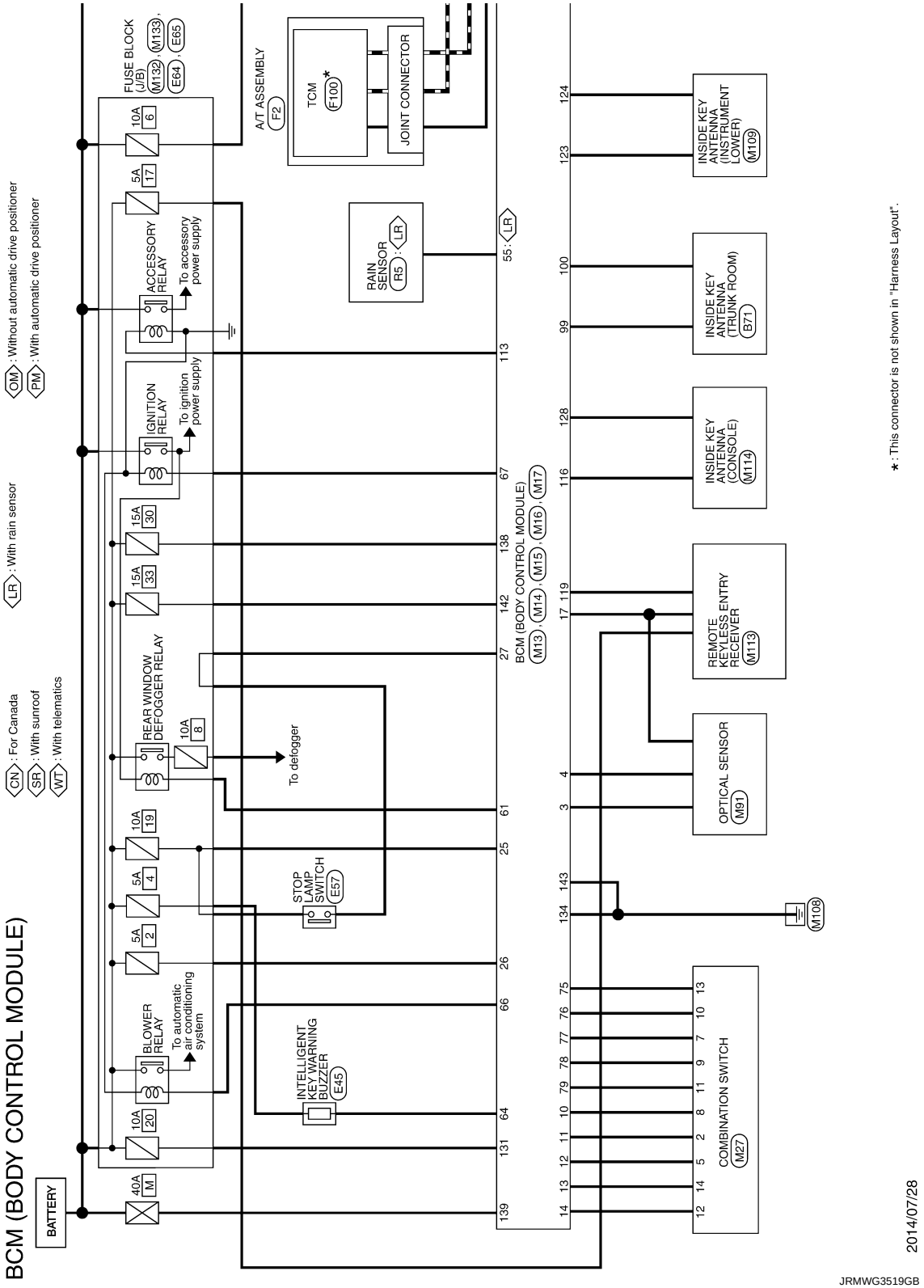
CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning display	Security indicator lamp ON	Low pressure warning lamp ON	Reference
C1707: LOW PRESSURE RL	—	—	—	—	×	WT-38
C1708: [NO - DATA] - FL	—	—	—	—	×	WT-40
C1709: [NO - DATA] - FR	—	—	—	—	×	WT-40
C1710: [NO - DATA] - RR	—	—	—	—	×	WT-40
C1711: [NO - DATA] - RL	—	—	—	—	×	WT-40
C1716: [PRESSDATA ERR] FL	—	—	—	—	×	WT-43
C1717: [PRESSDATA ERR] FR	—	—	—	—	×	WT-43
C1718: [PRESSDATA ERR] RR	—	—	—	—	×	WT-43
C1719: [PRESSDATA ERR] RL	—	—	—	—	×	WT-43
C1729: VHCL SPEED SIG ERR	—	—	—	—	×	WT-44
C1730: FLAT TIRE FL	—	—	—	—	×	WT-45
C1731: FLAT TIRE FR	—	—	—	—	×	WT-45
C1732: FLAT TIRE RR	—	—	—	—	×	WT-45
C1733: FLAT TIRE RL	—	—	—	—	×	WT-45
C1734: CONTROL UNIT	—	—	—	—	×	WT-47
C1761: TEMPERATURE DATA FL	—	—	—	—	×	WT-50
C1762: TEMPERATURE DATA FR	—	—	—	—	×	WT-50
C1763: TEMPERATURE DATA RR	—	—	—	—	×	WT-50
C1764: TEMPERATURE DATA RL	—	—	—	—	×	WT-50
C1769: CONFIG SETTING	—	—	—	—	×	WT-51
C1770: G SENSOR FL	—	—	—	—	×	WT-52
C1771: G SENSOR FR	—	—	—	—	×	WT-52
C1772: G SENSOR RL	—	—	—	—	×	WT-52
C1773: G SENSOR RR	—	—	—	—	×	WT-52

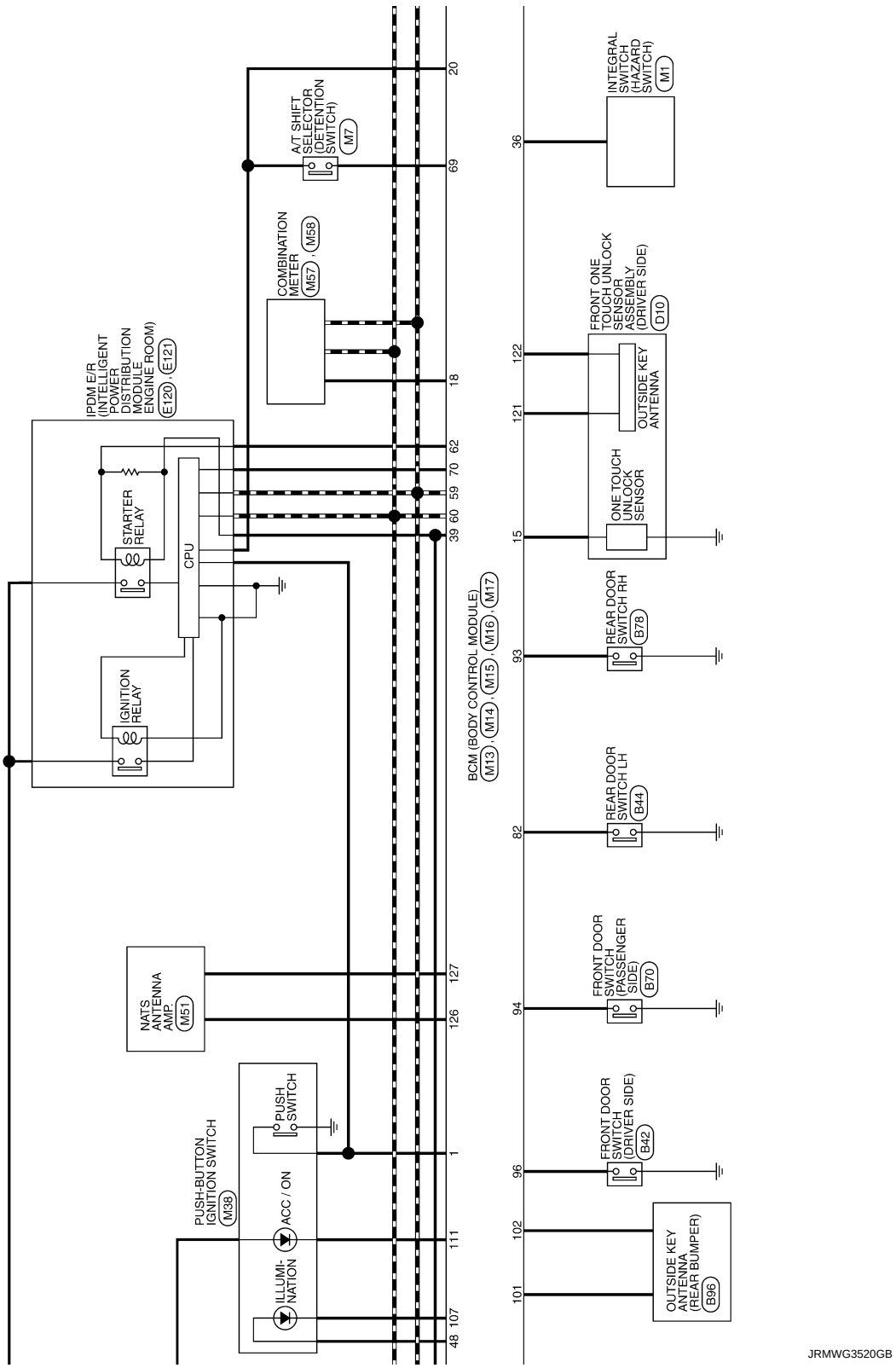
WIRING DIAGRAM

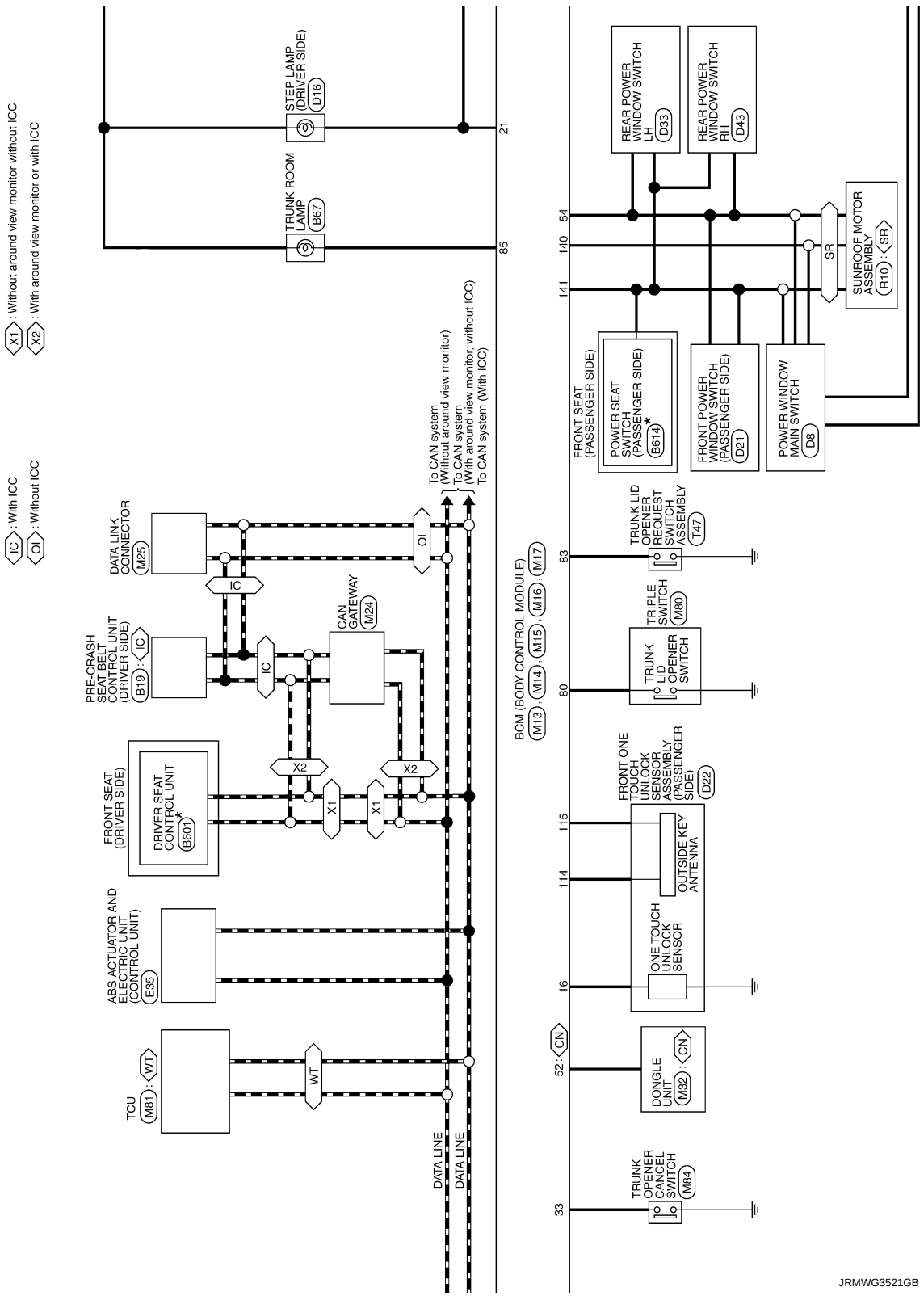
BCM

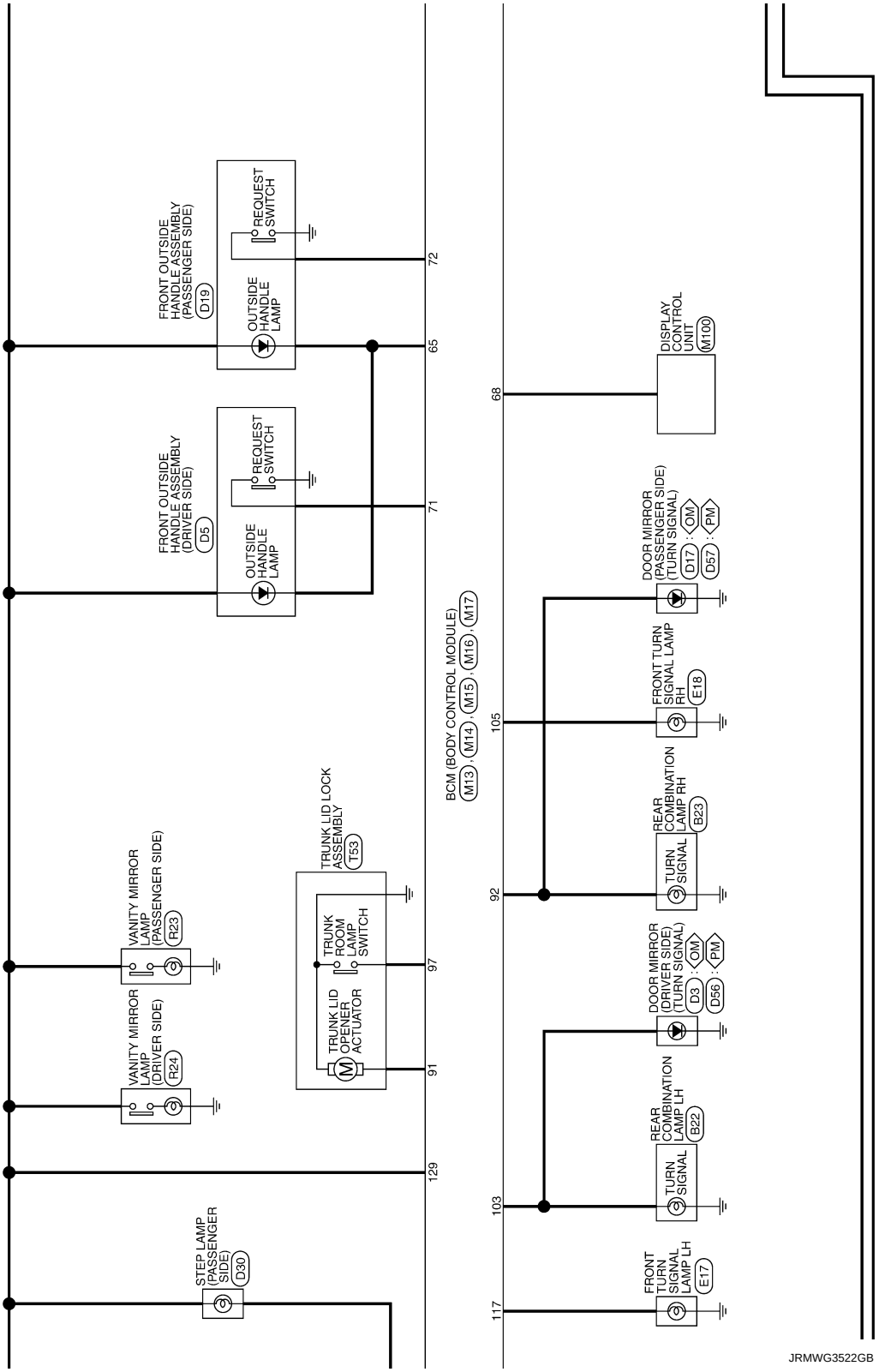
Wiring Diagram

INFOID:0000000011284351




IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) (E120), (E121)
STARTER RELAY
CPU
IGNITION RELAY
COMBINATION METER (M57), (M58)
A/T SHIFT SELECTOR (DETENTION SWITCH) (M7)
BCM (BODY CONTROL MODULE) (M13), (M14), (M15), (M16), (M17)
INTEGRAL SWITCH (HAZARD SWITCH) (M1)
FRONT ONE TOUCH UNLOCK SENSOR ASSEMBLY (DRIVER SIDE) (D10)
OUTSIDE KEY ANTENNA
ONE TOUCH UNLOCK SENSOR
REAR DOOR SWITCH RH (B78)
REAR DOOR SWITCH LH (B44)
FRONT DOOR SWITCH (PASSENGER SIDE) (B70)
FRONT DOOR SWITCH (DRIVER SIDE) (B42)
OUTSIDE KEY ANTENNA (REAR BUMPER) (B96)
NATS ANTENNA AMP. (M51)
PUSH-BUTTON IGNITION SWITCH (M38)
PUSH SWITCH
ACC / ON
ILLUMI-NATION
20
69
18
62
70
59
60
39
127
126
1
111
107
48
36
122
121
15
93
82
94
96
102
101
JRMWG3520GB


X1 : Without around view monitor without ICC
X2 : With around view monitor or with ICC
IC : With ICC
OI : Without ICC
STEP LAMP (DRIVER SIDE) D16
TRUNK ROOM LAMP B67
21
85
To CAN system (Without around view monitor)
To CAN system (With around view monitor, without ICC)
To CAN system (With ICC)
DATA LINK CONNECTOR M25
PRE-CRASH SEAT BELT CONTROL UNIT (DRIVER SIDE) B19 : IC
CAN GATEWAY M24
FRONT SEAT (DRIVER SIDE)
DRIVER SEAT CONTROL UNIT* B601
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) E35
TCU M81 : WT
DATA LINE
DATA LINE
BCM (BODY CONTROL MODULE) M13 , M14 , M15 , M16 , M17
TRUNK OPENER CANCEL SWITCH M84
DONGLE UNIT M32 : CN
ONE TOUCH UNLOCK SENSOR
OUTSIDE KEY ANTENNA
FRONT ONE TOUCH UNLOCK SENSOR ASSEMBLY (PASSENGER SIDE) D22
TRUNK LID OPENER SWITCH M80
TRUNK LID OPENER REQUEST SWITCH ASSEMBLY T47
FRONT SEAT (PASSENGER SIDE)
POWER SEAT SWITCH (PASSENGER SIDE)* B614
FRONT POWER WINDOW SWITCH (PASSENGER SIDE) D21
POWER WINDOW MAIN SWITCH D8
REAR POWER WINDOW SWITCH LH D33
REAR POWER WINDOW SWITCH RH D43
SUNROOF MOTOR ASSEMBLY R10 : SR
JRMWG3521GB


FRONT OUTSIDE HANDLE ASSEMBLY (PASSENGER SIDE) D19
OUTSIDE HANDLE LAMP
REQUEST SWITCH
FRONT OUTSIDE HANDLE ASSEMBLY (DRIVER SIDE) D5
OUTSIDE HANDLE LAMP
REQUEST SWITCH
TRUNK LID LOCK ASSEMBLY T53
TRUNK ROOM LAMP SWITCH
TRUNK LID OPENER ACTUATOR
VANITY MIRROR LAMP (PASSENGER SIDE) R23
VANITY MIRROR LAMP (DRIVER SIDE) R24
STEP LAMP (PASSENGER SIDE) D30
BCM (BODY CONTROL MODULE) M13, M14, M15, M16, M17
72
65
71
97
91
129
68
105
92
103
117
DISPLAY CONTROL UNIT M100
DOOR MIRROR (PASSENGER SIDE) (TURN SIGNAL) D17 : OM D57 : PM
FRONT TURN SIGNAL LAMP RH E18
REAR COMBINATION LAMP RH B23
TURN SIGNAL
DOOR MIRROR (DRIVER SIDE) (TURN SIGNAL) D3 : OM D56 : PM
REAR COMBINATION LAMP LH B22
FRONT TURN SIGNAL LAMP LH E17
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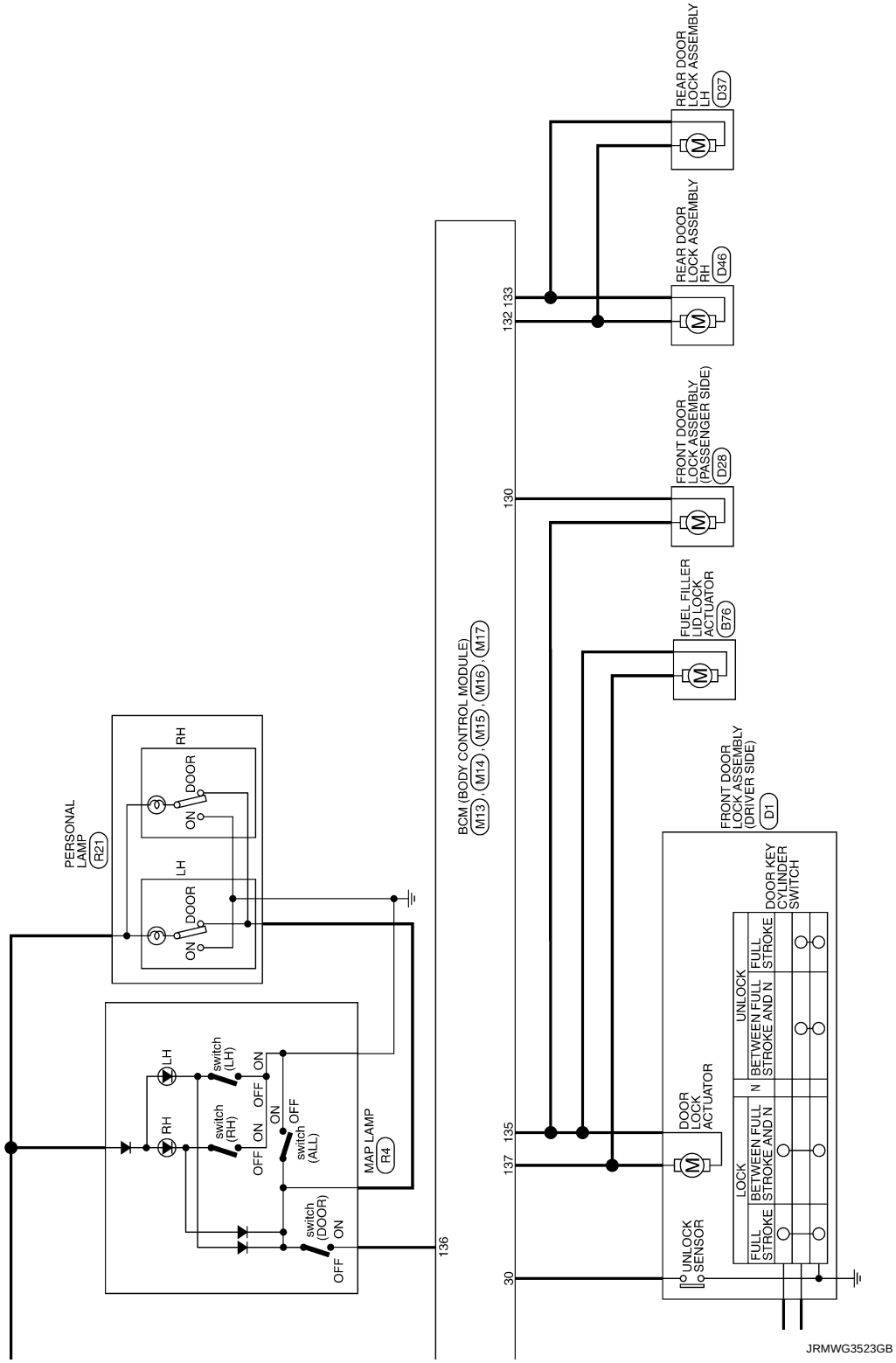
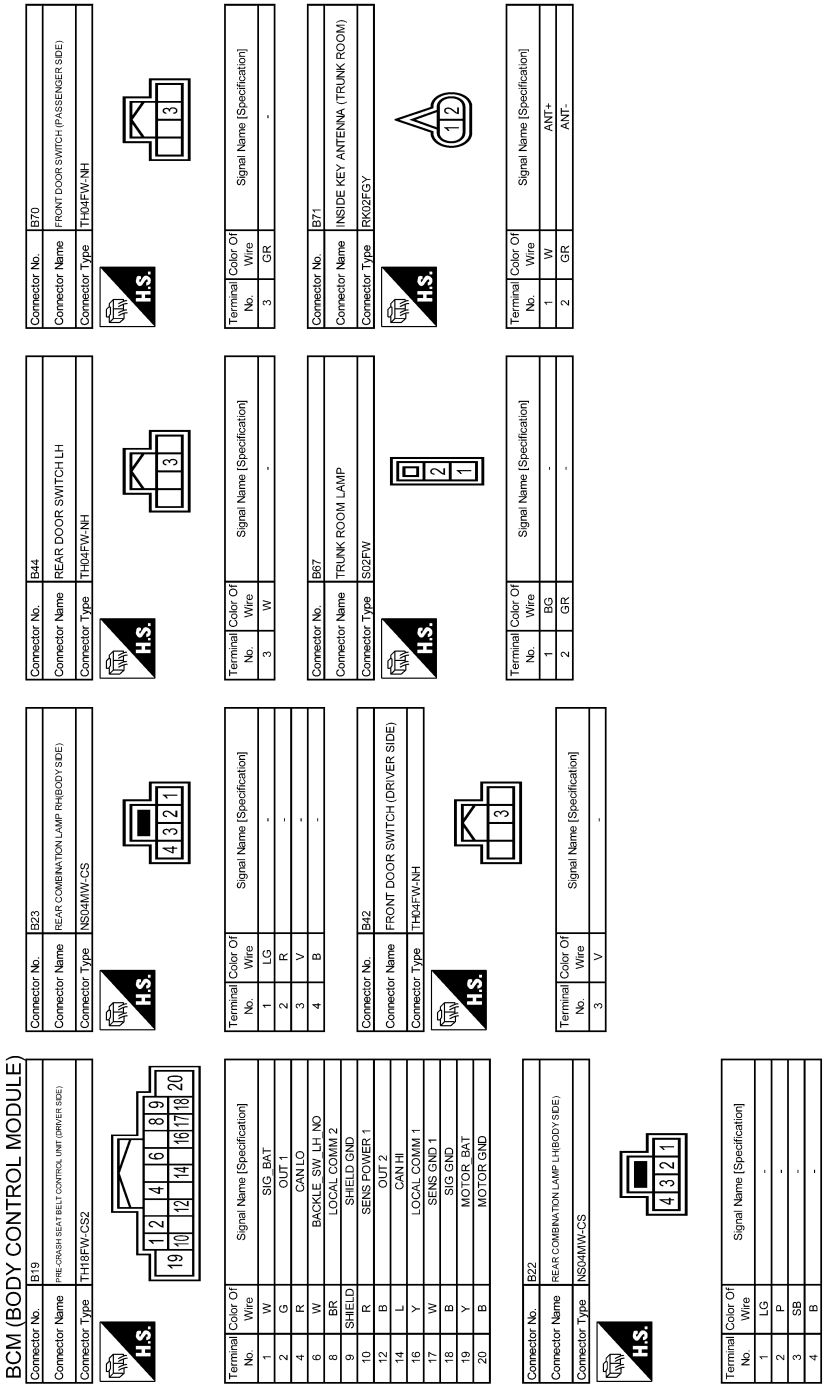

REAR DOOR LOCK ASSEMBLY LH D37
REAR DOOR LOCK ASSEMBLY RH D46
FRONT DOOR LOCK ASSEMBLY (PASSENGER SIDE) D28
FUEL FILLER LID LOCK ACTUATOR B76
FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE) D1
BCM (BODY CONTROL MODULE) M13, M14, M15, M16, M17
PERSONAL LAMP R21
MAP LAMP R4
DOOR KEY CYLINDER SWITCH
DOOR LOCK ACTUATOR
UNLOCK SENSOR
LOCK
UNLOCK
FULL STROKE
BETWEEN FULL STROKE AND N
N
RH DOOR
LH DOOR
ON
OFF
switch (RH)
switch (LH)
switch (ALL)
switch (DOOR)
132 133
130
135
137
30
136
JRMWG3523GB



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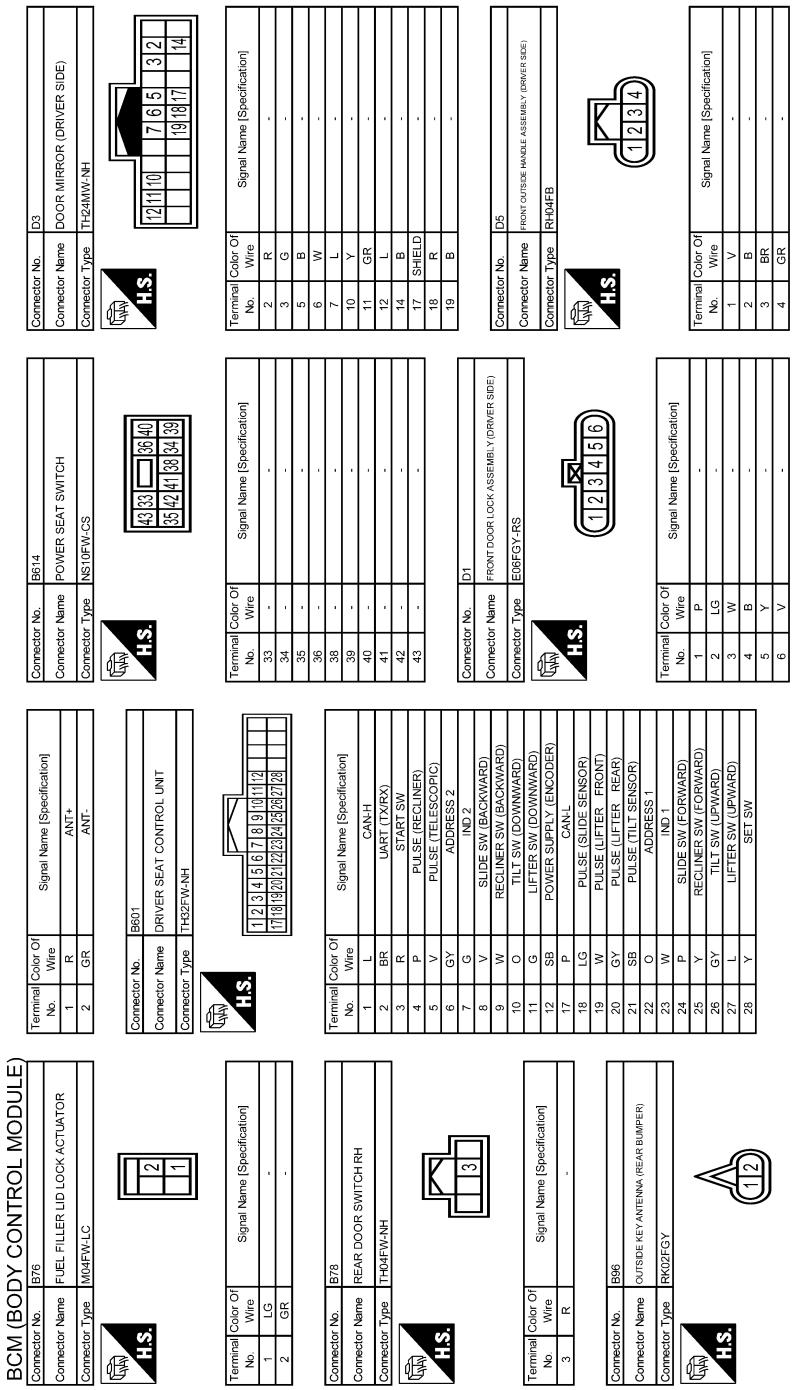

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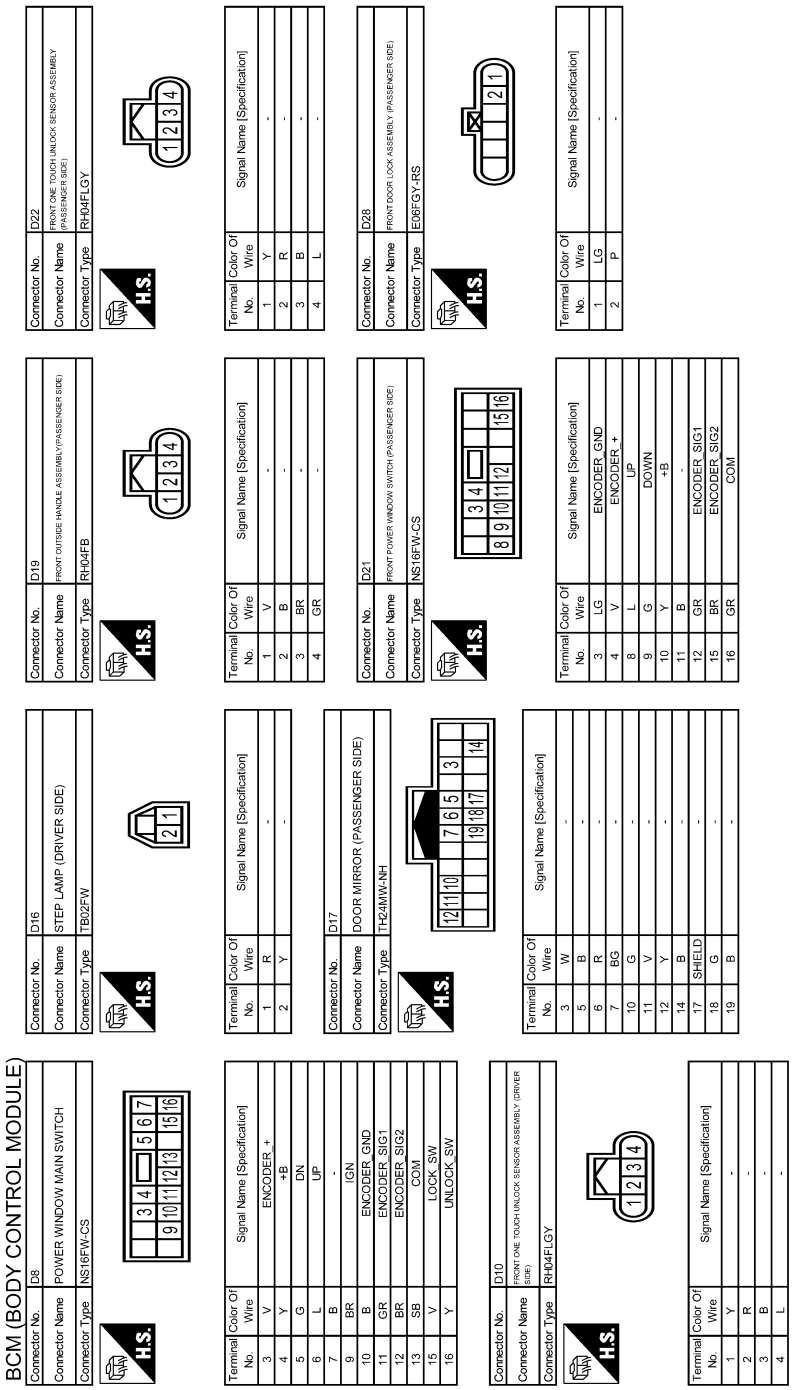

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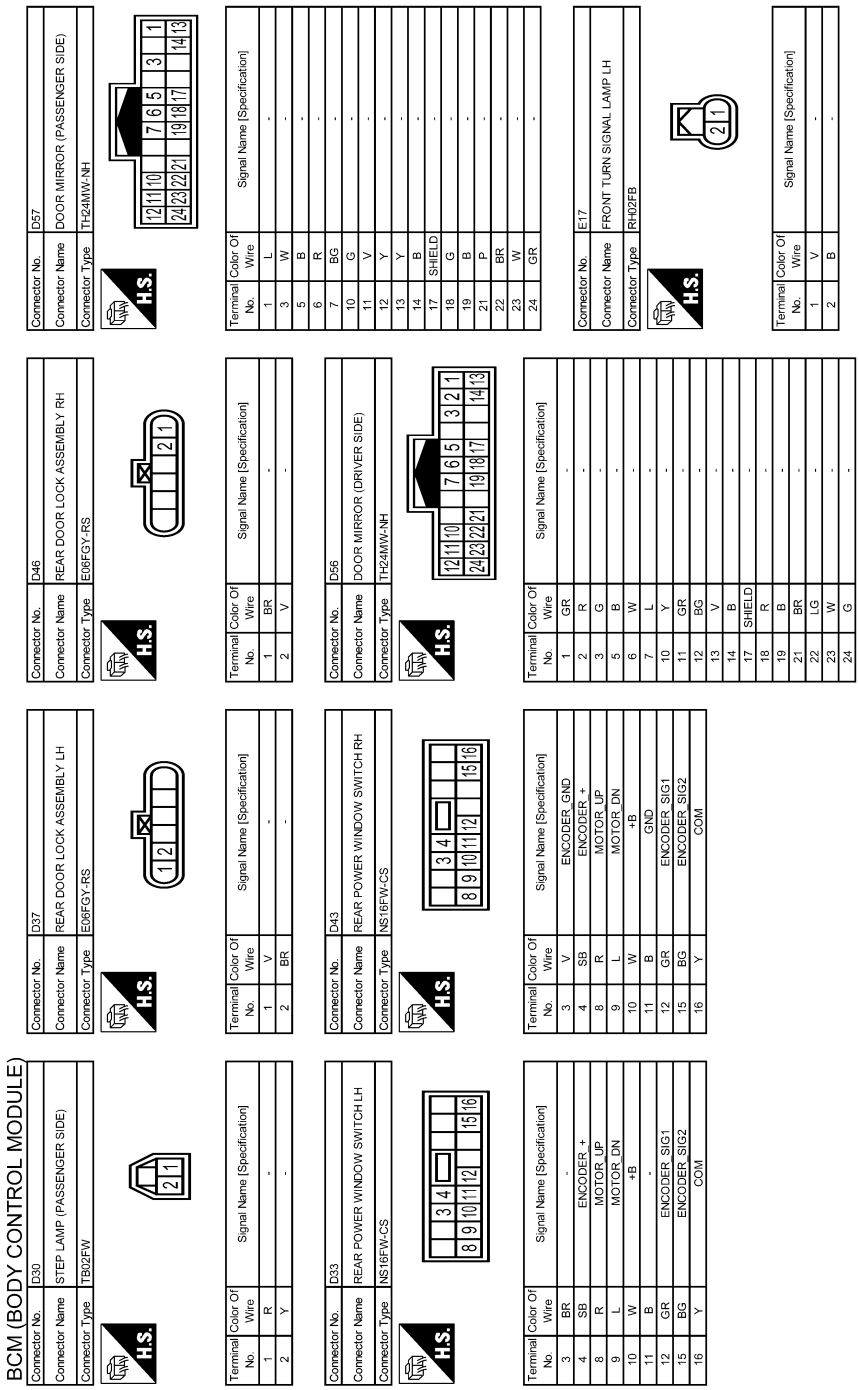

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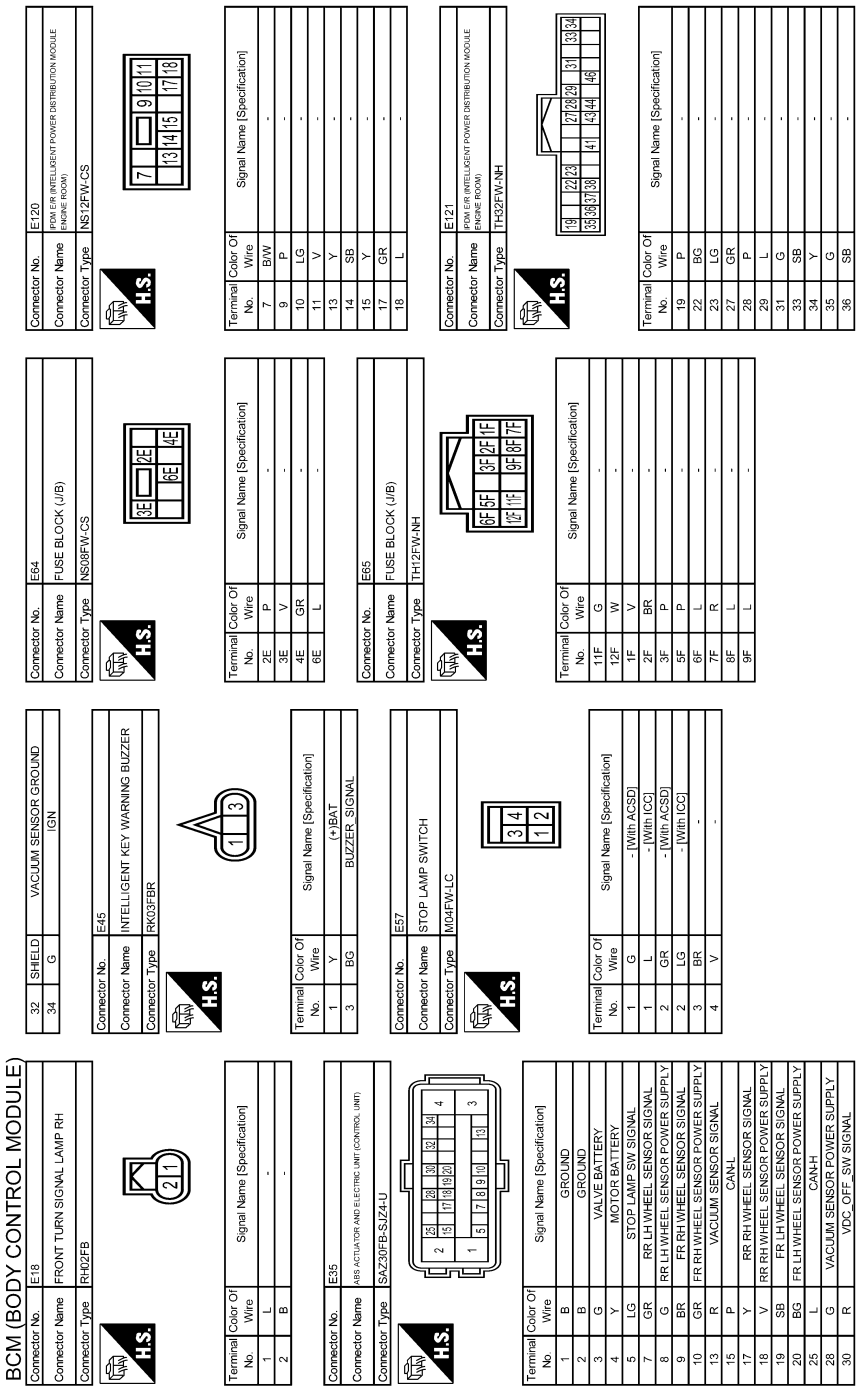

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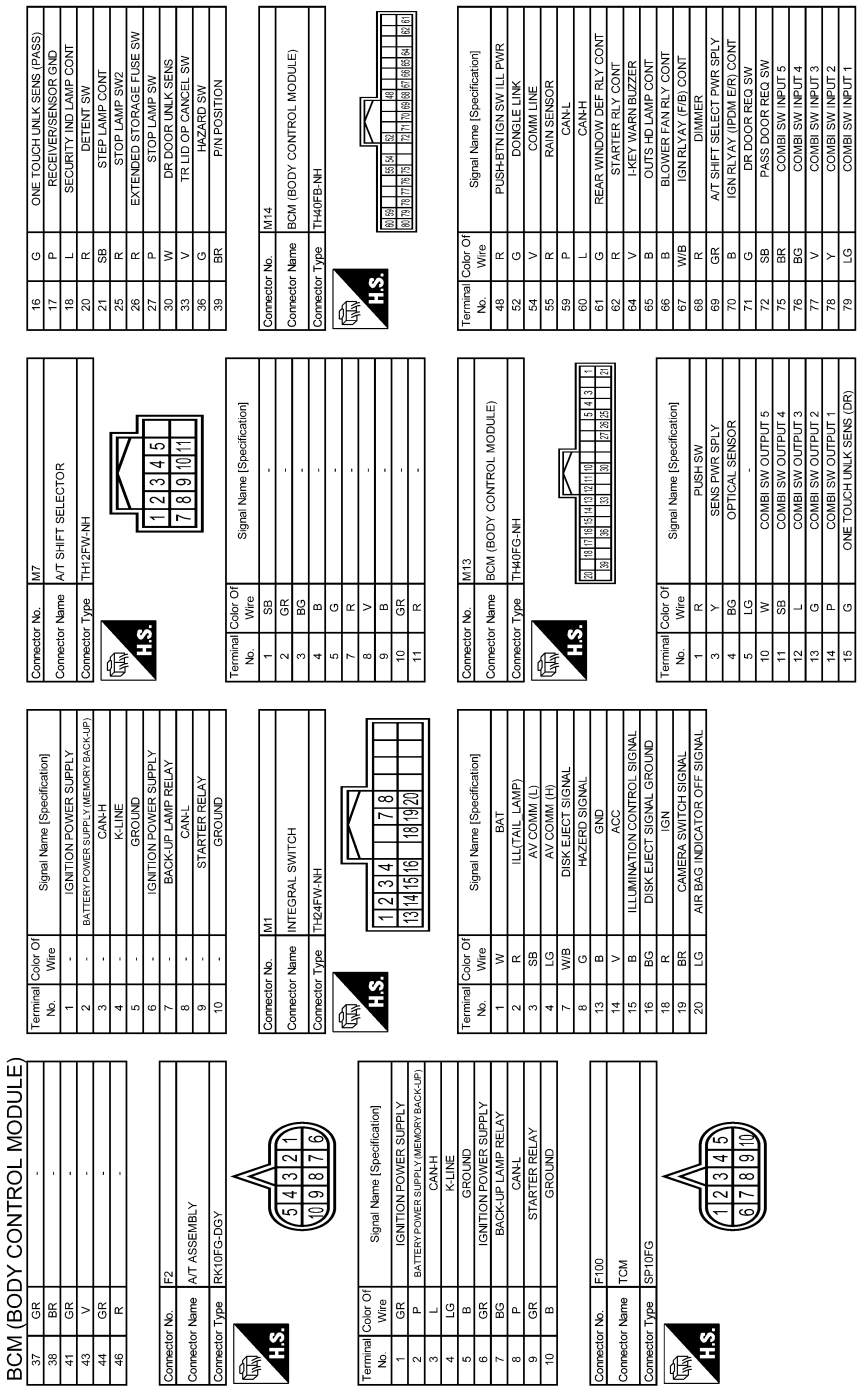
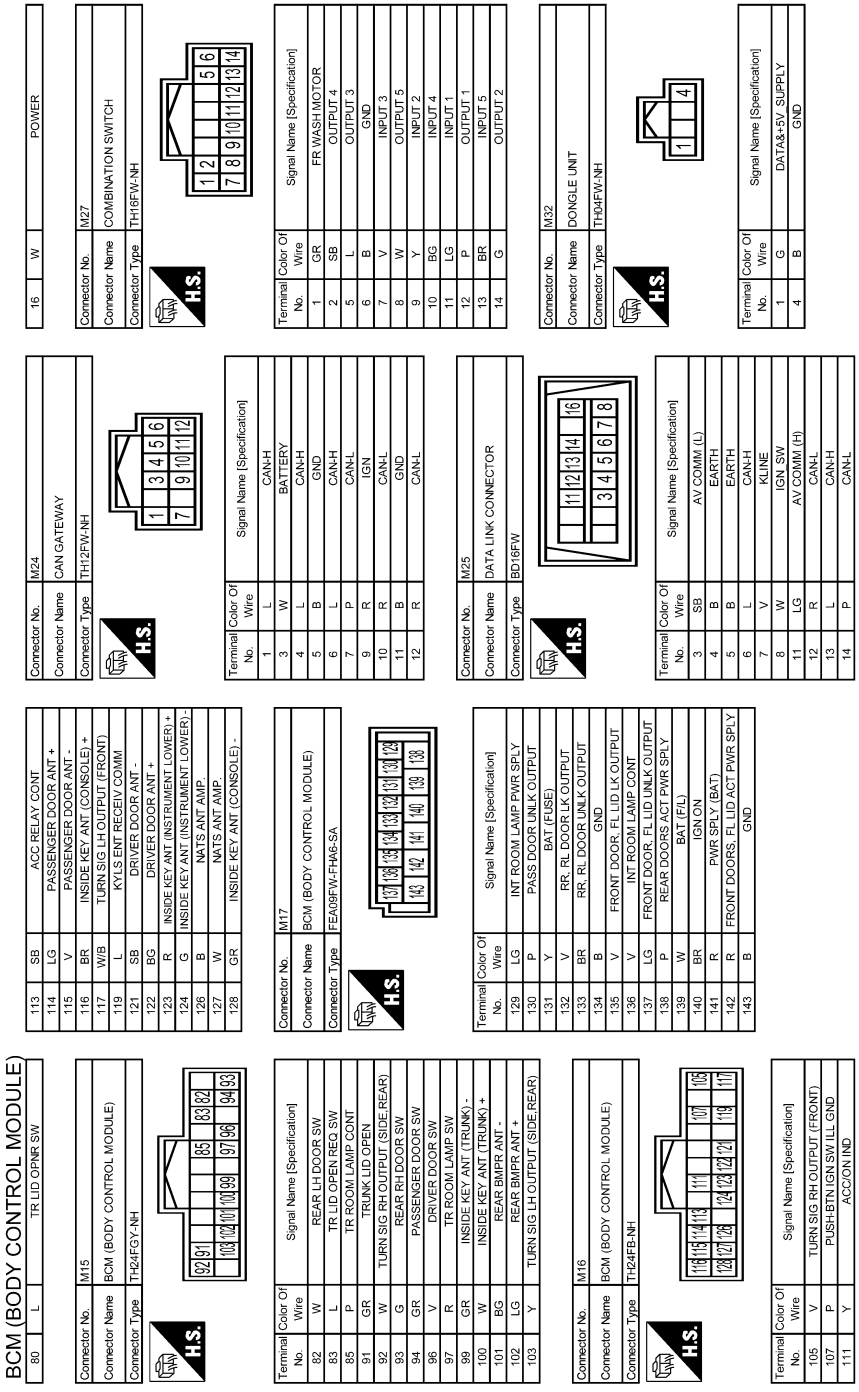

BCM (BODY CONTROL MODULE)
Connector No. M7
Connector Name A/T SHIFT SELECTOR
Connector Type TH12FW-NH
Connector No. M14
Connector Name BCM (BODY CONTROL MODULE)
Connector Type TH40FB-NH
Connector No. M1
Connector Name INTEGRAL SWITCH
Connector Type TH24FW-NH
Connector No. M13
Connector Name BCM (BODY CONTROL MODULE)
Connector Type TH40FG-NH
Connector No. F2
Connector Name A/T ASSEMBLY
Connector Type RK10FG-DGY
Connector No. F100
Connector Name TCM
Connector Type SP10FG
H.S.
JRMWG3529GB



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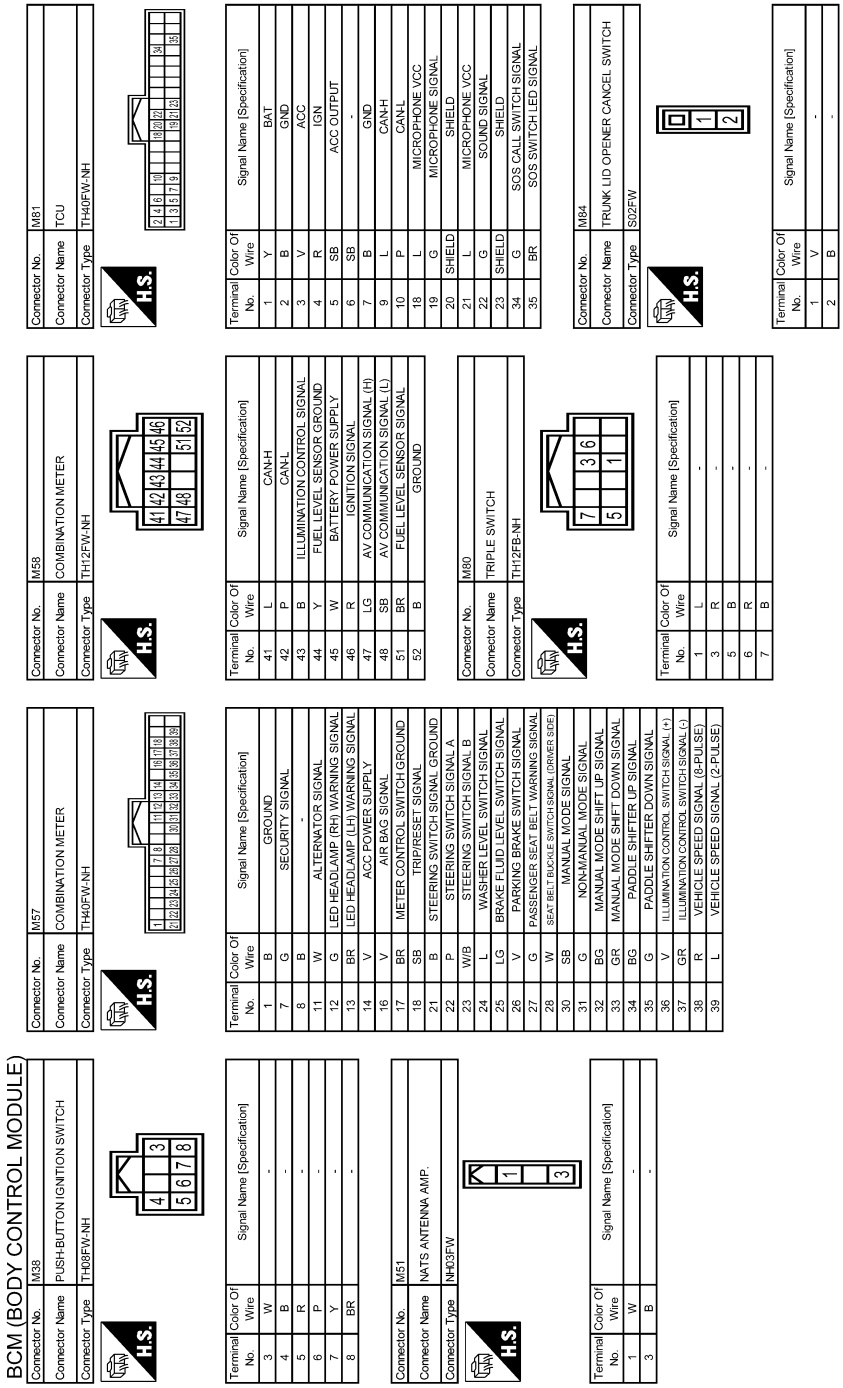


JRMWG3531GB

BCM (BODY CONTROL MODULE)

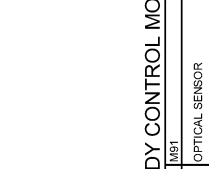
Connector No.	M91
Connector Name	OPTICAL SENSOR
Connector Type	TK03FW

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	SENSOR_POWER
2	BG	SENSOR_OUTPUT
3	P	SENSOR_GND

Connector No.	M100
Connector Name	DISPLAY CONTROL UNIT
Connector Type	TH24FW-NH

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
16	SB	AV COMM (L)
17	P	CAN-L
19	R	DIMMER SIGNAL
20	BR	REVERSE SIGNAL
22	B	GND
25	SB	-
26	BR	CAMERA SWITCH SIGNAL
28	LG	AV COMM (H)
29	L	CAN-H
30	R	IGN
31	R	VEHICLE SPEED SIGNAL (8-PULSE)
33	SB	ACC
34	Y	BAT

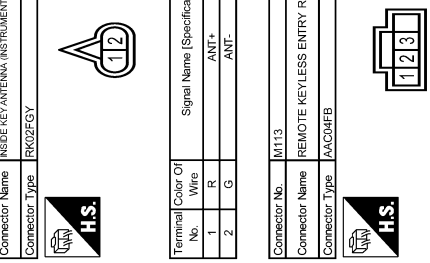
Connector No.	M109
Connector Name	INSIDE KEY ANTENNA (INSTRUMENT LOWER)
Connector Type	RK02FGY

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	ANT+
2	G	ANT-

Connector No.	M113
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Type	AAC04FB

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	+12V
2	L	SIGNAL
3	P	GND

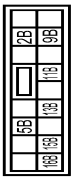
Connector No.	M114
Connector Name	INSIDE KEY ANTENNA (CONSOLE)
Connector Type	RK02FGY

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	BR	ANT+
2	GR	ANT-

Connector No.	M132
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FW-CS

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
11B	LG	-
13B	P	-
15B	Y	-
16B	Y	-
2B	B	-
5B	R	-
9B	Y	-

Connector No.	M133
Connector Name	FUSE BLOCK (J/B)
Connector Type	TH40FW-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
10C	V	-
11C	V	-
13C	L	-
14C	Y	-
15C	R	-
16C	R	-
17C	L	-
18C	BG	- [Without DRPO]
18C	P	- [With DRPO]
19C	B	-
20C	W	-
21C	L	-
22C	L	-
23C	L	-
25C	LG	-
26C	SB	-
27C	P	-
28C	W	-
29C	W	-
2C	R	-
30C	R	-
31C	W	-
32C	R	-
33C	B	-
34C	W/B	-
35C	SB	-
36C	R	-
37C	W	-
38C	SB	-
39C	V	-
3C	P	-
40C	G	-
4C	P	-
5C	P	-
6C	G	-
7C	G	-

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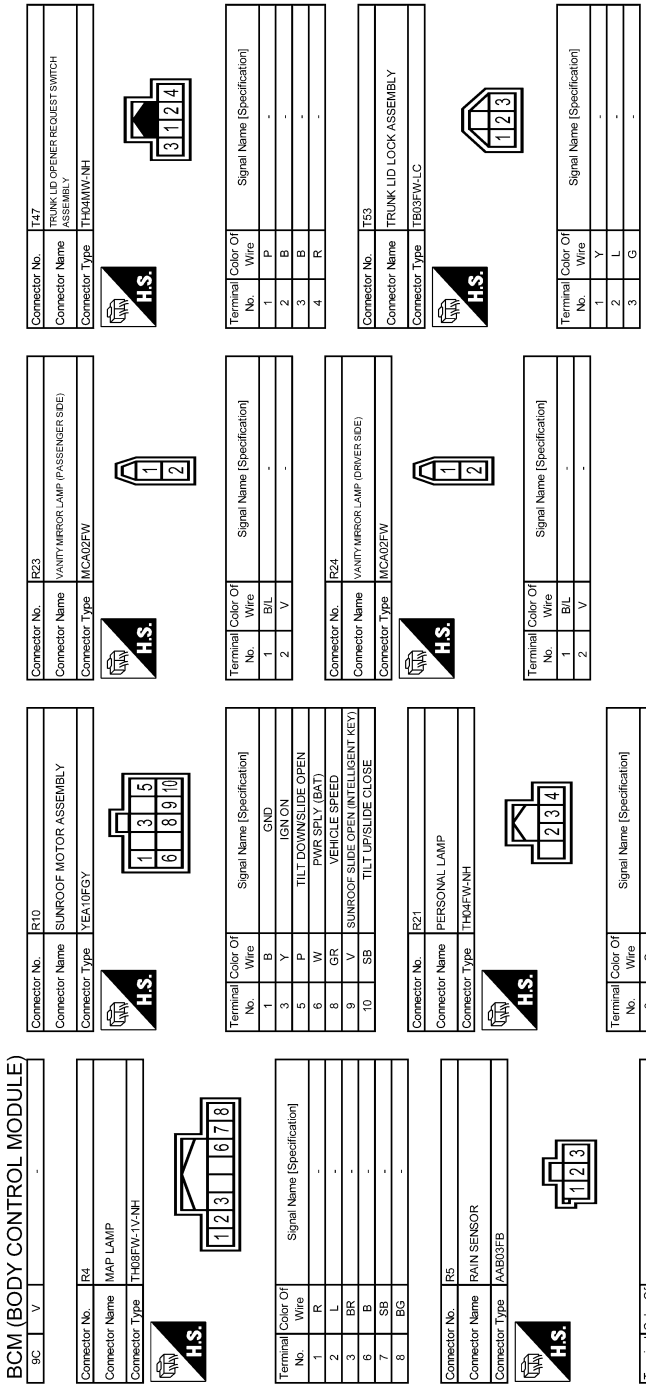


JRMWG3533GB

BASIC INSPECTION

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

Description

INFOID:0000000011284352

BEFORE REPLACEMENT

When replacing BCM, save or print current vehicle specification with CONSULT configuration before replacement.

NOTE:

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

AFTER REPLACEMENT

CAUTION:

When replacing BCM, always perform “WRITE CONFIGURATION” with CONSULT. Or not doing so, BCM control function does not operate normally.

- **Complete the procedure of “WRITE CONFIGURATION” in order.**
- **Configuration is different for each vehicle model. Confirm configuration of each vehicle model.**
- **If you set incorrect “WRITE CONFIGURATION”, incidents might occur.**

NOTE:

When replacing BCM, perform the system initialization (NATS and TPMS) (if equipped).

Work Procedure

INFOID:0000000011284353

1. SAVING VEHICLE SPECIFICATION (BCM)

CONSULT Configuration

Perform “READ CONFIGURATION” to save or print current vehicle specification. Refer to BCS-82, "Description".

NOTE:

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

>> GO TO 2.

2. SAVING VEHICLE SPECIFICATION (TPMS) (IF EQUIPPED)

CONSULT Configuration

Perform “READ CONFIGURATION” to save or print current vehicle specification. Refer to WT-36, "Work Procedure (Before Replacement)".

NOTE:

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

>> GO TO 3.

3. REPLACE BCM

Replace BCM. Refer to BCS-98, "Removal and Installation".

>> GO TO 4.

4. WRITING VEHICLE SPECIFICATION (BCM)

CONSULT Configuration

Perform “WRITE CONFIGURATION - Config file” or “WRITE CONFIGURATION - Manual selection” to write vehicle specification. Refer to BCS-82, "Work Procedure".

>> GO TO 5.

5. INITIALIZE BCM (NATS)

Perform BCM initialization (NATS).

>> GO TO 6.

6. INITIALIZE BCM (TPMS) (IF EQUIPPED)

Perform BCM initialization (TPMS). Refer to WT-36, "Work Procedure (After Replacement)".

>> WORK END

CONFIGURATION (BCM)

Description

INFOID:0000000011284354

Vehicle specification needs to be written with CONSULT because it is not written after replacing BCM. Configuration has three functions as follows.

Function		Description
Read / Write Configuration	Before Replace ECU	• Reads the vehicle configuration of current BCM. • Saves the read vehicle configuration.
	After Replace ECU	Writes the vehicle configuration with saved data.
Manual Configuration		Writes the vehicle configuration with manual selection.

NOTE:
Manual setting item: Items which need selection by vehicle specifications
Automatic setting item: Items which are written in automatically (Setting cannot be changed)
For some models and specifications, the automatic setting item may not be displayed.

CAUTION:
When replacing BCM, always perform “Re/programming, Configuration” with CONSULT. Or not doing so, BCM control function does not operate normally.
- **Complete the procedure of “Read / Write Configuration” in order.**
- **Configuration is different for each vehicle model. Confirm configuration of each vehicle model.**
- **Never perform “Read / Write Configuration” except for new BCM.**
- **If you set incorrect “Read / Write Configuration”, incidents might occur.**

Work Procedure

INFOID:0000000011284355

1. WRITING MODE SELECTION

CONSULT Configuration
Select “Re/programming, Configuration” of BCM.

When writing saved data>>GO TO 2.
When writing manually>>GO TO 3.

2. PERFORM “AFTER REPLACE ECU” OF “READ / WRITE CONFIGURATION”

CONSULT Configuration
Perform “After Replace ECU” of “Read / Write Configuration”.

>> WORK END

3. PERFORM “MANUAL CONFIGURATION”

CONSULT Configuration
1. Select “Manual Configuration”.
2. Identify the correct model and configuration list. Refer to BCS-83, "Configuration list".
3. Confirm and/or change setting value for each item.
   CAUTION:
   Thoroughly read and understand the vehicle specification. ECU control may not operate normally if the setting is not correct.
   NOTE:
   If items are not displayed, touch “Next”. Refer to BCS-83, "Configuration list" for written items and setting value.
4. Touch “Next”.
5. Touch “OK”.
   CAUTION:
   Make sure to select “OK” even if the indicated configuration of brand new BCM is same as the desirable configuration. If not, configuration which is set automatically by selecting vehicle model cannot be memorized.
6. Check that the configuration has been successfully written and touch “End”.

>> GO TO 4.

4. OPERATION CHECK

Confirm that each function controlled by BCM operates normally.

>> WORK END

Configuration list

INFOID:0000000011284356

CAUTION:

- **Thoroughly read and understand the vehicle specification. ECU control may not operate normally if the setting is not correct.**
- **The "setting value" of this vehicle is as follows: Never select any other value than the setting value shown below. (If there is only 1 item in "setting value" that means that item is the only choice for this certain vehicle.)**

SETTING ITEM		NOTE
Items	Setting value	
TR CANCEL SW	WITH ⇔ WITHOUT	• WITH: With trunk lid opener cancel switch • WITHOUT: Without trunk lid opener cancel switch
RAIN SENSOR CONFIG	WITH ⇔ WITHOUT	• WITH: With rain sensor • WITHOUT: Without rain sensor
DONGLE	WITH ⇔ WITHOUT	• WITH: For Canada models • WITHOUT: Except for Canada models
CAN ERR DETECT HPCM or VCM	WITHOUT	WITHOUT: Gasoline engine and diesel engine models
CAN ERR DETECT TELEMATICS	WITH ⇔ WITHOUT	• WITH: With telematics system • WITHOUT: Without telematics system
HBA SYSTEM	WITH ⇔ WITHOUT	• WITH: With high beam assist system • WITHOUT: Without high beam assist system
KEY FOB FREQUENCY TYPE	MODE2	MODE2: With Intelligent Key system
REMOTE KEYLESS ENTRY RECEIVER	MODE1	MODE1: With Intelligent Key system
Key Fob Type	LCK/UNLCK/TRNK/ALRM	LCK/UNLCK/TRNK/ALRM: With panic alarm
ONE TOUCH UNLOCK SENSOR	MODE1	MODE1: With one touch unlock function
INTELLIGENT KEY TYPE	MODE2	MODE2: With door request switch
ALT TYPE	GASOLINE	GASOLINE: Gasoline engine models
TRANSMISSION	AT with ABS	AT with ABS: Automatic transmission with ABS models
AUTO CRANK TIME	MODE1	MODE1: VQ37VHR engine models

⇔: Items which confirm vehicle specifications

SHIPPING MODE CANCEL OPERATION

Work Procedure

INFOID:0000000011284357

1.SHIPPING MODE CANCEL OPERATION

1. Turn ignition switch OFF.
2. Push in (switch on) the extended storage fuse switch. Refer to PG-117, "How To Check".
3. Turn ignition switch ON.
4. Turn ignition switch OFF and wait at least 2 seconds.

>> GO TO 2.

2.SHIPPING MODE CANCEL CHECK

1. Turn ignition switch ON.
2. Check that extended storage fuse warning message is not displayed on information display.

>> WORK END

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM

DTC Description

INFOID:0000000011284358

Desxription

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-42, "CAN COMMUNICATION SYSTEM : CAN Communication Signal Chart".

DTC DETECTION LOGIC

DTC	CONSULT display description	DTC Detection Condition
U1000	CAN COMM (CAN communication circuit)	When BCM cannot communicate CAN communication signal continuously for 2 seconds or more.

POSSIBLE CAUSE

CAN communication system

FAIL-SAFE

—

Diagnosis Procedure

INFOID:0000000011284359

1.PERFORM SELF DIAGNOSTIC

1. Turn 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-24, "Trouble Diagnosis Flow Chart".
NO–1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
NO–2 >> Confirmation after repair: INSPECTION END

U1010 CONTROL UNIT (CAN)

DTC Description

INFOID:0000000011284360

DTC DETECTION LOGIC

DTC	CONSULT display description	DTC Detection Condition
U1010	CONTROL UNIT (CAN) [Control unit (CAN)]	BCM detected internal CAN communication circuit malfunction.

POSSIBLE CAUSE

BCM

FAIL-SAFE

—

Diagnosis Procedure

INFOID:0000000011284361

1.REPLACE BCM

When DTC “U1010” is detected, replace BCM.

>> Replace BCM. Refer to BCS-98, "Removal and Installation".

U0415 VEHICLE SPEED

DTC Description

INFOID:0000000011284362

DTC DETECTION LOGIC

DTC	CONSULT display description	DTC Detection Condition
U0415	VEHICLE SPEED (Vehicle speed)	When the vehicle speed signal received from the ABS actuator and electric unit (control unit) remains abnormal for 2 seconds or more.

POSSIBLE CAUSE

- ABS actuator and electric unit (control unit)
- BCM

FAIL-SAFE

—

DTC CONFIRMATION PROCEDURE

1.DTC CONFIRMATION

1. Erase the DTC.
2. Turn ignition switch OFF.
3. Perform the “Self Diagnostic Result” of BCM with CONSULT, when passed 2 seconds or more after the ignition switch is turned ON.

Is any DTC detected?

YES >> Refer to BCS-87, "Diagnosis Procedure".
NO–1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
NO–2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011284363

1.ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF-DIAG RESULTS

Perform “Self-Diagnostic Result” of ABS actuator and electric unit (control unit) with CONSULT. Refer to BRC-58, "DTC Index".

Is any DTC detected?

YES >> Repair or replace the malfunctioning part.
NO >> Replace BCM. Refer to BCS-98, "Removal and Installation".

B2562 LOW VOLTAGE

DTC Description

INFOID:0000000011284364

DTC DETECTION LOGIC

DTC	CONSULT display description	DTC Detection Condition
B2562	LOW VOLTAGE (Low voltage)	When the power supply voltage to BCM remains less than 8.8 V for 120 seconds or more

POSSIBLE CAUSE

- Harness or connector (power supply circuit)
- BCM

FAIL-SAFE

—

DTC CONFIRMATION PROCEDURE

1.DTC CONFIRMATION

1. Erase DTC.
2. Turn ignition switch OFF.
3. Perform the “Self Diagnostic Result” of BCM with CONSULT, when passed 120 seconds or more after the ignition switch is turned ON.

Is any DTC detected?

YES >> Refer to BCS-88, "Diagnosis Procedure".
NO–1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
NO–2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011284365

1.CHECK POWER SUPPLY CIRCUIT

Check BCM power supply circuit. Refer to BCS-91, "Diagnosis Procedure".

Is the circuit normal?

YES >> Replace BCM. Refer to BCS-98, "Removal and Installation".
NO >> Repair the malfunctioning part.

B259A ROOM LAMP FUSE

DTC Description

INFOID:0000000011284366

DTC DETECTION LOGIC

DTC	CONSULT display description	DTC Detection Condition
B259A	ROOM LAMP FUSE BLOWN (Room lamp fuse blown)	When BCM detects that power supply voltage is supplied to fusible link battery power, but not to BCM battery fuse for 2 minutes when ignition switch is ON.

POSSIBLE CAUSE

- Fuse
- Harness or connector (power supply circuit is open or shorted)
- Harness or connector (interior room lamp power supply circuit is shorted)
- BCM

FAIL-SAFE

—

DTC CONFIRMATION PROCEDURE

1.DTC CONFIRMATION

1. Erase DTC.
2. Turn ignition switch OFF.
3. Perform the “Self Diagnostic Result” of BCM with CONSULT, after the ignition switch has been turned ON for 2 minutes or more.

Is any DTC detected?

YES >> Refer to BCS-89, "Diagnosis Procedure".
NO–1 >> To check malfunction symptom before repair: Refer to GI-42, "Intermittent Incident".
NO–2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000011284367

1.CHECK FUSE

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

Signal name	Fuse No.
Battery power supply	20

Is the fuse fusing?

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

2.CHECK BCM FUSE CIRCUIT

1. Disconnect BCM connectors.
2. Check voltage between BCM harness connector and ground.

(+)		(–)	Voltage
BCM			
Connector	Terminal		
M17	131	Ground	9 – 16 V

Is the measurement value normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".
NO >> Repair harness or connector.

3.CHECK BCM FUSE CIRCUIT FOR SHORT TO GROUND

1. Disconnect BCM connectors.

2. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M17	131		Not existed

Does continuity exist?

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

4. CHECK INTERIOR ROOM LAMP POWER SUPPLY CIRCUIT FOR SHORT TO GROUND

1. Disconnect following connectors.
- Map lamp
- Personal lamp
- Vanity mirror lamp (both sides)
- Outside handle lamp (both sides)
- Step lamp (ALL)
- Trunk room lamp

2. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M17	129		Not existed

Does continuity exist?

YES >> Repair harness or connector.
NO >> Check interior room lamp. If result is normal, replace BCM. Refer to BCS-98, "Removal and Installation".

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

INFOID:0000000011284368

1.CHECK FUSE AND FUSIBLE LINK

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

Signal name	Fuse and fusible link No.
Battery power supply	20
	M

Is the fuse fusing?

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

2.CHECK POWER SUPPLY CIRCUIT

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

(+)		(–)	Voltage
BCM			
Connector	Terminal		
M17	131	Ground	9 – 16 V
	139		

Is the measurement value normal?

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

3.CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M17	134		Existed
	143		

Does continuity exist?

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

COMBINATION SWITCH OUTPUT CIRCUIT

Diagnosis Procedure

INFOID:0000000011284369

1.CHECK OUTPUT 1 - 5 CIRCUIT FOR OPEN

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

System	BCM		Combination switch		Continuity
	Connector	Terminal	Connector	Terminal	
OUTPUT 1	M13	14	M27	12	Existed
OUTPUT 2		13		14	
OUTPUT 3		12		5	
OUTPUT 4		11		2	
OUTPUT 5		10		8	

Does continuity exist?

YES >> GO TO 2.
NO >> Repair harnesses or connectors.

2.CHECK OUTPUT 1 - 5 CIRCUIT FOR SHORT

Check for continuity between BCM harness connector and ground.

System	BCM		Ground	Continuity
	Connector	Terminal		
OUTPUT 1	M13	14	Ground	Not existed
OUTPUT 2		13		
OUTPUT 3		12		
OUTPUT 4		11		
OUTPUT 5		10		

Does continuity exist?

YES >> Repair harnesses or connectors.
NO >> GO TO 3.

3.CHECK COMBINATION SWITCH INTERNAL CIRCUIT

1. Connect BCM connector.
2. Turn ON any switch in the system that is malfunctioning.
3. Check voltage between BCM harness connector and ground.

NOTE:
Check that the combination switch outputs a signal from combination switch input system.

System	(+)		(–)	Voltage (Approx.)
	BCM			
	Connector	Terminal		
OUTPUT 1	M27	12	Ground	Refer to BCS-35, "Reference Value".
OUTPUT 2		14		
OUTPUT 3		5		
OUTPUT 4		2		
OUTPUT 5		8		

Is the measurement value normal?

YES >> Replace BCM. Refer to BCS-98, "Removal and Installation".

NO >> Replace combination switch. Refer to BCS-99, "Removal and Installation".

COMBINATION SWITCH INPUT CIRCUIT

Diagnosis Procedure

INFOID:0000000011284370

1.CHECK INPUT 1 - 5 CIRCUIT FOR OPEN

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

System	BCM		Combination switch		Continuity
	Connector	Terminal	Connector	Terminal	
INPUT 1	M14	79	M27	11	Existed
INPUT 2		78		9	
INPUT 3		77		7	
INPUT 4		76		10	
INPUT 5		75		13	

Does continuity exist?

YES >> GO TO 2.
NO >> Repair harnesses or connectors.

2.CHECK INPUT 1 - 5 CIRCUIT FOR SHORT

Check for continuity between BCM harness connector and ground.

System	BCM			Continuity
	Connector	Terminal		
INPUT 1	M14	79	Ground	Not existed
INPUT 2		78		
INPUT 3		77		
INPUT 4		76		
INPUT 5		75		

Does continuity exist?

YES >> Repair harnesses or connectors.
NO >> GO TO 3.

3.CHECK BCM OUTPUT SIGNAL

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

System	(+)		(–)	Voltage (Approx.)
	BCM			
	Connector	Terminal		
INPUT 1	M14	79	Ground	Refer to BCS-35, "Reference Value".
INPUT 2		78		
INPUT 3		77		
INPUT 4		76		
INPUT 5		75		

Is the measurement value normal?

Yes >> GO TO 4.
No >> Replace BCM. Refer to BCS-98, "Removal and Installation".

4.CHECK BCM INPUT SIGNAL

1. Connect combination switch connector.
2. Turn ON any switch in the system that is malfunction.
3. Check voltage between BCM harness connector and ground.

System	(+)		(–)	Voltage (Approx.)
	BCM			
	Connector	Terminal		
INPUT 1	M14	79	Ground	Refer to BCS-35, "Reference Value".
INPUT 2		78		
INPUT 3		77		
INPUT 4		76		
INPUT 5		75		

Is the measurement value normal?

Yes >> Replace BCM. Refer to BCS-98, "Removal and Installation".
No >> Replace combination switch. Refer to BCS-99, "Removal and Installation".

SYMPTOM DIAGNOSIS

COMBINATION SWITCH SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000011284371

1. Perform “Data Monitor” of CONSULT to check for any malfunctioning item.
2. Check the malfunction combinations.

Malfunction item: ×

Data monitor item														Malfunction combination
FR WIPER HI	FR WIPER LOW	FR WASHER SW	FR WIPER INT	INT VOLUME	TURN SIGNAL R	TURN SIGNAL L	TAIL LAMP SW	HI BEAM SW	HEAD LAMP SW 1	HEAD LAMP SW 2	PASSING SW	AUTO LIGHT SW	FR FOG SW	
	×	×			×	×								A
×			×						×		×			B
				×				×		×				C
				×			×					×		D
				×									×	E
×				×										F
		×		×										G
	×		×									×		H
						×				×	×		×	I
					×		×	×	×					J
All Items														K
If only one item is detected or the item is not applicable to the combinations A to K														L
All Items are normal														M

3. Identify the malfunctioning part from the agreed combination and repair or replace the part.

Malfunction combination	Malfunctioning part	Repair or replace
A	Combination switch INPUT 1 circuit	Inspect the combination switch output circuit applicable to the malfunctioning part. Refer to BCS-94, "Diagnosis Procedure".
B	Combination switch INPUT 2 circuit	
C	Combination switch INPUT 3 circuit	
D	Combination switch INPUT 4 circuit	
E	Combination switch INPUT 5 circuit	
F	Combination switch OUTPUT 1 circuit	Inspect the combination switch input circuit applicable to the malfunctioning part. Refer toBCS-92, "Diagnosis Procedure".
G	Combination switch OUTPUT 2 circuit	
H	Combination switch OUTPUT 3 circuit	
I	Combination switch OUTPUT 4 circuit	
J	Combination switch OUTPUT 5 circuit	
K	BCM	Replace BCM. Refer to BCS-98, "Removal and Installation".
L	Combination switch	Replace combination switch. Refer to BCS-99, "Removal and Installation".
M	Connector and harness	Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NORMAL OPERATING CONDITION

Description

INFOID:0000000011284372

SHIPPING MODE

- Shipping mode inhibits battery power consumption during transportation or storage of the vehicle. Vehicle is set to shipping mode before being shipped from the factory.
- When ignition switch is OFF, BCM operates shipping mode.
- BCM control function is limited in shipping mode. Remote keyless entry function is not operated during the shipping mode.
- For shipping mode cancel operation, refer to BCS-84, "Work Procedure".

NOTE:
Do not cancel shipping mode during storage of the vehicle. Always cancel shipping mode before delivery of the vehicle to customer.

REMOVAL AND INSTALLATION

BCM

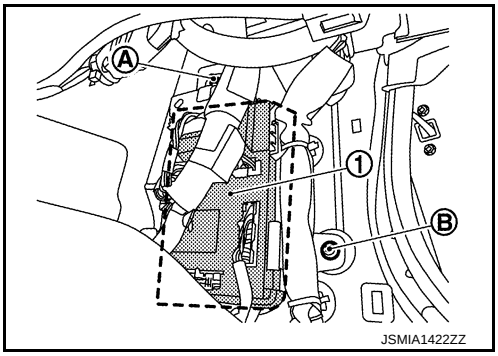
Removal and Installation

INFOID:0000000011284373

NOTE:
Before replacing BCM, perform “Before Replace ECU” of “Read / Write Configuration” to save or print current vehicle specification. Refer to BCS-80, "Description".

REMOVAL

1. Disconnect the battery cable from the negative terminal.
2. Remove the dash side finisher RH. Refer to INT-28, "DASH SIDE FINISHER : Removal and Installation".
3. Remove the BCM mounting nut Ⓐ and mounting bolt Ⓑ.
4. Disconnect the harness connectors from the BCM ①.



INSTALLATION
Install in the reverse order of removal.
CAUTION:
Be sure to perform “After Replace ECU” of “Read / Write Configuration” or “Manual Configuration” when replacing BCM. Refer to BCS-80, "Description".
NOTE:
- Be sure to perform the system initialization (NATS) when replacing BCM.
- Be sure to perform the system initialization (TPMS) when replacing BCM.

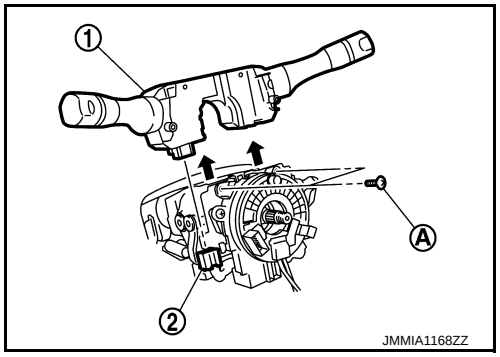
COMBINATION SWITCH

Removal and Installation

INFOID:0000000011284374

REMOVAL

1. Remove steering column cover. Refer to IP-13, "Removal and Installation".
2. Remove screws Ⓐ and disconnect connector ② then pull up combination switch ① to remove it.



INSTALLATION

Install in the reverse order of removal.