SECTION BCS
BODY CONTROL SYSTEM

CONTENTS

BCM

PRECAUTION

PRECAUTIONS

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

INFOID:0000000012548380

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

WARNING:

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

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

WARNING:

- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery or batteries, and wait at least three minutes before performing any service.**

SYSTEM DESCRIPTION

COMPONENT PARTS

BODY CONTROL SYSTEM

BODY CONTROL SYSTEM : Component Parts Location

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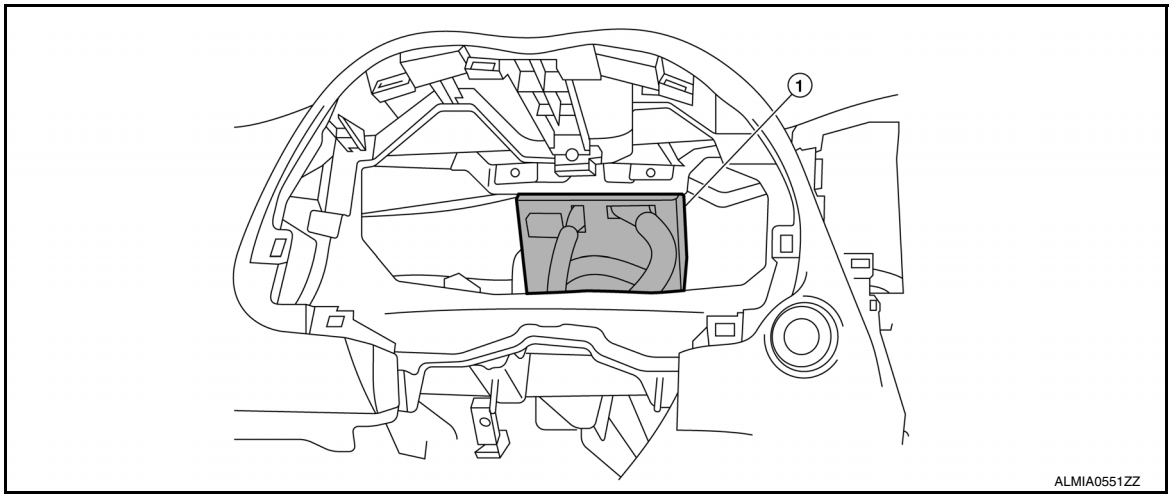

1. BCM (view with combination meter removed)

COMBINATION SWITCH READING SYSTEM

COMBINATION SWITCH READING SYSTEM : Component Parts Location

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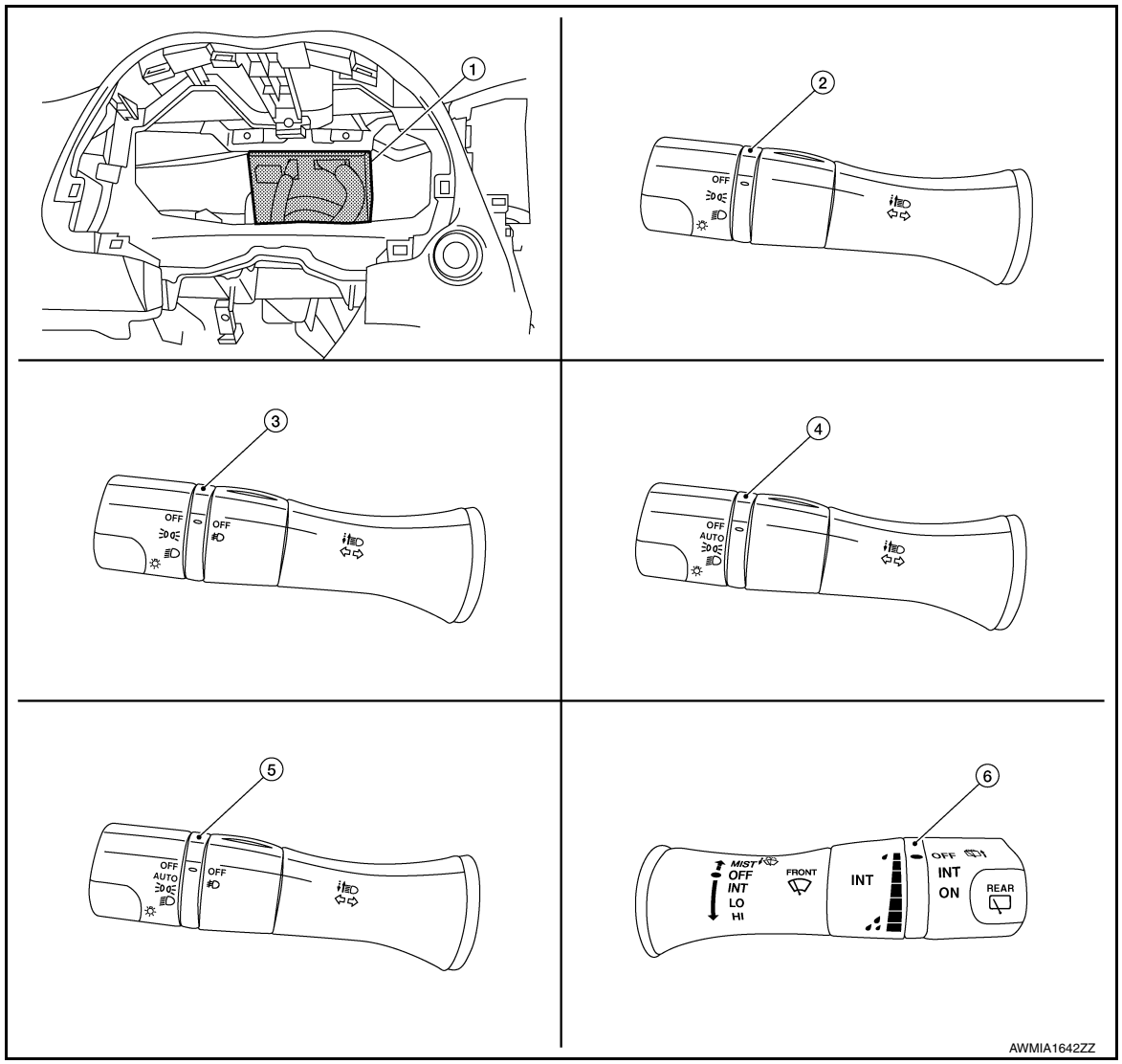

1. BCM (view with combination meter removed)
2. Combination switch (lighting and turn signal) (without auto light and front fog lamps)
3. Combination switch (lighting and turn signal) (without auto light, with front fog lamps)
4. Combination switch (lighting and turn signal) (with auto light, without fog lamps)
5. Combination switch (lighting and turn signal) (with auto light and front fog lamps)
6. Combination switch (wiper and washer)

POWER CONSUMPTION CONTROL SYSTEM

POWER CONSUMPTION CONTROL SYSTEM : Component Parts Location

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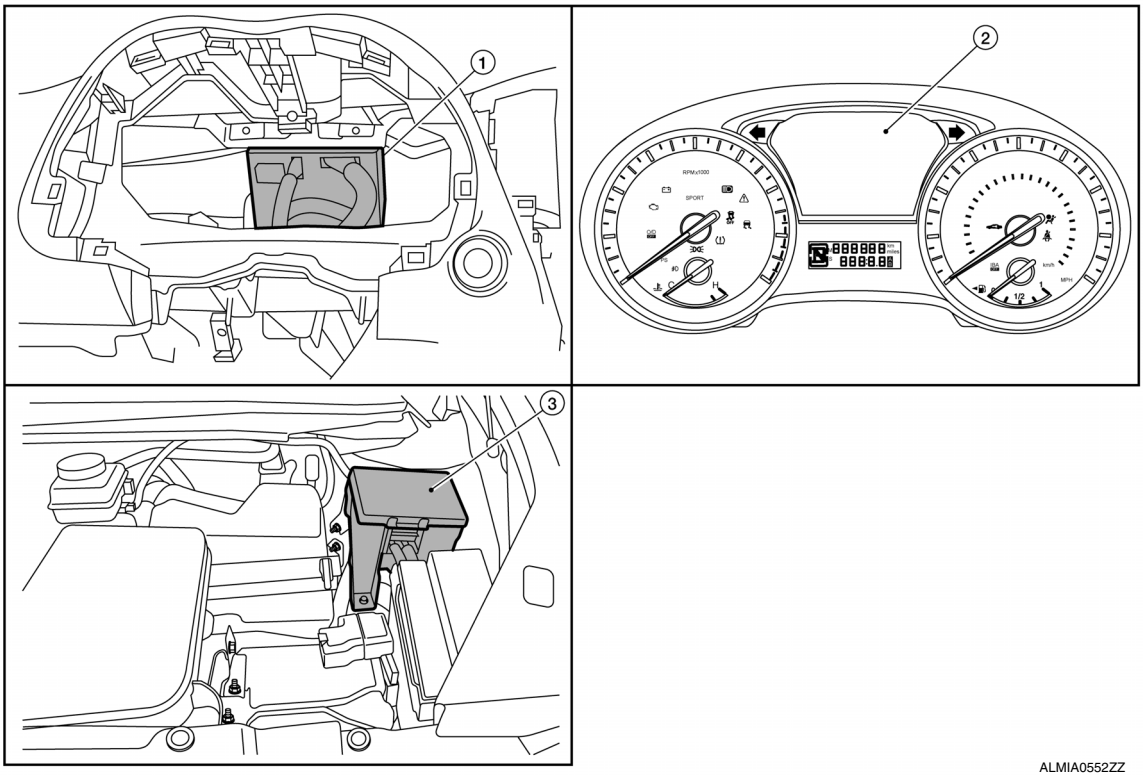

ALMIA0552ZZ

1. BCM (view with combination meter removed)
2. Combination meter
3. IPDM E/R

SYSTEM
BODY CONTROL SYSTEM
BODY CONTROL SYSTEM : System Description

INFOID:0000000012548384

OUTLINE

- BCM (body control module) controls various electrical components. It receives the information required from CAN communication and the signals received from each switch and sensor.
- BCM has a combination switch reading function for reading the status of combination switches (light, turn signal, wiper and washer) in addition to functions for controlling the operation of various electrical components. It also has a signal transmission function for other systems, and a power consumption control function that reduces the power consumption with the ignition switch OFF.
- BCM is equipped with a diagnosis function that operates with CONSULT and allows for various settings to be changed.

BCM FUNCTION LIST

System	Refer to
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-12, "POWER CONSUMPTION CONTROL SYSTEM : System Description"
Shipping mode control system	BCS-14, "SHIPPING MODE CONTROL SYSTEM : System Description"
Auto light system (if equipped)	EXL-9, "AUTO LIGHT SYSTEM : System Description"
Headlamp system	EXL-8, "HEADLAMP SYSTEM : System Description"
Daytime running light system (if equipped)	EXL-10, "DAYTIME RUNNING LIGHT SYSTEM : System Description"
Front fog lamp system (if equipped)	EXL-11, "FRONT FOG LAMP SYSTEM : System Description"
Turn signal and hazard warning lamps system	EXL-10, "TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM : System Description"
Parking, license plate and tail lamps system	EXL-11, "PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM : System Description"
Trailer tow system (if equipped)	EXL-12, "TRAILER TOW SYSTEM : System Description"
Exterior lamp battery saver system	EXL-8, "HEADLAMP SYSTEM : System Description"
Interior room lamp battery saver system	INL-6, "INTERIOR ROOM LAMP CONTROL SYSTEM : System Description"
Interior room lamp control system	INL-6, "INTERIOR ROOM LAMP CONTROL SYSTEM : System Description"
Front wiper and washer system	WW-9, "FRONT WIPER AND WASHER SYSTEM : System Description"
Rear wiper and washer system	WW-12, "REAR WIPER AND WASHER SYSTEM : System Description"
Warning chime system	WCS-6, "WARNING CHIME SYSTEM : System Description"
Door lock system	DLK-19, "System Description"
Back door open system	DLK-38, "System Description"
Nissan vehicle immobilizer system (NVIS)	SEC-12, "NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS : System Description"
Vehicle security system	DLK-34, "WARNING FUNCTION : System Description"
Panic alarm	
Rear window defogger system	DEF-6, "System Description"

System		Refer to
Intelligent Key system/engine start system	Door lock function	• DLK-22, "DOOR LOCK FUNCTION : System Description" (door request switch) • DLK-22, "DOOR LOCK FUNCTION : System Description" (Intelligent Key)
	Back door open function	• DLK-25, "BACK DOOR OPEN FUNCTION : System Description" (back door request switch) • DLK-25, "BACK DOOR OPEN FUNCTION : System Description" (Intelligent Key)
	Warning function	DLK-34, "WARNING FUNCTION : System Description"
	Key reminder function	DLK-29, "KEY REMINDER FUNCTION : System Description"
	Engine start function	SEC-9, "INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION : System Description"
Power window system		• PWC-10, "System Description" (LH front only auto down) • PWC-68, "System Description" (LH & RH front auto up/down)
RAP (retained accessory power) system		BCS-28, "RETAINED PWR : CONSULT Function (BCM - RETAINED PWR)"
TPMS (tire pressure monitoring system)		WT-9, "System Description"

COMBINATION SWITCH READING SYSTEM

COMBINATION SWITCH READING SYSTEM : System Diagram

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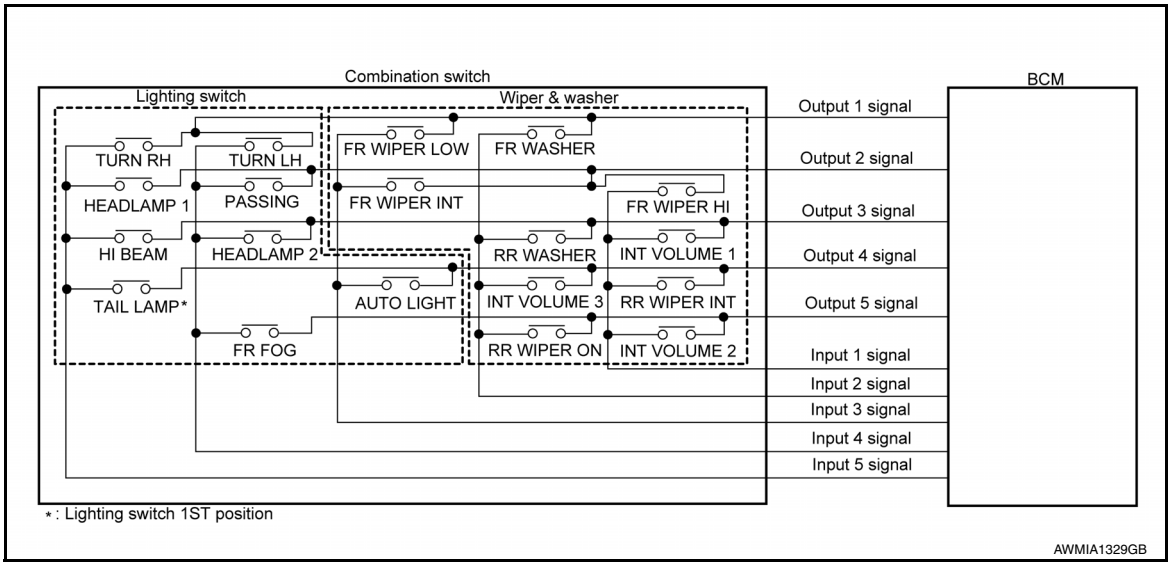


COMBINATION SWITCH READING SYSTEM : System Description

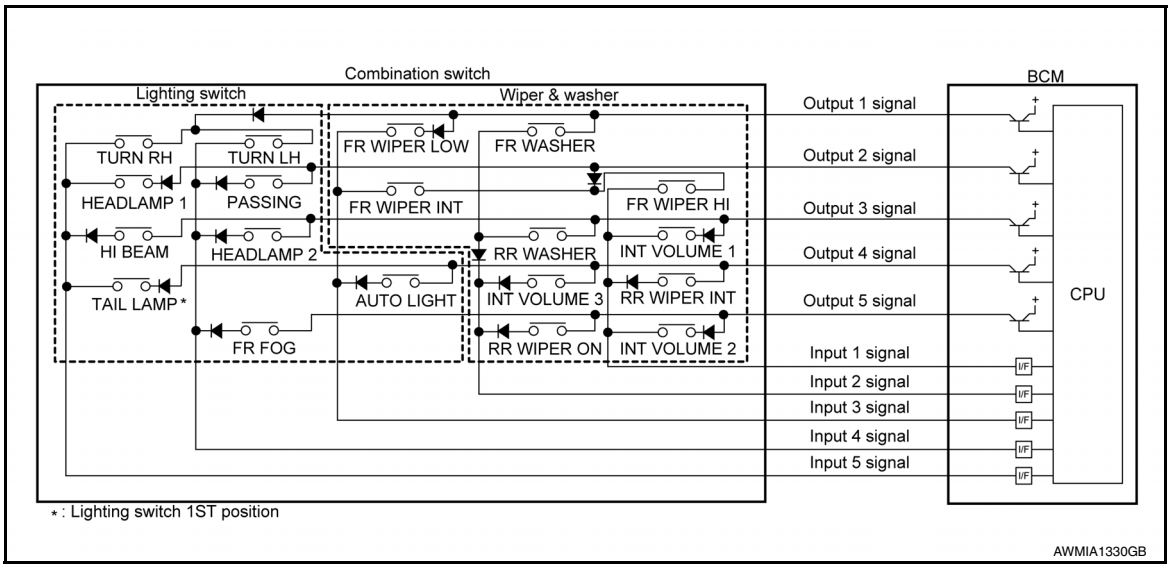
INFOID:0000000012548386

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) and reads a maximum of 20 switch states.

COMBINATION SWITCH MATRIX

Combination switch circuit



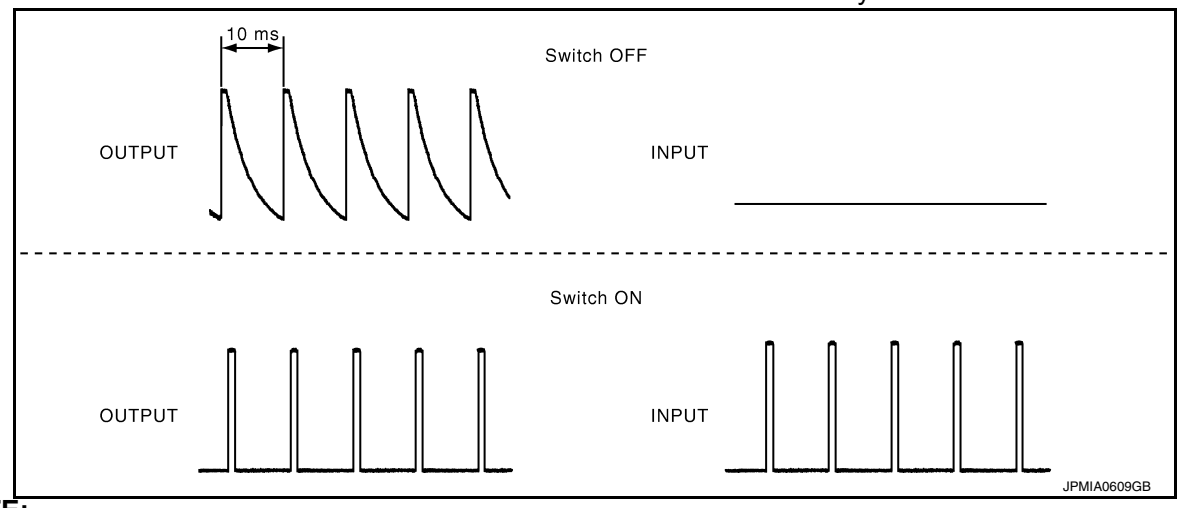
Combination switch INPUT-OUTPUT system list

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

COMBINATION SWITCH READING FUNCTION

Description

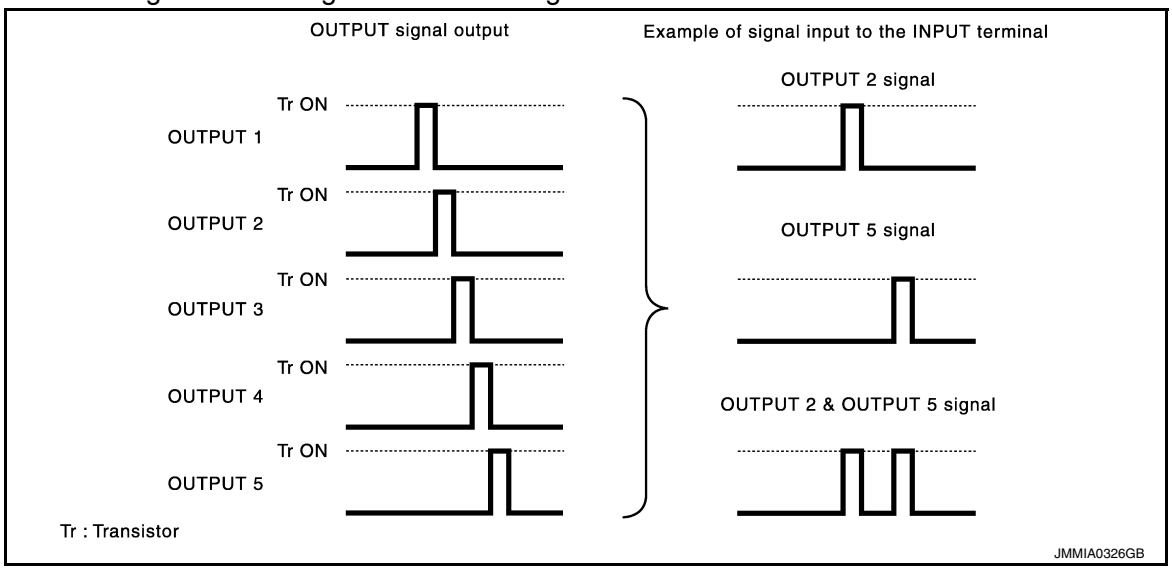
- BCM reads the status of the combination switch at 10 ms intervals normally.



NOTE:
BCM reads the status of the combination switch at 60 ms intervals 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 1 → 2 → 3 → 4 → 5, 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.

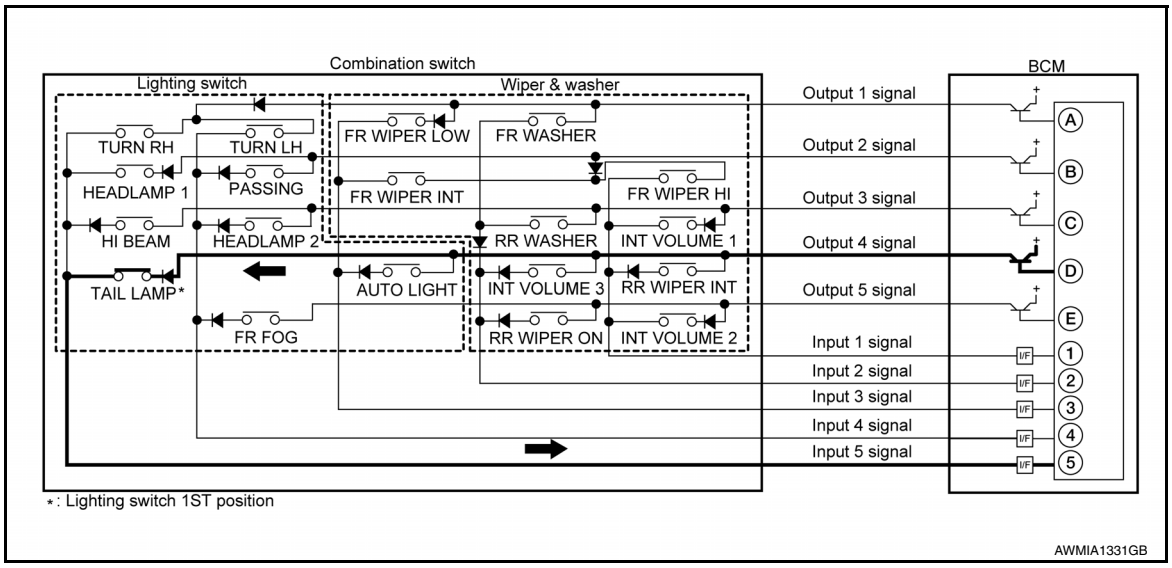


Operation Example

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 (TAIL LAMP) is turned ON

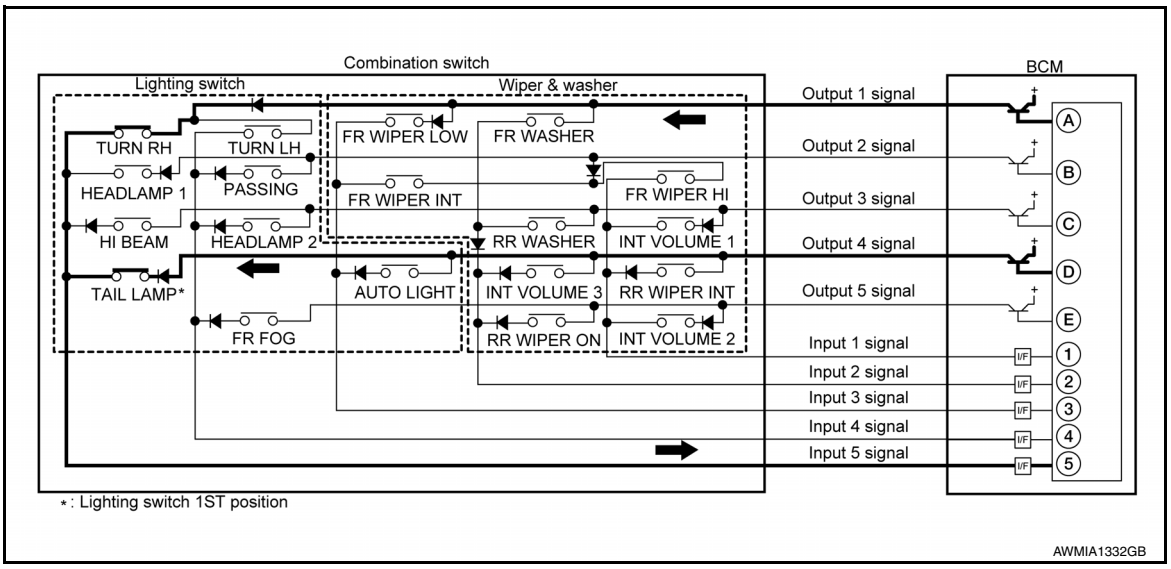
- The circuit between OUTPUT 4 and INPUT 5 is formed when the TAIL LAMP switch is turned ON.



- BCM detects the combination switch status signal “5D” when the signal of OUTPUT 4 is input to INPUT 5.
- BCM judges that the TAIL LAMP switch is ON when the signal “5D” is detected.

Example 2: When some switches (TURN RH, TAIL LAMP) are turned ON

- The circuits between OUTPUT 1 and INPUT 5 and between OUTPUT 4 and INPUT 5 are formed when the TURN RH switch and TAIL LAMP switch are turned ON.



- BCM detects the combination switch status signal “5AD” when the signals of OUTPUT 1 and OUTPUT 4 are input to INPUT 5.
- BCM judges that the TURN RH switch and TAIL LAMP switch are ON when the signal “5AD” is detected.

WIPER INTERMITTENT DIAL POSITION SETTING (FRONT WIPER INTERMITTENT OPERATION)

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

Wiper intermittent dial position	Switch status		
	INT VOLUME 1	INT VOLUME 2	INT VOLUME 3
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

SIGNAL BUFFER SYSTEM

SIGNAL BUFFER SYSTEM : System Diagram

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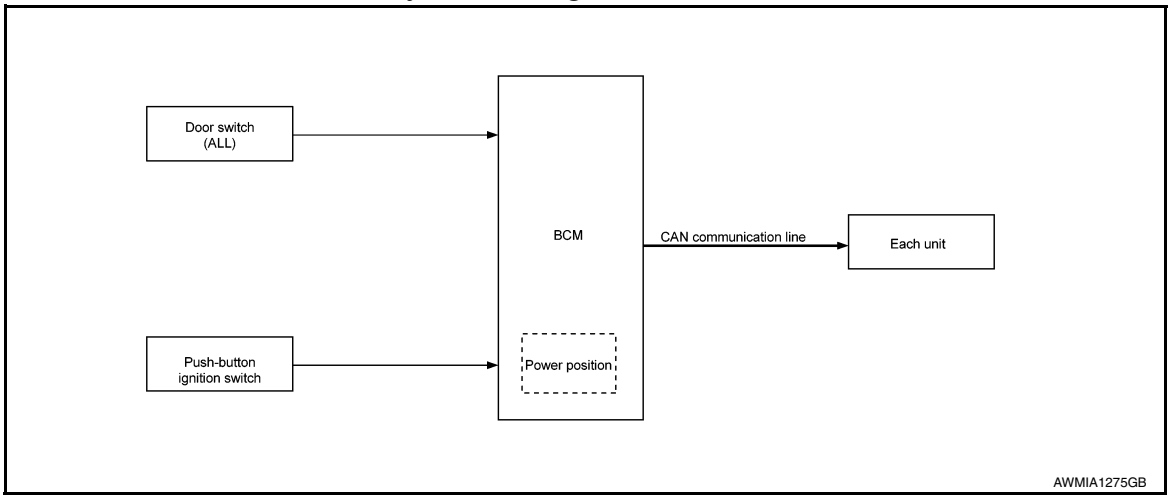


SIGNAL BUFFER SYSTEM : System Description

INFOID:0000000012548388

OUTLINE

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

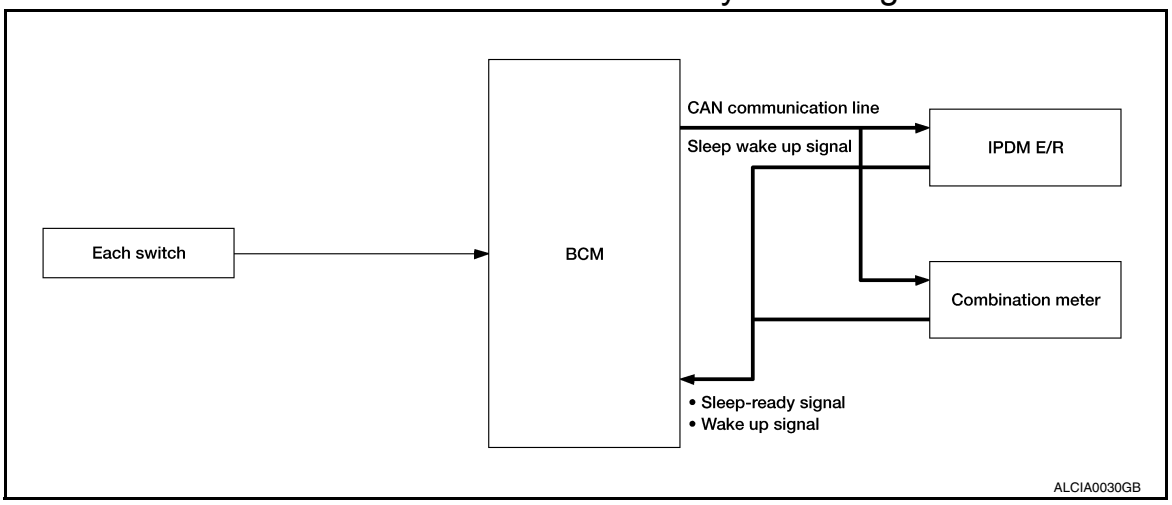
Signal transmission function list

Signal name	Input	Output	Description
• Ignition switch ON signal • Ignition switch signal	Engine switch (push switch)	IPDM E/R (CAN)	Inputs the push-button ignition switch (push switch) signal and transmits the ignition switch status judged with BCM via CAN communication.
Door switch signal	Any door switch	• Combination meter (CAN) • IPDM E/R (CAN)	Inputs the door switch signal and transmits it via CAN communication.

POWER CONSUMPTION CONTROL SYSTEM

POWER CONSUMPTION CONTROL SYSTEM : System Diagram

INFOID:0000000012548389



POWER CONSUMPTION CONTROL SYSTEM : System Description

INFOID:0000000012548390

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 and combination meter) 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 each switch changes from 10 ms interval to 60 ms interval.

Sleep mode activation

- BCM receives the sleep-ready signal (ready) from IPDM E/R and combination meter 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 wakeup signal. BCM is in CAN communication sleep mode.
- BCM is in the low power consumption mode and performs 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 • Ignition switch: OFF • Vehicle security system alarm and panic alarm : No operation • Warning lamp: Not operation • Intelligent Key system buzzer: No operation • Brake switch: OFF • Turn signal indicator lamp: No operation • Exterior lamp: OFF • Door lock status: No change • CONSULT communication status: No communication • Meter display signal : Non-transmission • Door switch status: No change • Rear window defogger: OFF	• Interior room lamp battery saver: Time out • RAP system: OFF • Power window switch communication: No transmission • Push-button ignition switch (push switch) illumination: OFF • NATS: No operation • Remote keyless entry receiver communication status: No communication • Tire pressure monitoring system: Stop

Wake-up operation

- BCM transmits the sleep wake up signal (wake up) to each unit when any of the CAN wake-up conditions are fulfilled. It changes from the low power consumption mode or the CAN communication sleep mode to the normal mode.
- Each unit starts the transmission of CAN communication with the sleep wake up signal. In addition, the combination meter transmits the wake up signal to BCM via CAN communication to report the CAN communication start.

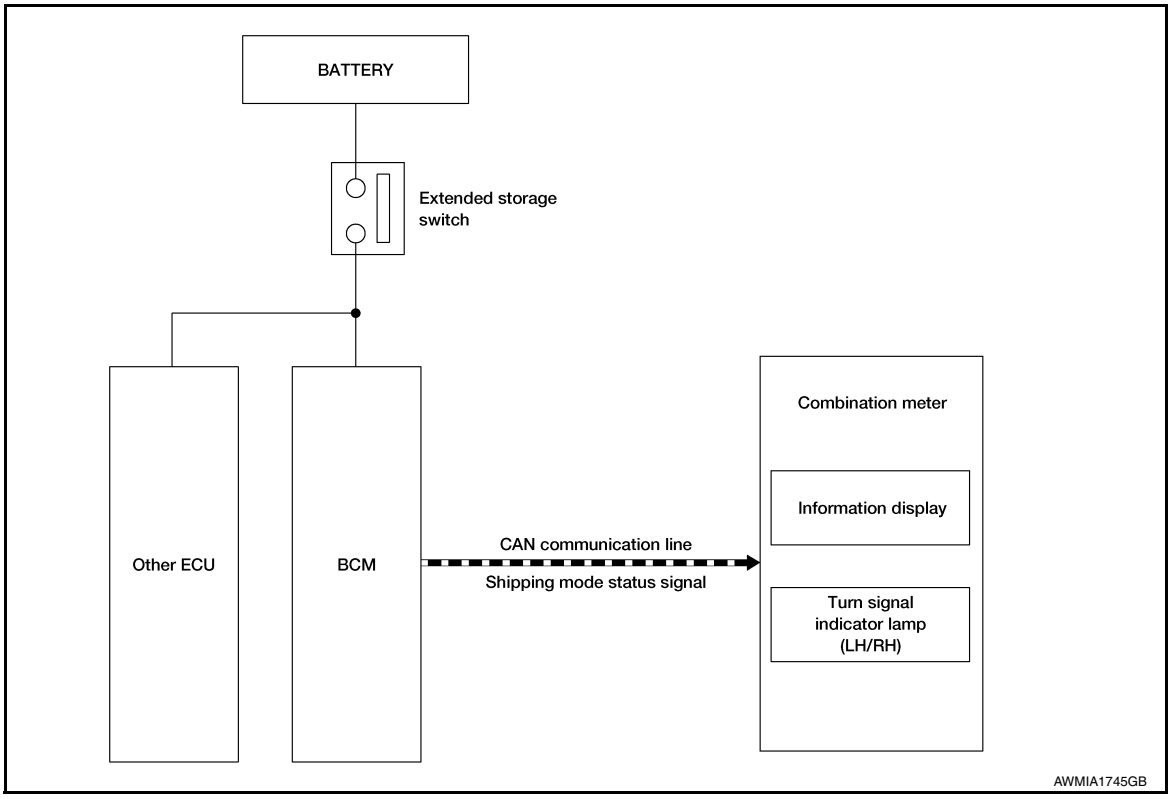
BCM wake-up condition	CAN wake-up condition
• Door unlock sensor: OFF→ON, ON→OFF • Door lock assembly LH (key cylinder switch): Lock or unlock • Door lock switch: OFF→ON • Door unlock switch: OFF→ON • Back door opener switch: OFF→ON • Power window serial link communication: Receiving • Remote keyless entry receiver: Receiving valid keyfob	• Receiving the sleep-ready signal (Not-ready) from any units • Push-button ignition switch (push switch): OFF→ON • Hazard switch: OFF→ON • PASSING switch: OFF→ON, ON→OFF • TAIL LAMP switch: OFF→ON • Driver door switch: OFF→ON, ON→OFF • Passenger door switch: OFF → ON, ON → OFF • Back door switch: OFF→ON, ON→OFF • Driver door request switch: OFF→ON • Passenger door request switch: OFF→ON • Back door request switch: OFF→ON • Stop lamp switch 2 signal: ON • Remote keyless entry receiver: Receiving valid keyfob

SHIPPING MODE CONTROL SYSTEM

SHIPPING MODE CONTROL SYSTEM : System Description

INFOID:0000000012960216

SYSTEM DIAGRAM



DESCRIPTION

- The BCM switches the status (shipping mode or normal mode) by itself according to the extended storage switch condition, and transmits the shipping mode status signal to the combination meter and each unit via CAN communication.
- When the shipping mode function is activated, the control units will not detect DTCs.
- BCM control functions are limited in shipping mode. Refer to BCS-80, "Description".
- When the BCM is in shipping mode, a message may be shown in the combination meter or display.
- For shipping mode cancel operation refer to BCS-67, "Work Procedure".

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

INFOID:0000000012548391

CAUTION:
After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and no-start condition.

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

Direct Diagnostic Mode	Description
ECU Identification	The BCM part number is displayed.
Self Diagnostic Result	The BCM self diagnostic results are displayed.
Data Monitor	The BCM input/output data is displayed in real time.
Active Test	The BCM activates outputs to test components.
Work support	The settings for BCM functions can be changed.
Configuration	• The vehicle specification can be read and saved. • The vehicle specification can be written when replacing BCM.
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

SYSTEM APPLICATION
BCM can perform the following functions.

System	Sub System	Direct Diagnostic Mode						
		ECU Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN Diag Support Mntr
Door lock	DOOR LOCK		×	×	×	×		
Rear window defogger	REAR DEFOGGER			×	×	×		
Warning chime	BUZZER			×	×			
Interior room lamp timer	INT LAMP			×	×	×		
Exterior lamp	HEADLAMP			×	×	×		
Wiper and washer	WIPER			×	×	×		
Turn signal and hazard warning lamps	FLASHER			×	×	×		
Air conditioner	AIR CONDITIONER			×				
Intelligent Key system	INTELLIGENT KEY		×	×	×	×		
Combination switch	COMB SW			×				
BCM	BCM	×	×			×	×	×
Immobilizer	IMMU		×	×	×			
Interior room lamp battery saver	BATTERY SAVER			×	×			
Back door open	TRUNK			×				
Vehicle security system	THEFT ALM			×	×	×		
RAP system	RETAINED PWR			×				

System	Sub System	Direct Diagnostic Mode						
		ECU Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN Diag Support Mntr
Signal buffer system	SIGNAL BUFFER			×	×			
TPMS	AIR PRESSURE MONITOR		×	×	×			

DOOR LOCK

DOOR LOCK : CONSULT Function (BCM - DOOR LOCK)

INFOID:0000000012548392

CAUTION:
After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and no-start condition.

SELF DIAGNOSTIC RESULT

Refer to BCS-52, "DTC Index".

DATA MONITOR

Monitor Item [Unit]	Description
REQ SW -DR [On/Off]	Indicates condition of door request switch LH.
REQ SW -AS [On/Off]	Indicates condition of door request switch RH.
REQ SW -BD/TR [On/Off]	Indicates condition of back door request switch.
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.
DOOR SW-RR [On/Off]	Indicates condition of rear door switch RH.
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH.
DOOR SW-BK [On/Off]	Indicates condition of back door switch.
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch.
CDL UNLOCK SW [On/Off]	Indicates condition of unlock signal from door lock and unlock switch.
KEY CYL LK-SW [On/Off]	Indicates condition of lock signal from door key cylinder switch.
KEY CYL UN-SW [On/Off]	Indicates condition of unlock signal from door key cylinder switch.

ACTIVE TEST

Test Item	Description
DOOR LOCK	This test is able to check door lock operation [ALL LOCK/ALL UNLK].

WORK SUPPORT

Support Item	Setting	Description
DOOR LOCK-UNLOCK SET	On*	Automatic door locks function ON.
	Off	Automatic door locks function OFF.
AUTO UNLOCK TYPE	MODE2	Driver door only unlocks automatically.
	MODE1*	All doors unlock automatically.

Support Item	Setting	Description
AUTO LOCK FUNCTION	MODE3	This mode is not used.
	MODE2	Doors lock automatically when shifted out of P (park).
	MODE1*	Doors lock automatically when vehicle speed reaches 24 km/h (15 mph).
	Off	—
AUTO UNLOCK FUNCTION	MODE3	This mode is not used.
	MODE2	Doors unlock automatically when shifted into P (park).
	MODE1*	Doors unlock automatically when ignition is switched from ON to OFF.
	Off	—

* : Initial setting

REAR DEFOGGER

REAR DEFOGGER : CONSULT Function (BCM - REAR DEFOGGER)

INFOID:0000000012548393

CAUTION:
After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and no-start condition.

DATA MONITOR

Monitor Item [Unit]	Description
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.
REAR DEF SW [On/Off]	Indicates condition of rear window defogger switch.

ACTIVE TEST

Test Item	Description
REAR DEFOGGER	This test is able to check rear window defogger operation [Off/On].

WORK SUPPORT

Support Item	Setting	Description
SET R-DEF TIMER	MODE3	Rear defogger turns OFF after 1 minute.
	MODE2	Rear defogger remains ON until turned OFF.
	MODE1*	Rear defogger turns OFF after 15 minutes.

* : Initial setting

BUZZER

BUZZER : CONSULT Function (BCM - BUZZER)

INFOID:0000000012548394

CAUTION:
After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and no-start condition.

DATA MONITOR

Monitor Item [Unit]	Description
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.
UNLK SEN -DR [On/Off]	Indicates condition of door unlock sensor.
VEH SPEED 1 [km/h]	Indicates vehicle speed signal received from ABS on CAN communication line.

Monitor Item [Unit]	Description
TAIL LAMP SW [On/Off]	Indicates condition of combination switch.
FR FOG SW [On/Off]	Indicates condition of front fog lamp switch.
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch.

ACTIVE TEST

Test Item	Description
SEAT BELT WARN TEST	This test is able to check seat belt warning chime operation [On/Off].
LIGHT WARN ALM	This test is able to check light warning chime operation [On/Off].
REVERSE WARNING	This test is able to check reverse warning chime operation [On/Off].

INT LAMP

INT LAMP : CONSULT Function (BCM - INT LAMP)

INFOID:0000000012548395

CAUTION:
After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and no-start condition.

DATA MONITOR

Monitor Item [Unit]	Description
REQ SW -DR [On/Off]	Indicates condition of door request switch LH.
REQ SW -AS [On/Off]	Indicates condition of door request switch RH.
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.
UNLK SEN -DR [On/Off]	Indicates condition of door unlock sensor.
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.
DOOR SW-RR [On/Off]	Indicates condition of rear door switch RH.
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH.
DOOR SW-BK [On/Off]	Indicates condition of back door switch.
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch.
CDL UNLOCK SW [On/Off]	Indicates condition of unlock signal from door lock and unlock switch.
KEY CYL LK-SW [On/Off]	Indicates condition of lock signal from door key cylinder switch.
KEY CYL UN-SW [On/Off]	Indicates condition of unlock signal from door key cylinder switch.
RKE-LOCK [On/Off]	Indicates condition of lock signal from Intelligent Key.
RKE-UNLOCK [On/Off]	Indicates condition of unlock signal from Intelligent Key.

ACTIVE TEST

Test Item	Description
INT LAMP	This test is able to check interior room lamp operation [On/Off].
STEP LAMP TEST	This test is able to check step lamp operation [On/Off].

WORK SUPPORT

NOTE:
The items listed below are the only applicable Work Support items for this vehicle. If other items are displayed on CONSULT, do not use or change the setting for these other items.

Support Item	Setting	Description
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	Interior room lamp timer function ON.
	Off*	Interior room lamp timer function OFF.
FOG LAMP OVERRIDE	On	Fog lamp override function ON.
	Off*	Fog lamp override function OFF.

*: Initial setting

HEADLAMP

HEADLAMP : CONSULT Function (BCM - HEADLAMP)

INFOID:0000000012548396

CAUTION:

After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and no-start condition.

DATA MONITOR

Monitor Item [Unit]	Description
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.
ENGINE STATE [STOP/STALL/CRANK/RUN]	Indicates engine status received from ECM on CAN communication line.
VEH SPEED 1 [km/h]	Indicates vehicle speed signal received from ABS on CAN communication line.
TURN SIGNAL R [On/Off]	Indicates condition of combination switch.
TURN SIGNAL L [On/Off]	
TAIL LAMP SW [On/Off]	
HI BEAM SW [On/Off]	
HEAD LAMP SW 1 [On/Off]	
HEAD LAMP SW 2 [On/Off]	
PASSING SW [On/Off]	
AUTO LIGHT SW [On/Off]	
FR FOG SW [On/Off]	
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.
DOOR SW-RR [On/Off]	Indicates condition of rear door switch RH.
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH.
DOOR SW-BK [On/Off]	Indicates condition of back door switch.
OPTI SEN (DTCT) [V]	Indicates outside brightness voltage signal from optical sensor.
OPTI SEN (FILT) [V]	Indicates outside brightness voltage signal from optical sensor filtered by BCM.
OPTICAL SENSOR [On/Off]	Indicates condition of optical sensor.

ACTIVE TEST

Test Item	Description
FR FOG LAMP	This test is able to check front fog lamp operation [On/Off].
DAYTIME RUNNING LIGHT	This test is able to check daytime running lamp operation [On/Off].
ILL DIM SIGNAL	This test is able to check head lamp illumination dimming operation [On/Off].

WORK SUPPORT

Support Item	Setting	Description
TWILIGHT On	MODE2*	Autolamp function ON.
	MODE1	Autolamp function OFF.
WIPER LINK	MODE4	This mode is not used.
	MODE3*	Wiper link function operates in INT, LOW and HI.
	MODE2	Wiper link function operates in LOW and HI.
	MODE1	Wiper link function OFF.
CUSTOM A/LIGHT SETTING	MODE4	Less sensitive than normal setting (turns ON later).
	MODE3	More sensitive than MODE2.
	MODE2	More sensitive than normal setting (turns ON earlier).
	MODE1*	Normal setting.
ILL DELAY SET	MODE 8	Autolamp delay timer.
	MODE 7	
	MODE 6	
	MODE 4	
	MODE 5	
	MODE 3	
	MODE 2	
	MODE 1*	

* : Initial setting

WIPER

WIPER : CONSULT Function (BCM - WIPER)

INFOID:0000000012548397

CAUTION:
After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and no-start condition.

DATA MONITOR

Monitor Item [Unit]	Description
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.
VEH SPEED 1 [km/h]	Indicates vehicle speed signal received from ABS on CAN communication line.
FR WIPER HI [On/Off]	Indicates condition of wiper operation of combination switch.
FR WIPER LOW [On/Off]	
FR WASHER SW [On/Off]	
FR WIPER INT [On/Off]	
FR WIPER STOP [On/Off]	Indicates front wiper auto stop signal received from IPDM E/R on CAN communication line.
INT VOLUME [1 – 7]	Indicates condition of intermittent wiper operation of combination switch.
RR WIPER ON [On/Off]	Indicates condition of rear wiper operation of combination switch.
RR WIPER INT [On/Off]	
RR WASHER SW [On/Off]	
RR WIPER STOP [On/Off]	Indicates rear wiper motor auto stop input from rear wiper motor.

ACTIVE TEST

Test Item	Description
FR WIPER	This test is able to check front wiper operation [Hi/Lo/INT/Off].
RR WIPER	This test is able to check rear wiper operation [On/Off].

WORK SUPPORT

Support Item	Setting	Description
WIPER SPEED SETTING	On*	Front wiper intermittent time linked with vehicle speed and wiper intermittent dial position.
	Off	Front wiper intermittent time is not linked with vehicle speed and wiper intermittent dial position.

*: Initial Setting

FLASHER

FLASHER : CONSULT Function (BCM - FLASHER)

INFOID:0000000012548398

CAUTION:
After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and no-start condition.

DATA MONITOR

Monitor Item [Unit]	Description
REQ SW -DR [On/Off]	Indicates condition of door request switch LH.
REQ SW -AS [On/Off]	Indicates condition of door request switch RH.
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.
TURN SIGNAL R [On/Off]	Indicates condition of turn signal function of combination switch.
TURN SIGNAL L [On/Off]	
HAZARD SW [On/Off]	Indicates condition of hazard switch.
RKE-LOCK [On/Off]	Indicates condition of lock signal from Intelligent Key.
RKE-UNLOCK [On/Off]	Indicates condition of unlock signal from Intelligent Key.
RKE-PANIC [On/Off]	Indicates condition of panic alarm signal from Intelligent Key.

ACTIVE TEST

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

WORK SUPPORT

Support Item	Setting	Description
3-TIME FLASHER SETTING	On*	3-Time flasher setting ON.
	Off	3-Time flasher setting OFF

*: Initial Setting

AIR CONDITIONER

AIR CONDITIONER : CONSULT Function (BCM - AIR CONDITIONER)

INFOID:0000000012548399

CAUTION:

After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and no-start condition.

DATA MONITOR

Monitor Item [Unit]	Description
FAN ON SIG [On/Off]	Indicates condition of fan switch.
AIR COND SW [On/Off]	Indicates condition of A/C switch.

INTELLIGENT KEY

INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY)

INFOID:0000000012548400

CAUTION:
After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and no-start condition.

SELF DIAGNOSTIC RESULT
Refer to BCS-52, "DTC Index".

DATA MONITOR

Monitor Item [Unit]	Main	Description
REQ SW -DR [On/Off]	×	Indicates condition of door request switch LH.
REQ SW -AS [On/Off]	×	Indicates condition of door request switch RH.
REQ SW -BD/TR [On/Off]	×	Indicates condition of back door request switch.
PUSH SW [On/Off]		Indicates condition of push-button ignition switch.
SHFTLCK SLNID PWR SPLY [On/Off]	×	Indicates condition of power supply to shiftlock solenoid.
BRAKE SW 1 [On/Off]	×	Indicates condition of brake switch.
BRAKE SW 2 [On/Off]		Indicates condition of brake switch.
DETE/CANCL SW [On/Off]	×	Indicates condition of P (park) position.
SFT PN/N SW [On/Off]	×	Indicates condition of P (park) or N (neutral) position.
UNLK SEN -DR [On/Off]	×	Indicates condition of door unlock sensor.
PUSH SW -IPDM [On/Off]		Indicates condition of push-button ignition switch received from IPDM E/R on CAN communication line.
IGN RLY1 -F/B [On/Off]		Indicates condition of ignition relay 1 received from IPDM E/R on CAN communication line.
DETE SW -IPDM [On/Off]		Indicates condition of detent switch received from TCM on CAN communication line.
SFT PN -IPDM [On/Off]		Indicates condition of P (park) or N (neutral) position from TCM on CAN communication line.
SFT P -MET [On/Off]		Indicates condition of P (park) position from TCM on CAN communication line.
SFT N -MET [On/Off]		Indicates condition of N (neutral) position from IPDM E/R on CAN communication line.
ENGINE STATE [STOP/START/CRANK/RUN]	×	Indicates condition of engine state from ECM on CAN communication line.
VEH SPEED 1 [mph/km/h]	×	Indicates condition of vehicle speed signal received from ABS on CAN communication line.
VEH SPEED 2 [mph/km/h]	×	Indicates condition of vehicle speed signal received from combination meter on CAN communication line.
DOOR STAT-DR [LOCK/READY/UNLK]	×	Indicates condition of driver side door status.

Monitor Item [Unit]	Main	Description
DOOR STAT-AS [LOCK/READY/UNLK]	×	Indicates condition of passenger side door status.
DOOR STAT-RR [LOCK/READY/UNLK]	×	Indicates condition of rear right side door status.
DOOR STAT-RL [LOCK/READY/UNLK]	×	Indicates condition of rear left side door status.
BK DOOR STATE [LOCK/READY/UNLK]	×	Indicates condition of back door status.
ID OK FLAG [Set/Reset]		Indicates condition of Intelligent Key ID.
PRMT ENG STRT [Set/Reset]		Indicates condition of engine start possibility.
PRMT RKE STRT [Set/Reset]		Indicates condition of engine start possibility from Intelligent Key.
I-KEY OK FLAG [Key ON/Key OFF]	×	Indicates condition of Intelligent Key OK flag.
PRBT ENG STRT [Set/Reset]		Indicates condition of engine start prohibit.
ID AUTHENT CANCEL TIMER [STOP]		Indicates condition of Intelligent Key ID authentication.
ACC BATTERY SAVER [STOP]		Indicates condition of battery saver.
CRNK PRBT TMR [On/Off]		Indicates condition of crank prohibit timer.
AUT CRNK TMR [On/Off]		Indicates condition of automatic engine crank timer from Intelligent Key.
CRNK PRBT TME [sec]		Indicates condition of engine crank prohibit time.
AUT CRNK TMR [sec]		Indicates condition of automatic engine crank time from Intelligent Key.
CRANKING TME [sec]		Indicates condition of engine cranking time from Intelligent Key.
DETE SW PWR [On/Off]		Indicates condition of detent switch voltage.
IGN RLY3 -REQ [On/Off]		Indicates condition of front blower motor relay control request.
ACC RLY -REQ [On/Off]		Indicates condition of accessory relay control request.
RKE OPE COUN1 [0-19]	×	When remote keyless entry receiver receives the signal transmitted while operating on Intelligent Key, the numerical value start changing.
RKE OPE COUN2 [0-19]	×	When remote keyless entry receiver receives the signal transmitted while operating on Intelligent Key, the numerical value start changing.
RKE-LOCK [On/Off]		Indicates condition of lock signal from Intelligent Key.
RKE-UNLOCK [On/Off]		Indicates condition of unlock signal from Intelligent Key.
RKE-TR/BD [On/Off]		Indicates condition of back door open signal from Intelligent Key.
RKE-PANIC [On/Off]		Indicates condition of panic signal from Intelligent Key.
RKE-MODE CHG [On/Off]		Indicates condition of mode change signal from Intelligent Key.
RKE PBD [On/Off]		Indicates condition of power back door signal from Intelligent Key.

ACTIVE TEST

Test Item	Description
INTELLIGENT KEY LINK (CAN)	This test is able to check Intelligent Key identification number [Off/ID No1/ID N02/ID No3/ID No4/ID No5].
INT LAMP	This test is able to check interior room lamp operation [On/Off].
FLASHER	This test is able to check hazard lamp operation [LH/RH/Off].
HORN	This test is able to check horn operation [On].
BATTERY SAVER	This test is able to check battery saver operation [On/Off].
TRUNK/BACK DOOR	This test is able to check back door actuator operation [Open].
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation [On/Off].
INSIDE BUZZER	This test is able to check combination meter warning chime operation [Take Out/Knob/Key/Off].
INDICATOR	This test is able to check combination meter warning lamp operation [KEY ON/KEY IND/Off].
IGN CONT2	This test is able to check ignition relay-2 control operation [On/Off].
ENGINE SW ILLUMI	This test is able to check push-button ignition switch START indicator operation [On/Off].
PUSH SWITCH INDICATOR	This test is able to check push-button ignition switch indicator operation [On/Off].

Test Item	Description
ACC CONT	This test is able to check accessory relay control operation [On/Off].
IGN CONT1	This test is able to check ignition relay-1 control operation [On/Off].
ST CONT LOW	This test is able to check starter control relay operation [On/Off].
IGNITION RELAY	This test is able to check ignition relay operation [On/Off].
REVERSE LAMP TEST	This test is able to check reverse lamp illumination operation [On/Off].
DOOR HANDLE LAMP TEST	This test is able to check door handle lamp illumination operation [On/Off].
TRUNK/LUGGAGE LAMP TEST	This test is able to check cargo lamp illumination operation [On/Off].
KEYFOB P/W TEST	This test is able to check power window operation using the Intelligent Key [P/W up/down OFF/Send P/W down ON/Send P/W up ON].
SHIFTLOCK SORENOID TEST	This test is able to check shift lock solenoid operation [On/Off].

WORK SUPPORT

Support Item	Setting		Description
IGN/ACC BATTERY SAVER	On*		Battery saver function ON.
	Off		Battery saver function OFF.
REMOTE ENGINE STARTER	On*		Remote engine start function ON.
	Off		Remote engine start function OFF.
ANSWER BACK I-KEY LOCK UNLOCK	BUZZER*		Buzzer reminder function by door lock/unlock request switch ON.
	HORN		Horn chirp reminder function by door lock request switch ON.
	Off		No reminder function by door lock/unlock request switch.
	INVALID		This mode is not used.
ANSWERBACK KEYLESS LOCK UNLOCK	On*		Buzzer or horn chirp reminder when doors are locked/unlocked with Intelligent Key.
	Off		No buzzer or horn chirp reminder when doors are locked/unlocked with Intelligent Key.
WELCOME LIGHT OP SET	On*		Door handle lamp function from request switch ON.
	Off		Door handle lamp function from request switch OFF.
ANSWER BACK	On*		Horn chirp reminder when doors are locked with Intelligent Key.
	Off		No horn chirp reminder when doors are locked with Intelligent Key.
RETRACTABLE MIRROR SET	On		Retractable mirror set ON.
	Off*		Retractable mirror set OFF.
CONFIRM KEY FOB ID	—		Intelligent Key ID code registration can be checked.
LOCK/UNLOCK BY I-KEY	On*		Door lock/unlock function from Intelligent Key ON.
	Off		Door lock/unlock function from Intelligent Key OFF.
ENGINE START BY I-KEY	On*		Engine start function from Intelligent Key ON.
	Off		Engine start function from Intelligent Key OFF.
TRUNK/GLASS HATCH OPEN	On*		Buzzer reminder function by back door request switch ON.
	Off		Buzzer reminder function by back door request switch OFF.
INTELLIGENT KEY LINK SET	On		Intelligent Key link set ON.
	Off*		Intelligent Key link set OFF.
SHORT CRANKING OUTPUT	Start	70 msec	Starter motor operation duration times.
		100 msec	
		200 msec	
	End		—
INSIDE ANT DIAGNOSIS	—		This function allows inside key antenna self-diagnosis.

Support Item	Setting		Description
AUTO LOCK SET	MODE7	5 min	Auto door lock time can be set in this mode.
	MODE6	4 min	
	MODE5	3 min	
	MODE4	2 min	
	MODE3*	1 min	
	MODE2	30 sec	
	MODE1	Off	

*: Initial Setting

COMB SW

COMB SW : CONSULT Function (BCM - COMB SW)

INFOID:0000000012548401

CAUTION:
After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and no-start condition.

DATA MONITOR

Monitor Item [Unit]	Description
FR WIPER HI [On/Off]	Indicates condition of wiper operation of combination switch.
FR WIPER LOW [On/Off]	
FR WASHER SW [On/Off]	
FR WIPER INT [On/Off]	
INT VOLUME [1 - 7]	Indicates condition of intermittent wiper operation of combination switch.
RR WIPER ON [On/Off]	Indicates condition of rear wiper operation of combination switch.
RR WIPER INT [On/Off]	
RR WASHER SW [On/Off]	
TURN SIGNAL R [On/Off]	Indicates condition of right turn signal operation of combination switch.
TURN SIGNAL L [On/Off]	Indicates condition of left turn signal operation of combination switch.
TAIL LAMP SW [On/Off]	Indicates condition of tail lamp switch operation of combination switch.
HI BEAM SW [On/Off]	Indicates condition of Hi beam switch operation of combination switch.
HEAD LAMP SW 1 [On/Off]	Indicates condition of head lamp switch 1 operation of combination switch.
HEAD LAMP SW 2 [On/Off]	Indicates condition of head lamp switch 2 operation of combination switch.
PASSING SW [On/Off]	Indicates condition of passing switch operation of combination switch.
AUTO LIGHT SW [On/Off]	Indicates condition of auto light switch operation of combination switch.
FR FOG SW [On/Off]	Indicates condition of front fog lamp switch operation of combination switch.

BCM

BCM : CONSULT Function (BCM - BCM)

INFOID:0000000012548402

CAUTION:
After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and no-start condition.

ECU IDENTIFICATION
The BCM part number is displayed.

SELF DIAGNOSTIC RESULT
Refer to BCS-52, "DTC Index".

WORK SUPPORT

Support Item	Setting	Description
RESET SETTING VALUE	Reset	Returns BCM to initial value in factory shipment.
	Cancel	Cancels the reset function.

CONFIGURATION
Refer to BCS-65, "CONFIGURATION (BCM) : Description".

CAN DIAG SUPPORT MNTR
Refer to LAN-18, "CAN Diagnostic Support Monitor".

IMMU

IMMU : CONSULT Function (BCM - IMMU)

INFOID:0000000012548403

CAUTION:
After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and no-start condition.

SELF DIAGNOSTIC RESULT
Refer to BCS-52, "DTC Index".

DATA MONITOR

Monitor Item [Unit]	Description
CONFRM ID ALL [Yet/DONE]	Switches to DONE when an Intelligent Key is registered.
CONFIRM ID4 [Yet/DONE]	
CONFIRM ID3 [Yet/DONE]	
CONFIRM ID2 [Yet/DONE]	
CONFIRM ID1 [Yet/DONE]	
TP 4 [Yet/DONE]	DONE indicates the number of Intelligent Key ID which has been registered.
TP 3 [Yet/DONE]	
TP 2 [Yet/DONE]	
TP 1 [Yet/DONE]	
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.
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.

ACTIVE TEST

Test Item	Description
THEFT IND	This test is able to check security indicator operation [On/Off].

BATTERY SAVER

BATTERY SAVER : CONSULT Function (BCM - BATTERY SAVER)

INFOID:0000000012548404

CAUTION:
After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and no-start condition.

DATA MONITOR

Monitor Item [Unit]	Description
REQ SW -DR [On/Off]	Indicates condition of door request switch LH.
REQ SW -AS [On/Off]	Indicates condition of door request switch RH.
PUSH SW [On/Off]	Indicates condition push-button ignition switch.
UNLK SEN -DR [On/Off]	Indicates condition of door unlock sensor.
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.
DOOR SW-RR [On/Off]	Indicates condition of rear door switch RH.
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH.
DOOR SW-BK [On/Off]	Indicates condition of back door switch.
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch.
CDL UNLOCK SW [On/Off]	Indicates condition of unlock signal from door lock and unlock switch.
KEY CYL LK-SW [On/Off]	Indicates condition of lock signal from door key cylinder switch.
KEY CYL UN-SW [On/Off]	Indicates condition of unlock signal from door key cylinder switch.
RKE-LOCK [On/Off]	Indicates condition of lock signal from Intelligent Key.
RKE-UNLOCK [On/Off]	Indicates condition of unlock signal from Intelligent Key.

ACTIVE TEST

Test item	Description
BATTERY SAVER	This test is able to check battery saver operation [On/Off].

TRUNK

TRUNK : CONSULT Function (BCM - TRUNK)

INFOID:0000000012548405

CAUTION:
After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and no-start condition.

DATA MONITOR

Monitor Item [Unit]	Description
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.
UNLK SEN -DR [On/Off]	Indicates condition of door unlock sensor.
VEH SPEED 1 [km/h]	Indicates vehicle speed signal received from ABS on CAN communication line.
TR/BD OPEN SW [On/Off]	Indicates condition of back door opener switch.
RKE-TR/BD [On/Off]	Indicates condition of back door open signal from Intelligent Key.

THEFT ALM

THEFT ALM : CONSULT Function (BCM - THEFT ALM)

INFOID:0000000012548406

CAUTION:
After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and no-start condition.

DATA MONITOR

Monitored Item	Description
REQ SW -DR [On/Off]	Indicates condition of door request switch LH.
REQ SW -AS [On/Off]	Indicates condition of door request switch RH.
REQ SW -BD/TR [On/Off]	Indicates condition of back door request switch.
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.
UNLK SEN -DR [On/Off]	Indicates condition of door unlock sensor.
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.
DOOR SW-RR [On/Off]	Indicates condition of rear door switch RH.
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH.
DOOR SW-BK [On/Off]	Indicates condition of back door switch.
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch.
CDL UNLOCK SW [On/Off]	Indicates condition of unlock signal from door lock and unlock switch.
KEY CYL LK-SW [On/Off]	Indicates condition of lock signal from door key cylinder switch.
KEY CYL UN-SW [On/Off]	Indicates condition of unlock signal from door key cylinder switch.
TR/BD OPEN SW [On/Off]	Indicates condition of back door opener switch.
RKE-LOCK [On/Off]	Indicates condition of lock signal from Intelligent Key.
RKE-UNLOCK [On/Off]	Indicates condition of unlock signal from Intelligent Key.
RKE-TR/BD [On/Off]	Indicates condition of back door open signal from Intelligent Key.

ACTIVE TEST

Test Item	Description
FLASHER	This test is able to check turn signal lamp operation [LH/RH/Off].
THEFT IND	This test is able to check security indicator lamp operation [On/Off].
VEHICLE SECURITY HORN	This test is able to check vehicle security horn operation [On].
HEAD LAMP(HI)	This test is able to check vehicle security lamp operation [On].

WORK SUPPORT

Support Item	Setting	Description
SECURITY ALARM SET	On	Security alarm ON.
	Off	Security alarm OFF.

RETAINED PWR

RETAINED PWR : CONSULT Function (BCM - RETAINED PWR)

INFOID:0000000012548407

CAUTION:

After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and no-start condition.

DATA MONITOR

Monitor Item [Unit]	Description
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.

SIGNAL BUFFER

SIGNAL BUFFER : CONSULT Function (BCM - SIGNAL BUFFER)

INFOID:0000000012548408

CAUTION:
After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and no-start condition.

DATA MONITOR

Monitor Item [Unit]	Description
PUSH SW [On/Off]	Indicates condition of the push-button ignition switch.

ACTIVE TEST

Test Item	Description
OIL PRESSURE SW	This test is able to check the oil pressure warning lamp operation [On/Off].
BRAKE SWITCH	This test is able to check the brake switch operation [On/Off].

AIR PRESSURE MONITOR

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

INFOID:0000000012548409

CAUTION:
After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and no-start condition.

NOTE:
The Signal Tech II Tool [– (J-50190)] can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.
- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs
- Check Intelligent Key relative signal strength
- Confirm vehicle Intelligent Key antenna signal strength

SELF DIAGNOSTIC RESULT

NOTE:
Before performing Self Diagnostic Result, be sure to register the transmitter ID or the actual malfunction may be different from that displayed on CONSULT.
Refer to BCS-52, "DTC Index".

DATA MONITOR

Monitor Item [Unit]	Description
AIR PRESS FL [kPa, kg/cm^2 or Psi]	Indicates air pressure of front LH tire.
AIR PRESS FR [kPa, kg/cm^2 or Psi]	Indicates air pressure of front RH tire.
AIR PRESS RR [kPa, kg/cm^2 or Psi]	Indicates air pressure of rear RH tire.
AIR PRESS RL [kPa, kg/cm^2 or Psi]	Indicates air pressure of rear LH tire.
ID REGST FL1 [Done/Yet]	Indicates ID registration status of front LH transmitter.
ID REGST FR1 [Done/Yet]	Indicates ID registration status of front RH transmitter.
ID REGST RR1 [Done/Yet]	Indicates ID registration status of rear RH transmitter.
ID REGST RL1 [Done/Yet]	Indicates ID registration status of rear LH transmitter.

Monitor Item [Unit]	Description
WARNING LAMP [Off/On]	Indicates condition of low tire pressure warning lamp in combination meter.
BUZZER [Off/On]	Indicates condition of buzzer in combination meter.

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].

ECU DIAGNOSIS INFORMATION

BCM

Reference Value

INFOID:0000000012548410

NOTE:
The Signal Tech II Tool [– (J-50190)] can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.
- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs
- Check Intelligent Key relative signal strength
- Confirm vehicle Intelligent Key antenna signal strength

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
ACC BATTERY SAVER	When battery saver is OFF.	STOP
ACC RLY -REQ	When BCM is not requesting accessory relay activation.	Off
	When BCM is requesting accessory relay activation.	On
AIR COND SW	A/C switch OFF	Off
	A/C switch ON	On
AIR PRESS FL	Front left tire air pressure value	kPa, kg/cm^2, psi
AIR PRESS FR	Front right tire air pressure value	kPa, kg/cm^2, psi
AIR PRESS RL	Rear left tire air pressure value	kPa, kg/cm^2, psi
AIR PRESS RR	Rear right tire air pressure value	kPa, kg/cm^2, psi
AUT CRNK TMR	Remote engine start timer duration.	sec
AUT CRNK TMR	When the remote engine start timer is OFF.	Off
	When the remote engine start timer is ON.	On
AUTO LIGHT SW	Lighting switch OFF	Off
	Lighting switch AUTO	On
BK DOOR STATE	Back door LOCK status	LOCK
	Back door UNLOCK status	UNLK
	Wait with selective UNLOCK operation (5 seconds)	READY
BRAKE SW 1	When the brake pedal is released	On
	When the brake pedal is depressed	Off
BRAKE SW2	Brake pedal released	Off
	Brake pedal depressed	On
BUZZER	Buzzer in combination meter OFF	Off
	Buzzer in combination meter ON	On
CDL LOCK SW	Door lock/unlock switch does not operate	Off
	Press door lock/unlock switch to the LOCK side	On
CDL UNLOCK SW	Door lock/unlock switch does not operate	Off
	Press door lock/unlock switch to the UNLOCK side	On
CONFRM ID ALL	The key ID does not match any key ID registered to BCM.	Yet
	The key ID matches any key ID registered to BCM.	DONE

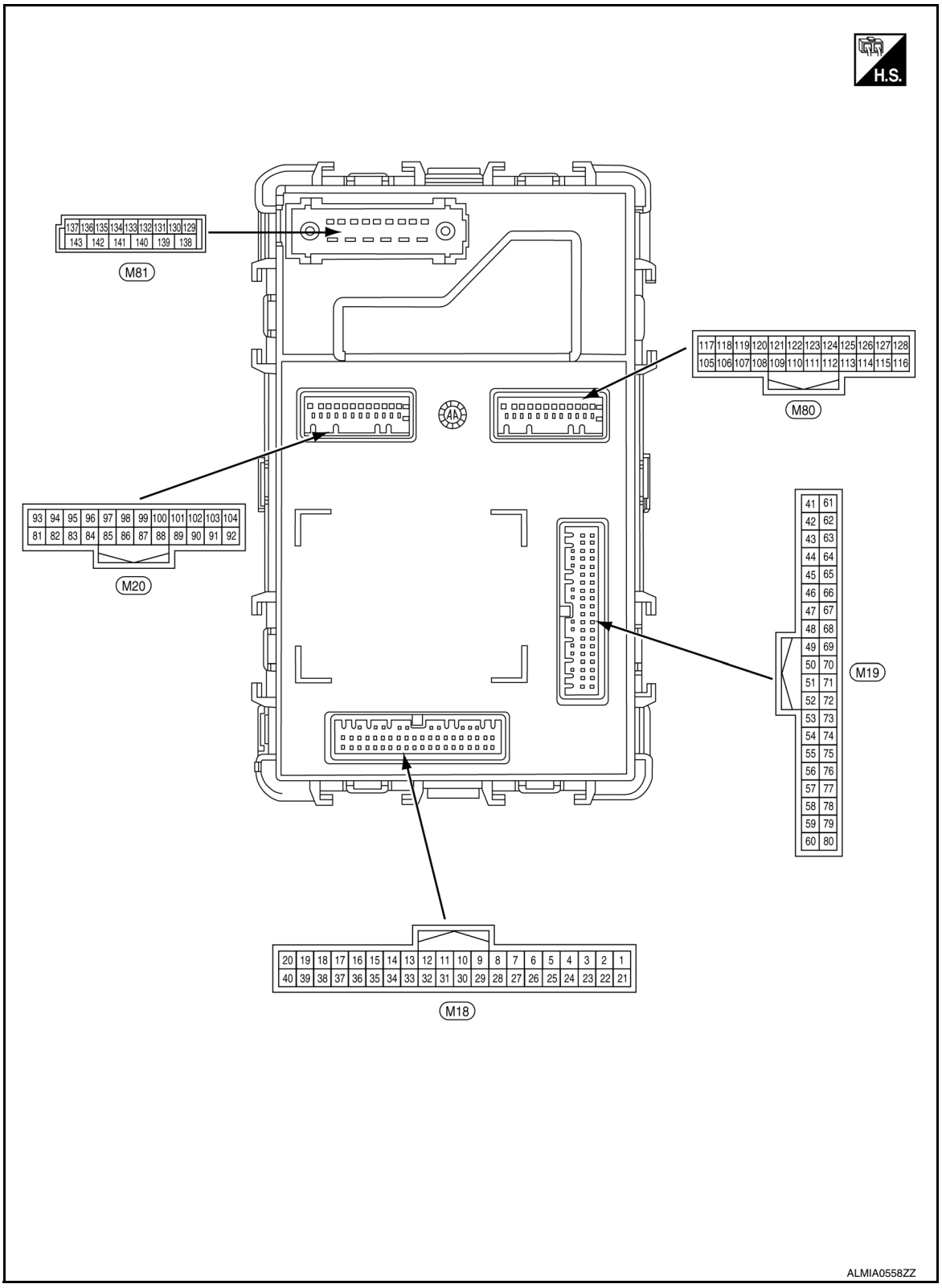
Monitor Item	Condition	Value/Status
CONFIRM ID4	The key ID does not match the fourth key ID registered to BCM.	Yet
	The key ID matches the fourth key ID registered to BCM.	DONE
CONFIRM ID3	The key ID does not match the third key ID registered to BCM.	Yet
	The key ID matches the third key ID registered to BCM.	DONE
CONFIRM ID2	The key ID does not match the second key ID registered to BCM.	Yet
	The key ID matches the second key ID registered to BCM.	DONE
CONFIRM ID1	The key ID does not match the first key ID registered to BCM.	Yet
	The key ID matches the first key ID registered to BCM.	DONE
CRANKING TME	Engine start timer duration.	sec
CRNK PRBT TME	Engine start prohibit timer duration.	sec
CRNK PRBT TMR	When the engine start prohibit timer is OFF.	Off
	When the engine start prohibit timer is ON.	On
DETE SW -IPDM	When selector lever is in P position	Off
	When selector lever is in any position other than P	On
DETE SW PWR	When BCM is not supplying power to detent switch.	Off
	When BCM is supplying power to detent switch.	On
DETE/CANCL SW	When selector lever is in P position	Off
	When selector lever is in any position other than P	On
DOOR STAT-AS	Passenger door LOCK status	LOCK
	Passenger door UNLOCK status	UNLK
	Wait with selective UNLOCK operation (5 seconds)	READY
DOOR STAT-DR	Driver door LOCK status	LOCK
	Driver door UNLOCK status	UNLK
	Wait with selective UNLOCK operation (5 seconds)	READY
DOOR STAT-RL	Rear left door LOCK status	LOCK
	Rear left door UNLOCK status	UNLK
	Wait with selective UNLOCK operation (5 seconds)	READY
DOOR STAT-RR	Rear right door LOCK status	LOCK
	Rear right door UNLOCK status	UNLK
	Wait with selective UNLOCK operation (5 seconds)	READY
DOOR SW-AS	Front door RH closed	Off
	Front door RH opened	On
DOOR SW-BK	Back door closed	Off
	Back door opened	On
DOOR SW-DR	Front door LH closed	Off
	Front door LH opened	On
DOOR SW-RL	Rear door LH closed	Off
	Rear door LH opened	On
DOOR SW-RR	Rear door RH closed	Off
	Rear door RH opened	On
ENGINE STATE	Engine stopped	STOP
	While the engine stalls	STALL
	At engine cranking	CRANK
	Engine running	RUN

Monitor Item	Condition	Value/Status
FAN ON SIG	Blower motor fan switch OFF	Off
	Blower motor fan switch ON	On
FR FOG SW	Front fog lamp switch OFF	Off
	Front fog lamp switch ON	On
FR WASHER SW	Front washer switch OFF	Off
	Front washer switch ON	On
FR WIPER LOW	Front wiper switch OFF	Off
	Front wiper switch LO	On
FR WIPER HI	Front wiper switch OFF	Off
	Front wiper switch HI	On
FR WIPER INT	Front wiper switch OFF	Off
	Front wiper switch INT	On
FR WIPER STOP	Any position other than front wiper stop position	Off
	Front wiper stop position	On
HAZARD SW	When hazard switch is not pressed	Off
	When hazard switch is pressed	On
HEAD LAMP SW 1	Headlamp switch OFF	Off
	Headlamp switch 1st	On
HEAD LAMP SW 2	Headlamp switch OFF	Off
	Headlamp switch 1st	On
HI BEAM SW	High beam switch OFF	Off
	High beam switch HI	On
ID AUTHENT CANCEL TIMER	When I-Key authentication is OFF.	STOP
ID OK FLAG	Ignition switch ACC or ON	Reset
	Ignition switch OFF	Set
ID REGST FL1	ID registration of front left tire incomplete	YET
	ID registration of front left tire complete	DONE
ID REGST FR1	ID registration of front right tire incomplete	YET
	ID registration of front right tire complete	DONE
ID REGST RL1	ID registration of rear left tire incomplete	YET
	ID registration of rear left tire complete	DONE
ID REGST RR1	ID registration of rear right tire incomplete	YET
	ID registration of rear right tire complete	DONE
IGN RLY1 -F/B	Ignition switch OFF or ACC	Off
	Ignition switch ON	On
IGN RLY3 -REQ	Front blower motor OFF	Off
	Front blower motor ON	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
I-KEY OK FLAG	I-Key OFF	Key OFF
	I-Key ON	Key ON
KEY CYL LK-SW	Door key cylinder LOCK position	On
	Door key cylinder other than LOCK position	Off
KEY CYL UN-SW	Door key cylinder UNLOCK position	On
	Door key cylinder other than UNLOCK position	Off

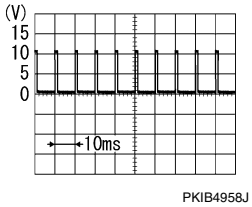
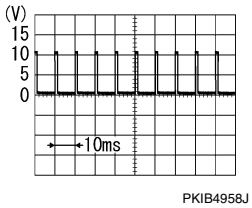
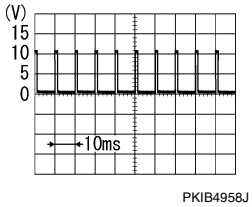
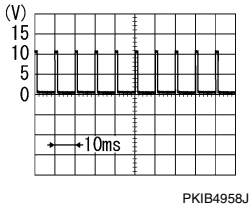
Monitor Item	Condition	Value/Status
NOT REGISTERED	BCM detects registered Intelligent Key ID, or BCM does not detect Intelligent Key ID	ID OK
	BCM detects non-registration Intelligent Key ID	ID NG
RKE PBD	I-Key power back door button not pressed	Off
	I-Key power back door button pressed	On
OPTI SEN (DTCT)	Bright outside of the vehicle	Close to 5V
	Dark outside of the vehicle	Close to 0V
OPTI SEN (FILT)	Bright outside of the vehicle	Close to 5V
	Dark outside of the vehicle	Close to 0V
OPTICAL SENSOR	Optical sensor ON	ON
	Optical sensor OFF	OFF
PASSING SW	Other than lighting switch PASS	Off
	Lighting switch PASS	On
PRBT ENG STRT	When the engine start is prohibited	Reset
	When the engine start is permitted	Set
PRMT ENG STRT	When the engine start is prohibited	Reset
	When the engine start is permitted	Set
PRMT RKE STRT	When the engine start is prohibited	Reset
	When the engine start is permitted	Set
PUSH SW	Return ignition switch to LOCK position	Off
	Press ignition switch	On
PUSH SW-IPDM	When engine switch (push switch) is not pressed	Off
	When engine switch (push switch) is pressed	On
REAR DEF SW	Rear window defogger switch OFF	Off
	Rear window defogger switch ON	On
RR WASHER SW	Rear washer switch OFF	Off
	Rear washer switch ON	On
RR WIPER INT	Rear wiper switch OFF	Off
	Rear wiper switch INT	On
RR WIPER ON	Rear wiper switch OFF	Off
	Rear wiper switch ON	On
RR WIPER STOP	Any position other than rear wiper stop position	Off
	Rear wiper stop position	On
REQ SW -AS	When passenger door request switch is not pressed	Off
	When passenger door request switch is pressed	On
REQ SW -BD/TR	When back door request switch is not pressed	Off
	When back door request switch is pressed	On
REQ SW -DR	When driver door request switch is not pressed	Off
	When driver door request switch is pressed	On
RKE-LOCK	When LOCK button of Intelligent Key is not pressed	Off
	When LOCK button of Intelligent Key is pressed	On
RKE-MODE CHG	When LOCK/UNLOCK button of Intelligent Key is not pressed and held simultaneously	Off
	When LOCK/UNLOCK button of Intelligent Key is pressed and held simultaneously	On

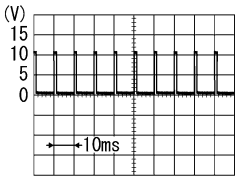
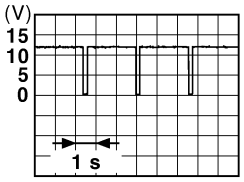
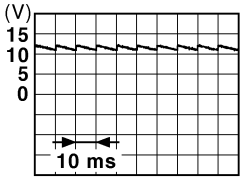
Monitor Item	Condition	Value/Status
RKE OPE COUN1	Operation frequency of Intelligent Key	0-19
RKE OPE COUN2	Operation frequency of Intelligent Key	0-19
RKE-PANIC	When PANIC button of Intelligent Key is not pressed	Off
	When PANIC button of Intelligent Key is pressed	On
RKE-TR/BD	When BACK DOOR OPEN button of Intelligent Key is not pressed	Off
	When BACK DOOR OPEN button of Intelligent Key is pressed	On
RKE-UNLOCK	When UNLOCK button of Intelligent Key is not pressed	Off
	When UNLOCK button of Intelligent Key is pressed	On
SFT N-MET	When selector lever is in any position other than N	Off
	When selector lever is in N position	On
SFT P-MET	When selector lever is in any position other than P	Off
	When selector lever is in P position	On
SFT PN -IPDM	When selector lever is in any position other than P or N	Off
	When selector lever is in P or N position	On
SFT PN/N SW	When selector lever is in any position other than P or N	Off
	When selector lever is in P or N position	On
SHFTLCK SLNID PWR SPLY	When BCM is not supplying power to shiftlock.	Off
	When BCM is supplying power to shiftlock.	On
TAIL LAMP SW	Other than lighting switch 1ST and 2ND	Off
	Lighting switch 1ST or 2ND	On
TP 4	The ID of fourth key is not registered to BCM	Yet
	The ID of fourth key is registered to BCM	DONE
TP 3	The ID of third key is not registered to BCM	Yet
	The ID of third key is registered to BCM	DONE
TP 2	The ID of second key is not registered to BCM	Yet
	The ID of second key is registered to BCM	DONE
TP 1	The ID of first key is not registered to BCM	Yet
	The ID of first key is registered to BCM	DONE
TR/BD OPEN SW	Back door opener switch OFF	Off
	While the back door opener switch is turned ON	On
TURN SIGNAL L	Turn signal switch OFF	Off
	Turn signal switch LH	On
TURN SIGNAL R	Turn signal switch OFF	Off
	Turn signal switch RH	On
UNLK SEN-DR	Driver door UNLOCK status	Off
	Driver door LOCK status	On
VEH SPEED 1	While driving, equivalent to speedometer reading	mph, km/h
VEH SPEED 2	While driving, equivalent to speedometer reading	mph, km/h
WARNING LAMP	Low tire pressure warning lamp in combination meter OFF	Off
	Low tire pressure warning lamp in combination meter ON	On

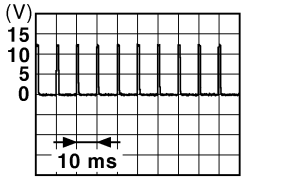
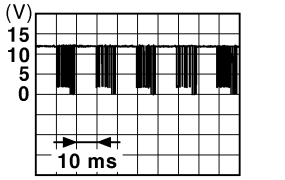
TERMINAL LAYOUT

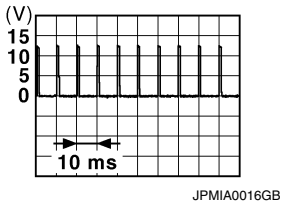
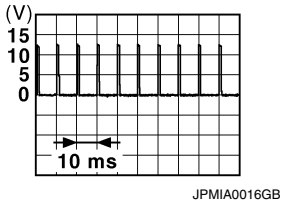
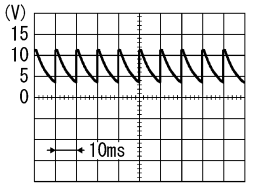
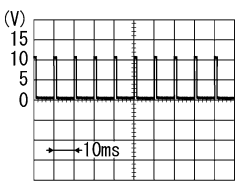


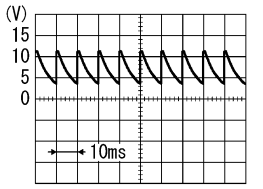
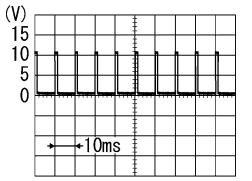
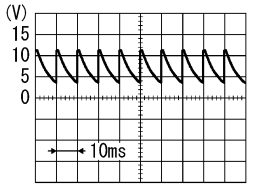
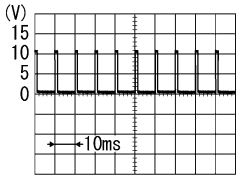
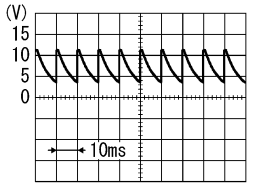
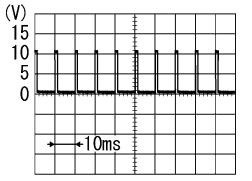
PHYSICAL VALUES

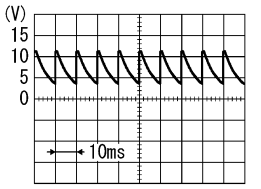
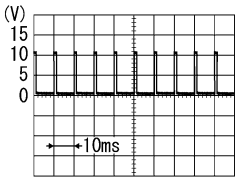
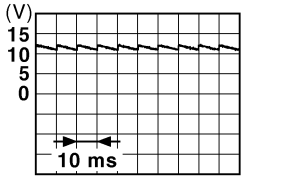
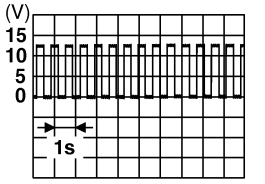
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
1 (G)	Ground	Engine start switch	Input	Push-button ignition switch	Pressed	0V
					Not pressed	Battery voltage
3 (W)	Ground	Auto light power supply 5V	Output	Push-button ignition switch	OFF	0V
					ACC or ON	5V
4 (G)	Ground	Auto light signal	Input	Push-button ignition switch ON	When outside of the vehicle is bright	Close to 5V
					When outside of the vehicle is dark	Close to 0V
10 (W)	Ground	Combination switch input 5	Input	Combination switch (Wiper intermittent dial 4)	OFF	0V
					TURN RH	 PKIB4958J 1.0V
					HEADLAMP 1	
					HI BEAM	
					TAIL LAMP	
11 (BG)	Ground	Combination switch input 4	Input	Combination switch (Wiper intermittent dial 4)	OFF	0V
					TURN LH	 PKIB4958J 1.0V
					PASSING	
					HEADLAMP 2	
					FR FOG	
12 (R)	Ground	Combination switch input 3	Input	Combination switch (Wiper intermittent dial 4)	OFF	0V
					FR WIPER LOW	 PKIB4958J 1.0V
					FR WIPER INT/AUTO	
					AUTO LIGHT	
13 (G)	Ground	Combination switch input 2	Input	Combination switch (Wiper intermittent dial 4)	OFF	0V
					FR WASHER	 PKIB4958J 1.0V
					RR WASHER	
					INT VOLUME 3	
					RR WIPER ON	

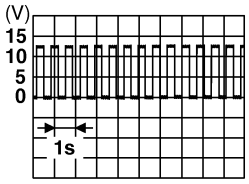
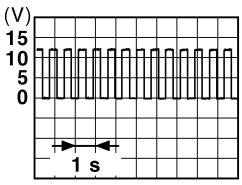
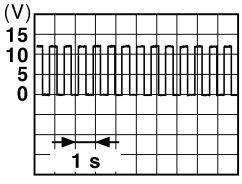
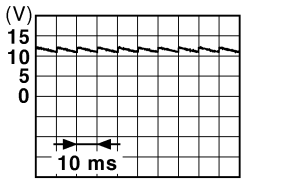
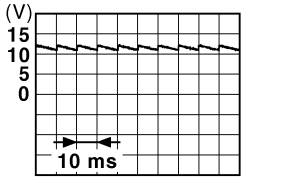
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
14 (P)	Ground	Combination switch input 1	Input	Combination switch (Wiper intermittent dial 4)	OFF	0V
					FR WIPER HI	 PKIB4958J 1.0V
					INT VOLUME 1	
					RR WIPER INT	
					INT VOLUME 2	
17 (R)	Ground	Auto light reference ground	Input	Push-button ignition switch ON		0V
18 (V)	Ground	Security indicator	Output	Security indicator	ON	0V
					Blinking	 JPMIA0014GB 11.3V
					OFF	Battery voltage
19 (Y)	Ground	Central door lock sw signal	Input	Door lock/unlock switch	Lock	Battery voltage
					Unlock	0V
20 (W)	Ground	Shift P	Input	Selector lever	P position	0V
					Any position other than P	Battery voltage
21 (W)	Ground	Step lamp control	Output	Step lamp	ON	0V
					OFF	Battery voltage
24 (SB)	Ground	Door key/c unlock sw signal	Input	Key cylinder switch	OFF (neutral)	5V
					ON (unlock)	0V
25 (W)	Ground	Brake switch fuse	Input	—		Battery voltage
26 (L)	Ground	Shorting input	Input	Push-button ignition switch OFF		Battery voltage
27 (G)	Ground	Brake switch lamp	Input	Stop lamp switch	OFF (brake pedal is not depressed)	0V
					ON (brake pedal is depressed)	Battery voltage
30 (P)	Ground	Driver door lock status	Input	Front door LH	LOCK status	 JPMIA0011GB 11.8V
					UNLOCK status	0V
32 (R)	Ground	Rr def sw signal	Input	Rear window defogger switch	OFF	5V
					ON	0V

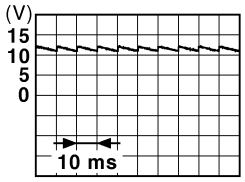
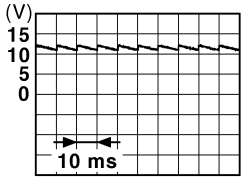
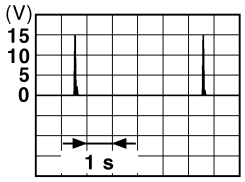
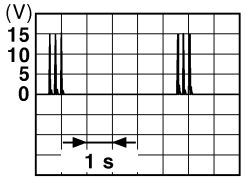
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
34 (BR)	Ground	Central door unlock sw signal	Input	Door lock/unlock switch	Unlock	Battery voltage
					Lock	0V
36 (W)	Ground	Hazard switch	Input	Hazard switch	Pressed	0 V
					Not pressed	 JPMIA0012GB 1.1V
39 (G)	Ground	Shift N/P	Input	Selector lever	P or N position	Battery voltage
					Except P and N positions	0V
48 (R)	Ground	High side start switch LED	Output	Push-button ignition switch illumination	ON	5.5V
					OFF	0V
52 (W)	Ground	Audio dongle	Input/ Output	Push-button ignition switch OFF		5V
54 (W)	Ground	Power window link/ communication	Input/ Output	Push-button ignition switch	ON	 JPMIA0013GB 10.2V
					OFF or ACC	0V
59 (P)	Ground	CAN low	Input/ Output	—		—
60 (L)	Ground	CAN high	Input/ Output	—		—
61 (BG)	Ground	Rear defogger relay output	Output	Rear window defogger	Activated	0V
					Not activated	Battery voltage
62 (W)	Ground	Starter relay output	Output	Push-button ignition switch ON	When selector lever is in P or N position and the brake is depressed	Battery voltage
					When selector lever is in P or N position and the brake is not depressed	0V
63 (BG)	Ground	I-Key link signal	Output	Push-button ignition switch OFF → ON, after unlocking door by 1st key registered to BCM		5V
				Push-button ignition switch OFF → ON, after unlocking door by 2nd key registered to BCM		0V
64 (P)	Ground	Buzzer output	Output	Outside warning buzzer	Sounding	0V
					Not sounding	Battery voltage
66 (W)	Ground	Blower fan relay output	Output	Push-button ignition switch	OFF or ACC	0V
					ON	Battery voltage
67 (G)	Ground	Ignition electrical relay output 2	Output	Push-button ignition switch	OFF or ACC	0V
					ON	Battery voltage

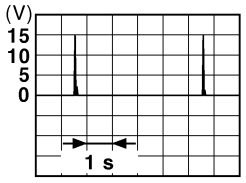
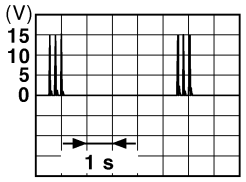
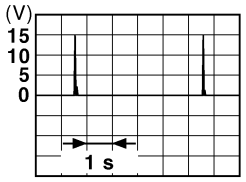
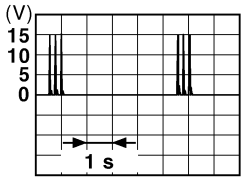
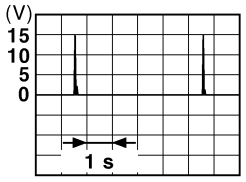
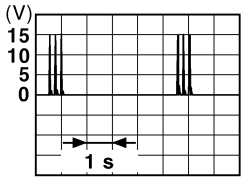
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
68 (P)	Ground	Dimmer signal output	Output	Push-button ignition switch ON	Either of the following conditions • Lighting switch OFF • The area around the vehicle is bright (Shine a light on the optical sensor)	0V
					The area around the vehicle is dark (Block the light from the optical sensor)	Battery voltage
69 (G)	Ground	CVT device output	Output	—		Battery voltage
70 (P)	Ground	IPDM E/R ignition output 1	Output	Push-button ignition switch	OFF or ACC	0V
					ON	Battery voltage
71 (R)	Ground	Driver request switch	Input	Front door LH request switch	ON (pressed)	0V
					OFF (not pressed)	 JPMIA0016GB 1.0V
72 (G)	Ground	Passenger request switch	Input	Front door RH request switch	ON (pressed)	0V
					OFF (not pressed)	 JPMIA0016GB 1.0V
74 (BR)	Ground	Door key/c lock sw signal	Input	Front door lock assembly LH (key cylinder switch)	OFF (neutral)	5V
					ON (lock)	0V
75 (BG)	Ground	Combination switch output 5	Output	Combination switch (Wiper intermittent dial 4)	OFF	 PKIB4960J 7.0 – 8.0V
					INT VOLUME 2	 PKIB4958J 1.2V
					RR WIPER ON	
					FR FOG	

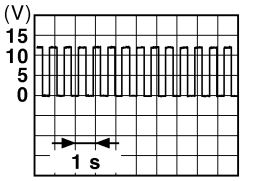
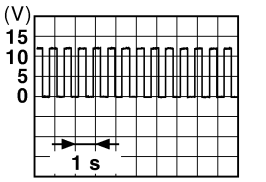
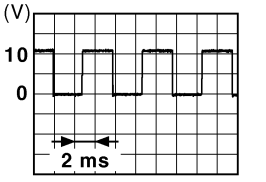
Terminal No. (Wire color) (+)	Terminal No. (Wire color) (-)	Description: Signal name	Description: Input/ Output	Condition		Value (Approx.)
76 (P)	Ground	Combination switch output 4	Output	Combination switch (Wiper intermittent dial 4)	OFF	 PKIB4960J 7.0 – 8.0V
					RR WIPER INT INT VOLUME 3 AUTO LIGHT TAIL LAMP	 PKIB4958J 1.2V
77 (R)	Ground	Combination switch output 3	Output	Combination switch (Wiper intermittent dial 4)	OFF	 PKIB4960J 7.0 – 8.0V
					INT VOLUME 1 RR WASHER HEADLAMP 2 HI BEAM	 PKIB4958J 1.2V
78 (G)	Ground	Combination switch output 2	Output	Combination switch (Wiper intermittent dial 4)	OFF	 PKIB4960J 7.0 – 8.0V
					FR WIPER HI FR WIPER INT/AUTO PASSING HEADLAMP 1	 PKIB4958J 1.2V

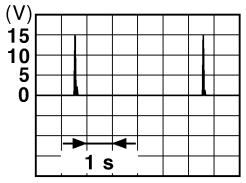
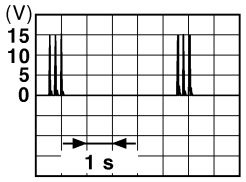
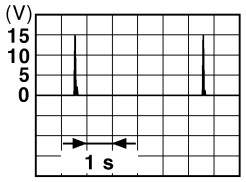
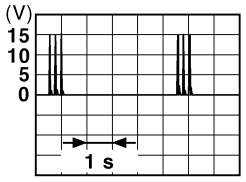
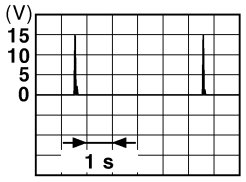
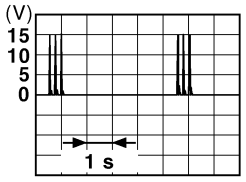
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
79 (W)	Ground	Combination switch output 1	Output	Combination switch (Wiper intermittent dial 4)	OFF	 PKIB4960J 7.0 – 8.0V
					FR WASHER	 PKIB4958J 1.2V
					FR WIPER LOW	
					TURN LH	
					TURN RH	
80 (R)	Ground	Back door open switch	Output	Back door	Open (back door actuator is activated)	Battery voltage
					Close (back door actuator is not activated)	0V
81 (L)	Ground	Rear wiper battery fuse	Input	Push-button ignition switch OFF		Battery voltage
82 (W)	Ground	Left rear door switch	Input	Rear door LH switch	OFF (when rear door LH closes)	 JPMIA0011GB 11.8V
					ON (when rear door LH opens)	0V
83 (BG)	Ground	Back door request switch	Input	Back door request switch	ON (pressed)	0V
					OFF (not pressed)	Battery voltage
84 (BR)	Ground	Rear wiper autostop switch	Input	Push-button ignition switch ON	Rear wiper stop position	Battery voltage
					Any position other than rear wiper stop position	0V
86 (R)	Ground	Left rear trailer flasher	Output	Push-button ignition switch ON	Turn signal switch OFF	Battery voltage
					Turn signal switch LH	 PKIC6370E 6.0 - 7.0 V

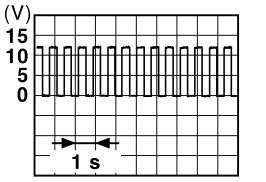
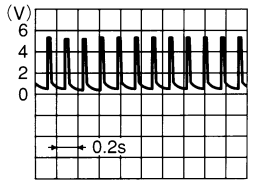
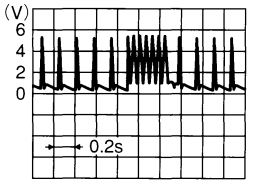
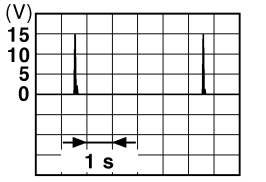
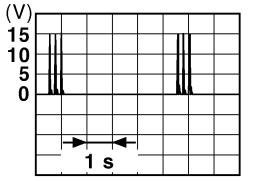
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
87 (P)	Ground	Right rear trailer flasher	Output	Push-button ignition switch ON	Turn signal switch OFF	Battery voltage
					Turn signal switch RH	 PKIC6370E 6.0 - 7.0 V
89 (LG)	Ground	Reverse lamp output	Output	Push-button ignition switch ON	R position	 PKID0926E 6.5V
					Any position other than R	0V
91 (BR)	Ground	Back door open out signal	Output	Back door opener switch	OFF	0V
					ON	Battery voltage
92 (R)	Ground	Right rear flasher	Output	Push-button ignition switch ON	Turn signal switch OFF	0V
					Turn signal switch RH	 PKID0926E 6.5 V
93 (R)	Ground	Right rear door switch	Input	Rear door RH switch	OFF (when rear door RH closes)	 JPMIA0011GB 11.8V
					ON (when rear door RH opens)	0V
94 (G)	Ground	Passenger door switch	Input	Front door RH switch	OFF (when front door RH closes)	 JPMIA0011GB 11.8 V
					ON (when front door RH opens)	0V

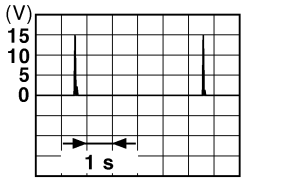
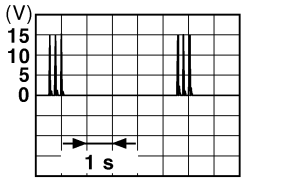
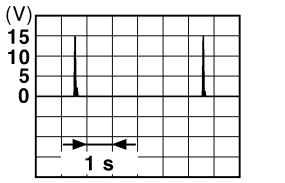
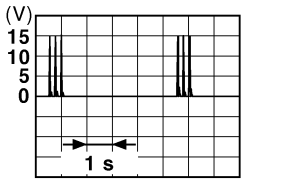
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
95 (V)	Ground	Rear wiper output	Output	Rear wiper	OFF (stopped)	0V
					ON (activated)	Battery voltage
96 (BG)	Ground	Driver door switch	Input	Front door LH switch	OFF (front door LH CLOSE)	 JPMIA0011GB 11.8V
					ON (front door LH OPEN)	0V
97 (W)	Ground	Back door switch	Input	Back door switch	OFF (back door is closed)	 JPMIA0011GB 11.8V
					ON (back door is open)	0V
99 (P)	Ground	Inside key antenna (luggage room) B	Output	Push-button ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
100 (W)	Ground	Inside key antenna (luggage room) A	Output	Push-button ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
101 (R)	Ground	Outside key antenna (rear bumper) B	Output	When the back door request switch is operated with push-button ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
102 (G)	Ground	Outside key antenna (rear bumper) A	Output	When the back door request switch is operated with push-button ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
103 (BG)	Ground	Left rear flasher	Output	Push-button ignition switch ON	Turn signal switch OFF	0V
					Turn signal switch LH	 PKID0926E 6.5 V
105 (LG)	Ground	Right front flasher	Output	Push-button ignition switch ON	Turn signal switch OFF	0V
					Turn signal switch RH	 PKID0926E 6.5 V
107 (W)	Ground	Low side start switch LED	Input	Push-button ignition switch	OFF	0V
					NOTE: When the illumination brightening/dimming level is in the neutral position ON	 JSNIA0010GB
108 (GR)	Ground	Shift lock solenoid output	Input	Selector lever	P position	0V
					Any position other than P	Battery voltage
109 (R)	Ground	Reverse signal	Output	Push-button ignition switch ON	R position	Battery voltage
					Any position other than R	0V
111 (P)	Ground	ACC LED	Output	Push-button ignition switch	OFF	Battery voltage
					ACC or ON	0V
113 (L)	Ground	ACC relay output	Output	Push-button ignition switch	OFF	0V
					ACC or ON	Battery voltage

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
114 (W)	Ground	Outside key antenna (passenger side) A	Output	When the front door RH request switch is operated with push-button ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
115 (BG)	Ground	Outside key antenna (passenger side) B	Output	When the front door RH request switch is operated with push-button ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
116 (W)	Ground	Inside key antenna (console) A	Output	Push-button ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
117 (SB)	Ground	Left front flasher	Output	Push-button ignition switch ON	Turn signal switch OFF	0V
					Turn signal switch LH	 PKID0926E 6.5 V
119 (R)	Ground	Remote keyless entry receiver signal	Input/ Output	Push-button ignition switch ON	Standby state	 OCC3881D
					When receiving the signal from the transmitter	 OCC3880D
121 (G)	Ground	Outside key antenna (driver side) B	Output	When the front door LH request switch is operated with push-button ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
122 (P)	Ground	Outside key antenna (driver side) A	Output	When the front door LH request switch is operated with push-button ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
126 (P)	Ground	NATS antenna amp. B	Input/ Output	During waiting	Intelligent Key backside is contacted to push-button ignition switch, turn ignition switch ON.	Just after pressing push-button ignition switch. Pointer of analog volt meter should move.
127 (BG)	Ground	NATS antenna amp. A	Input/ Output	During waiting	Intelligent Key backside is contacted to push-button ignition switch, turn ignition switch ON.	Just after pressing push-button ignition switch. Pointer of analog volt meter should move.
128 (R)	Ground	Inside key antenna (console) B	Output	Push-button ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
129 (SB)	Ground	Battery saver output	Output	After passing the interior room lamp battery saver operation time		0V
				Any other time after passing the interior room lamp battery saver operation time		Battery voltage
130 (LG)	Ground	Passenger door unlock	Output	Front door RH	UNLOCK (actuator is activated)	Battery voltage
					Other than UNLOCK (actuator is not activated)	0V
131 (W)	Ground	BCM battery fuse	Input	Push-button ignition switch OFF		Battery voltage

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
132 (BR)	Ground	Rear door lock	Output	All doors	LOCK (actuator is activated)	Battery voltage
					Other than LOCK (actuator is not activated)	0V
133 (Y)	Ground	Rear door unlock	Output	Rear door RH and rear door LH	UNLOCK (actuator is activated)	Battery voltage
					Other than UNLOCK (actuator is not activated)	0V
134 (B)	Ground	Ground 2	—	Push-button ignition switch ON		0V
135 (L)	Ground	Driver, passenger and fuel door lock	Output	All doors	LOCK (actuator is activated)	Battery voltage
					Other than LOCK (actuator is not activated)	0V
136 (LG)	Ground	Room lamp control	Output	Interior room lamp	OFF	Battery voltage
					ON	0V
137 (V)	Ground	Driver unlock	Output	Front door LH	UNLOCK (actuator is activated)	Battery voltage
					Other than UNLOCK (actuator is not activated)	0V
138 (V)	Ground	Rear door battery	Input	Push-button ignition switch OFF		Battery voltage
139 (W)	Ground	Fusible link battery power	Input	Push-button ignition switch OFF		Battery voltage
140 (BR)	Ground	Power window ignition power supply	Output	Push-button ignition switch ON		Battery voltage
141 (Y)	Ground	Power window battery power supply	Output	Push-button ignition switch OFF		Battery voltage
142 (Y)	Ground	Front door battery	Input	Push-button ignition switch OFF		Battery voltage
143 (B)	Ground	Ground 1	—	Push-button ignition switch ON		0V

Fail Safe

INFOID:0000000012548411

CONSULT Display	Fail-safe	Cancellation
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI-SCANNING	Inhibit engine cranking	Ignition switch ON → OFF
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent • Starter control relay signal • Starter relay status signal
B2562: LO VOLTAGE	Inhibit engine cranking	100 ms after the power supply voltage increases to more than 8.8 V
B2608: STARTER RELAY	Inhibit engine cranking	500 ms after the following signal communication status becomes consistent • Starter motor relay control signal • Starter relay status signal (CAN)

CONSULT Display	Fail-safe	Cancellation
B260A: IGNITION RELAY	Inhibit engine cranking	500 ms after the following conditions are fulfilled • IGN relay (IPDM E/R) control signal: OFF (Battery voltage) • Ignition ON signal (CAN to IPDM E/R): OFF (Request signal) • Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)
B2617: STARTER RELAY CIRC	Inhibit engine cranking	1 second after the starter motor relay control inside BCM becomes normal
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM becomes normal
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization

DTC Inspection Priority Chart

INFOID:0000000012548412

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 CIRCUIT • U1010: CONTROL UNIT (CAN)
3	• B2190: NATS ANTENNA AMP • B2191: DIFFERENCE OF KEY • B2192: ID DISCORD BCM-ECM • B2193: CHAIN OF BCM-ECM • B2195: ANTI SCANNING • B2196: DONGLE UNIT • B2198: NATS ANTENNA AMP
4	• B2555: STOP LAMP • B2556: PUSH-BTN IGN SW • B2557: VEHICLE SPEED • B2560: STARTER CONT RELAY • B2601: SHIFT POSITION • B2602: SHIFT POSITION • B2603: SHIFT POSI STATUS • B2604: PNP SW • B2605: PNP SW • B2608: STARTER RELAY • B260A: IGNITION RELAY • B2614: ACC RELAY CIRC • B2615: BLOWER RELAY CIRC • B2616: IGN RELAY CIRC • B2617: STARTER RELAY CIRC • B2618: BCM • B261A: PUSH-BTN IGN SW • B261B: RES ENG RUN • B261E: VEHICLE TYPE • B26F1: IGNITION RELAY • B26F2: IGNITION RELAY • B26F3: STARTER CONTROL RELAY • B26F4: STARTER CONTROL RELAY • B26F6: BCM • B26F7: BCM • B26F8: BCM • B26FD: SHIFT LOCK SOLENOID • B26FE: HOOD SWITCH • B26FF: INTELLIGENT TUNER • C1729: VHCL SPEED SIG ERR • U0415: VEHICLE SPEED SIG

Priority	DTC
5	• C1704: LOW PRESSURE FL • C1705: LOW PRESSURE FR • C1706: LOW PRESSURE RR • C1707: LOW PRESSURE RL • C1708: [NO DATA] FL • C1709: [NO DATA] FR • C1710: [NO DATA] RR • C1711: [NO DATA] RL • C1712: [CHECKSUM ERR] FL • C1713: [CHECKSUM ERR] FR • C1714: [CHECKSUM ERR] RR • C1715: [CHECKSUM ERR] RL • C1716: [PRESSDATA ERR] FL • C1717: [PRESSDATA ERR] FR • C1718: [PRESSDATA ERR] RR • C1719: [PRESSDATA ERR] RL • C1720: [CODE ERR] FL • C1721: [CODE ERR] FR • C1722: [CODE ERR] RR • C1723: [CODE ERR] RL • C1724: [BATT VOLT LOW] FL • C1725: [BATT VOLT LOW] FR • C1726: [BATT VOLT LOW] RR • C1727: [BATT VOLT LOW] RL • C1730: FLAT TIRE FL • C1731: FLAT TIRE FR • C1732: FLAT TIRE RR • C1733: FLAT TIRE RL • C1734: CONTROL UNIT • C1735: IGNITION SIGNAL
6	• B2622: INSIDE ANTENNA • B2623: INSIDE ANTENNA
7	B259A: ROOM LAMP FUSE

DTC Index

INFOID:0000000012548413

NOTE:

Details of time display

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

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. Further testing may be required.	—	—	—	—
U1000: CAN COMM CIRCUIT	—	—	—	BCS-68, "Description"
U1010: CONTROL UNIT (CAN)	—	—	—	BCS-69, "DTC Logic"
U0415: VEHICLE SPEED SIG	—	—	—	BCS-70, "Description"
B2190: NATS ANTENNA AMP	×	—	—	SEC-96, "Description"
B2191: DIFFERENCE OF KEY	×	—	—	SEC-98, "Description"
B2192: ID DISCORD BCM-ECM	×	—	—	SEC-99, "DTC Logic"
B2193: CHAIN OF BCM-ECM	×	—	—	SEC-100, "DTC Logic"
B2195: ANTI SCANNING	×	—	—	SEC-101, "DTC Logic"

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2196: DONGLE UNIT	—	—	—	SEC-102, "Description"
B2198: NATS ANTENNA AMP.	—	—	—	SEC-104, "DTC Logic"
B2555: STOP LAMP	—	—	—	SEC-106, "DTC Logic"
B2556: PUSH-BTN IGN SW	—	×	—	SEC-108, "DTC Logic"
B2557: VEHICLE SPEED	—	×	—	SEC-110, "DTC Logic"
B2560: STARTER CONT RELAY	×	×	—	SEC-111, "Description"
B2562: LOW VOLTAGE	×	—	—	BCS-71, "DTC Logic"
B259A: ROOM LAMP FUSE	—	—	—	BCS-72, "DTC Logic"
B2601: SHIFT POSITION	—	×	—	SEC-112, "DTC Logic"
B2602: SHIFT POSITION	—	×	—	SEC-115, "DTC Logic"
B2603: SHIFT POSI STATUS	—	×	—	SEC-118, "DTC Logic"
B2604: PNP SW	—	×	—	SEC-122, "DTC Logic"
B2605: PNP SW	—	×	—	SEC-125, "DTC Logic"
B2608: STARTER RELAY	×	×	—	SEC-128, "DTC Logic"
B260A: IGNITION RELAY	×	×	—	PCS-60, "DTC Logic"
B2614: ACC RELAY CIRC	—	×	—	PCS-62, "DTC Logic"
B2615: BLOWER RELAY CIRC	—	×	—	PCS-64, "DTC Logic"
B2616: IGN RELAY CIRC	—	×	—	PCS-66, "DTC Logic"
B2617: STARTER RELAY CIRC	×	×	—	SEC-130, "Description"
B2618: BCM	×	×	—	PCS-68, "DTC Logic"
B261A: PUSH-BTN IGN SW	—	×	—	PCS-70, "DTC Logic"
B261B: RES ENG RUN	—	—	—	DLK-148, "DTC Logic"
B261E: VEHICLE TYPE	×	× (Turn ON for 15 seconds)	—	SEC-132, "Description"
B2622: INSIDE ANTENNA	—	—	—	DLK-149, "DTC Logic"
B2623: INSIDE ANTENNA	—	—	—	DLK-151, "DTC Logic"
B26F1: IGNITION RELAY	—	—	—	PCS-72, "DTC Logic"
B26F2: IGNITION RELAY	—	—	—	PCS-74, "DTC Logic"
B26F3: STARTER CONTROL RELAY	—	—	—	SEC-134, "DTC Logic"
B26F4: STARTER CONTROL RELAY	—	—	—	SEC-135, "DTC Logic"
B26F6: BCM	—	—	—	PCS-76, "DTC Logic"
B26F7: BCM	—	—	—	SEC-136, "DTC Logic"
B26F8: BCM	—	—	—	SEC-137, "DTC Logic"
B26FD: SHIFT LOCK SOLENOID	—	—	—	DLK-153, "DTC Logic"
B26FE: HOOD SWITCH	—	—	—	DLK-156, "DTC Logic"
B26FF: REMOTE KEYLESS ENTRY RECEIVER	—	—	—	DLK-158, "DTC Logic"
C1704: LOW PRESSURE FL	—	—	×	WT-33, "DTC Logic"
C1705: LOW PRESSURE FR	—	—	×	
C1706: LOW PRESSURE RR	—	—	×	
C1707: LOW PRESSURE RL	—	—	×	

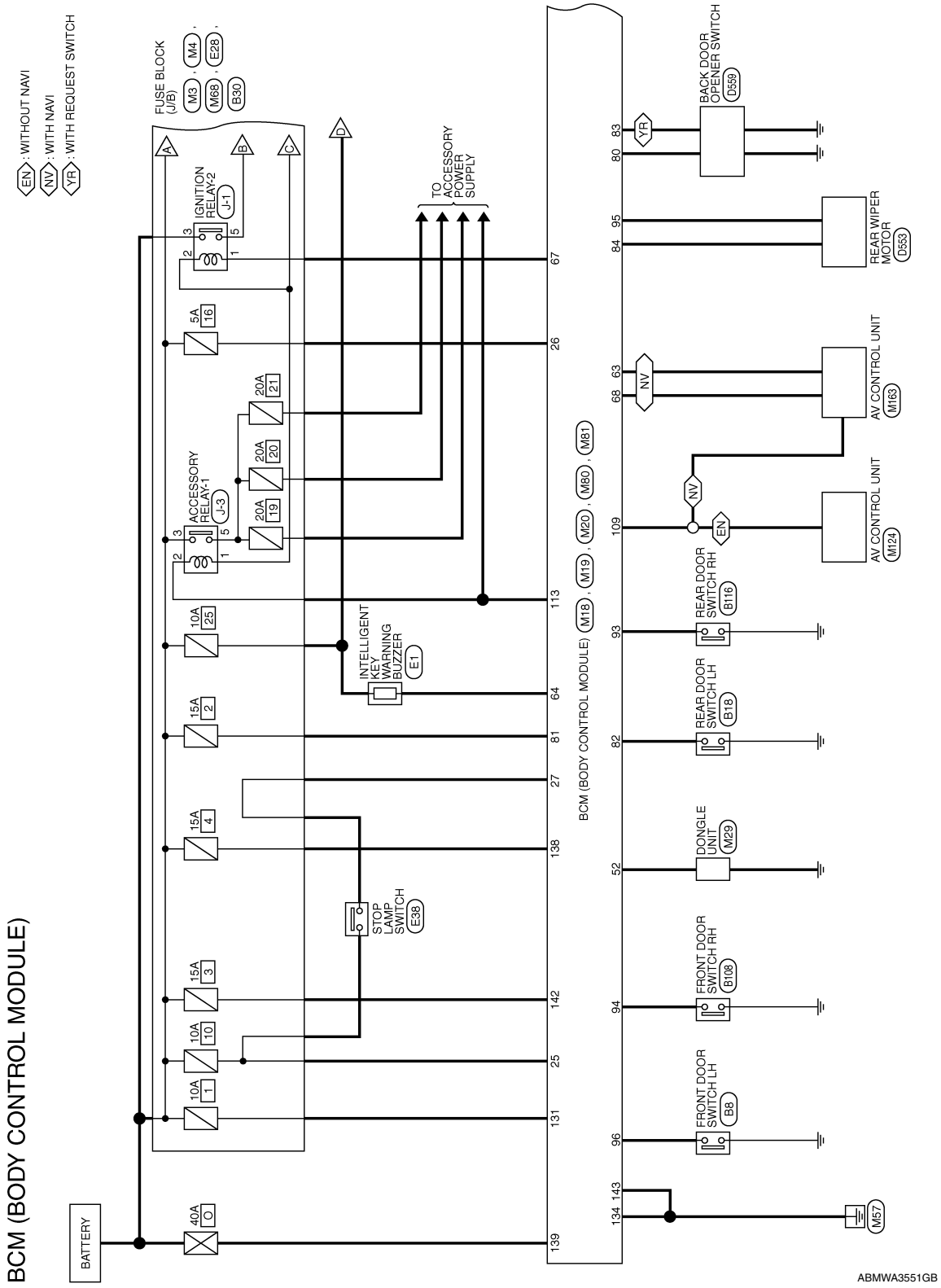
CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
C1708: [NO DATA] FL	—	—	×	WT-35, "DTC Logic"
C1709: [NO DATA] FR	—	—	×	
C1710: [NO DATA] RR	—	—	×	
C1711: [NO DATA] RL	—	—	×	
C1712: [CHECKSUM ERR] FL	—	—	×	WT-38, "DTC Logic"
C1713: [CHECKSUM ERR] FR	—	—	×	
C1714: [CHECKSUM ERR] RR	—	—	×	
C1715: [CHECKSUM ERR] RL	—	—	×	
C1716: [PRESSDATA ERR] FL	—	—	×	WT-40, "DTC Logic"
C1717: [PRESSDATA ERR] FR	—	—	×	
C1718: [PRESSDATA ERR] RR	—	—	×	
C1719: [PRESSDATA ERR] RL	—	—	×	
C1720: [CODE ERR] FL	—	—	×	WT-42, "DTC Logic"
C1721: [CODE ERR] FR	—	—	×	
C1722: [CODE ERR] RR	—	—	×	
C1723: [CODE ERR] RL	—	—	×	
C1724: [BATT VOLT LOW] FL	—	—	×	WT-44, "DTC Logic"
C1725: [BATT VOLT LOW] FR	—	—	×	
C1726: [BATT VOLT LOW] RR	—	—	×	
C1727: [BATT VOLT LOW] RL	—	—	×	
C1729: VHCL SPEED SIG ERR	—	—	×	WT-46, "DTC Logic"
C1730: FLAT TIRE FL	—	—	×	WT-47, "DTC Logic"
C1731: FLAT TIRE FR	—	—	×	
C1732: FLAT TIRE RR	—	—	×	
C1733: FLAT TIRE RL	—	—	×	
C1734: CONTROL UNIT	—	—	×	WT-49, "DTC Logic"
C1735: IGNTION SIGNAL	—	—	×	WT-51, "DTC Logic"

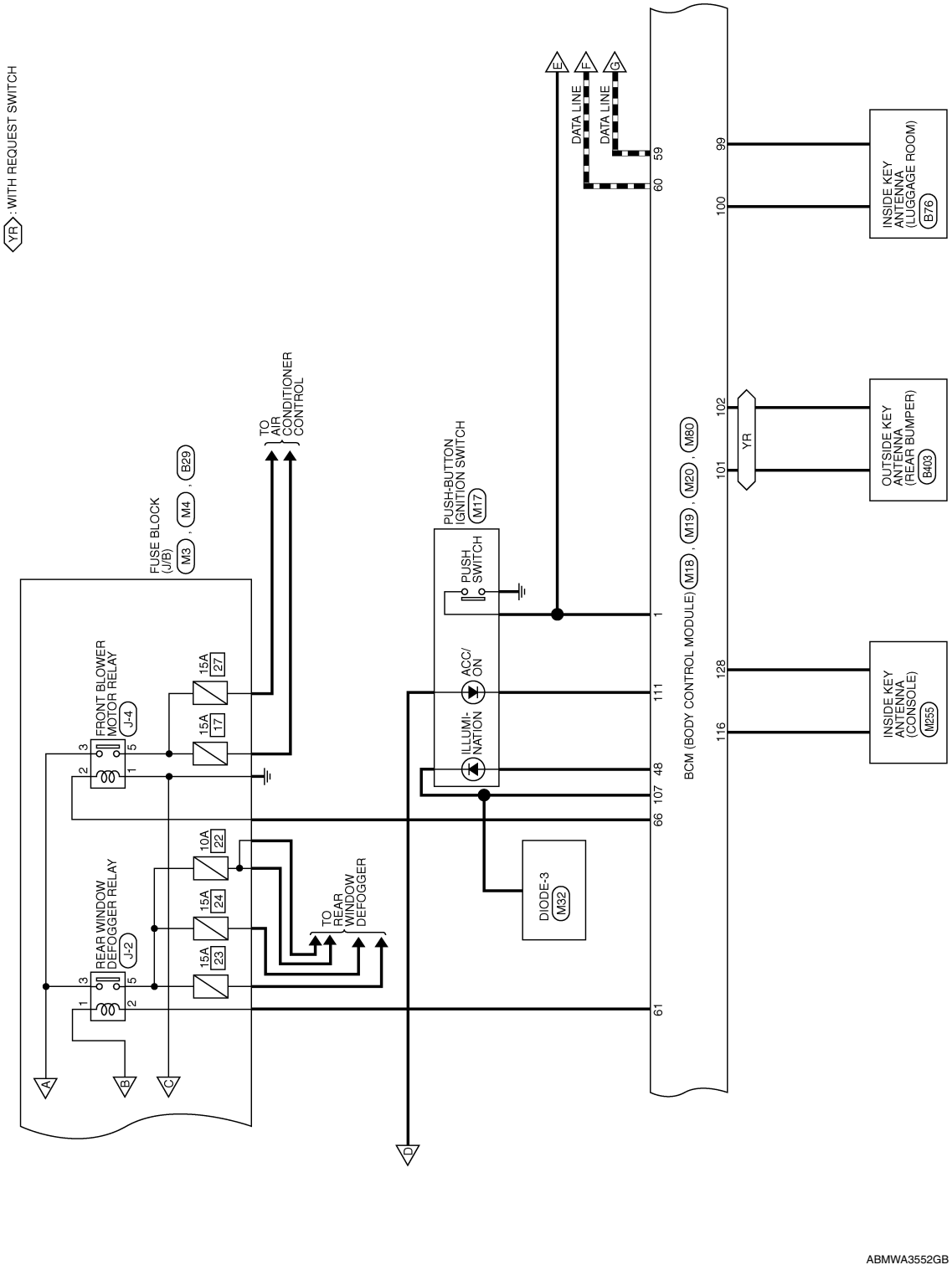
WIRING DIAGRAM

BCM

Wiring Diagram

INFOID:0000000012548414





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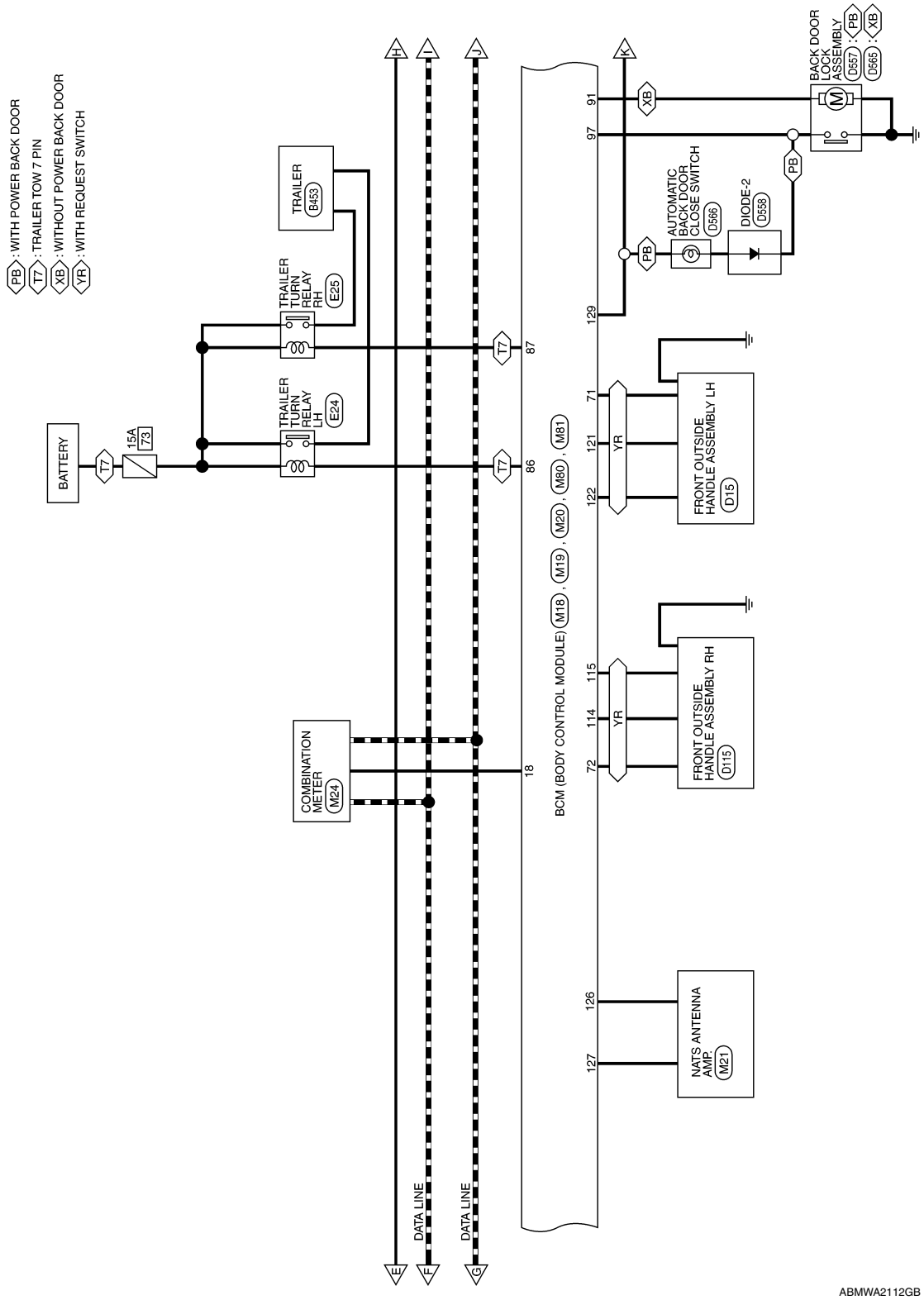
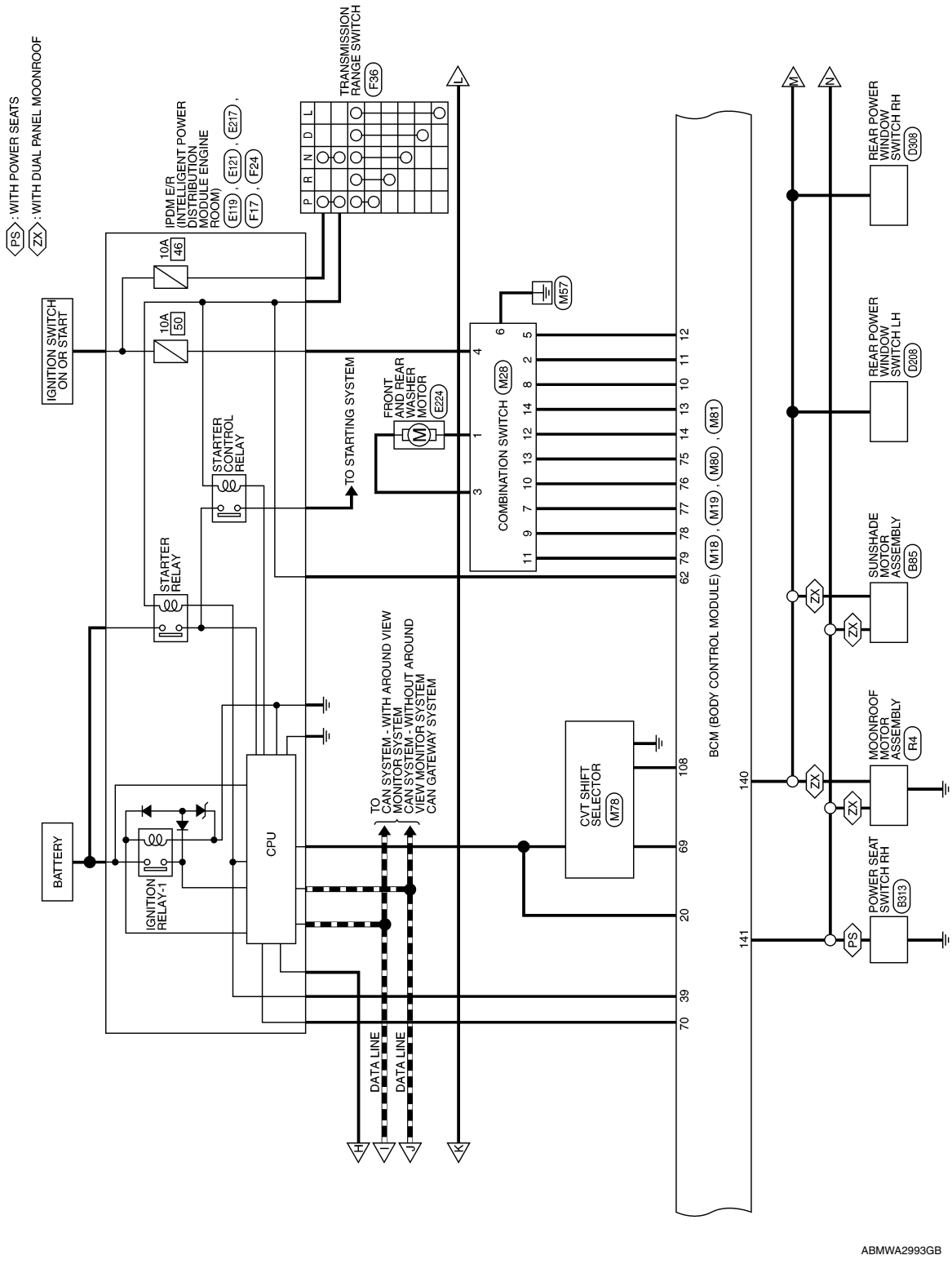
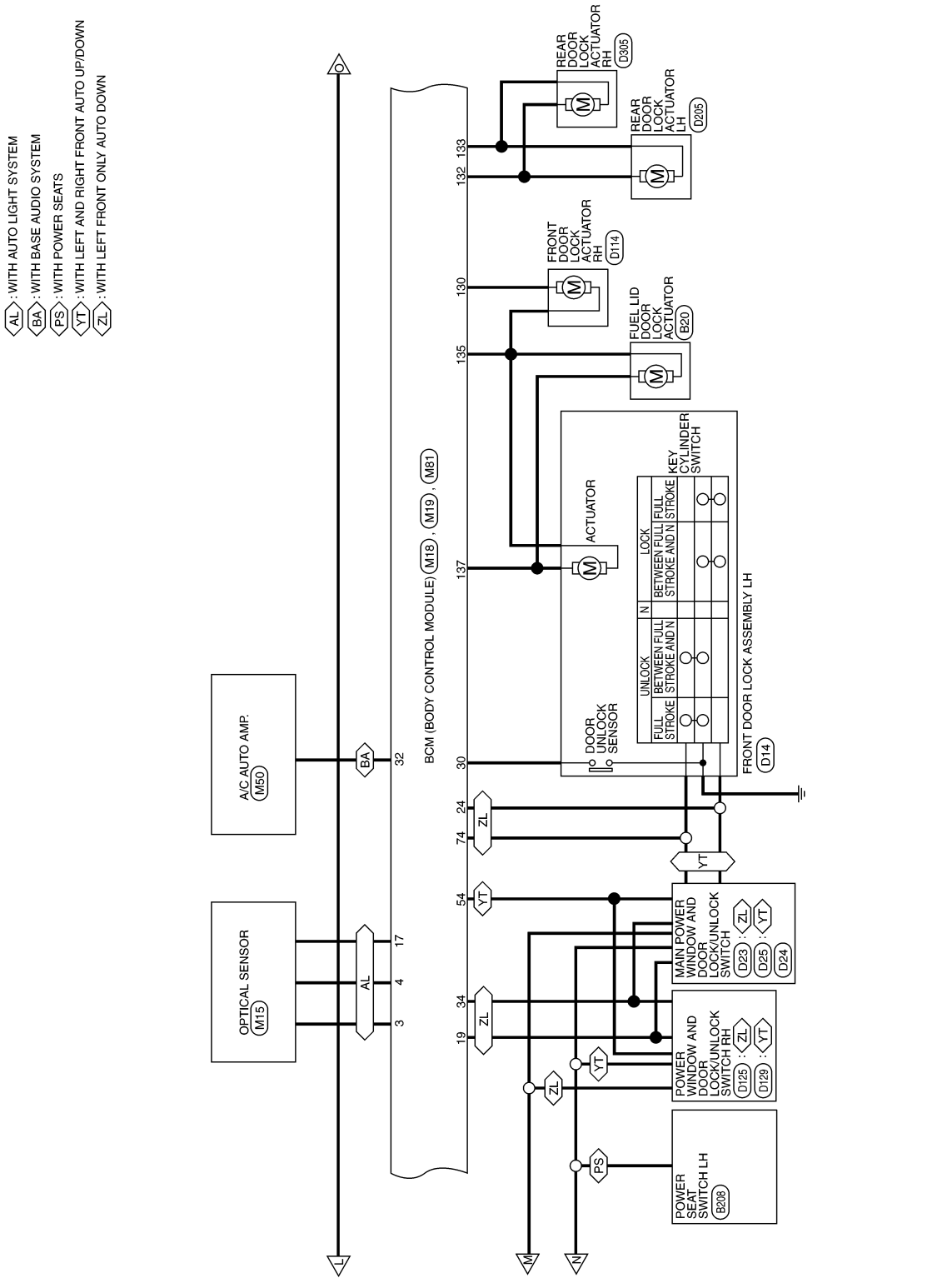
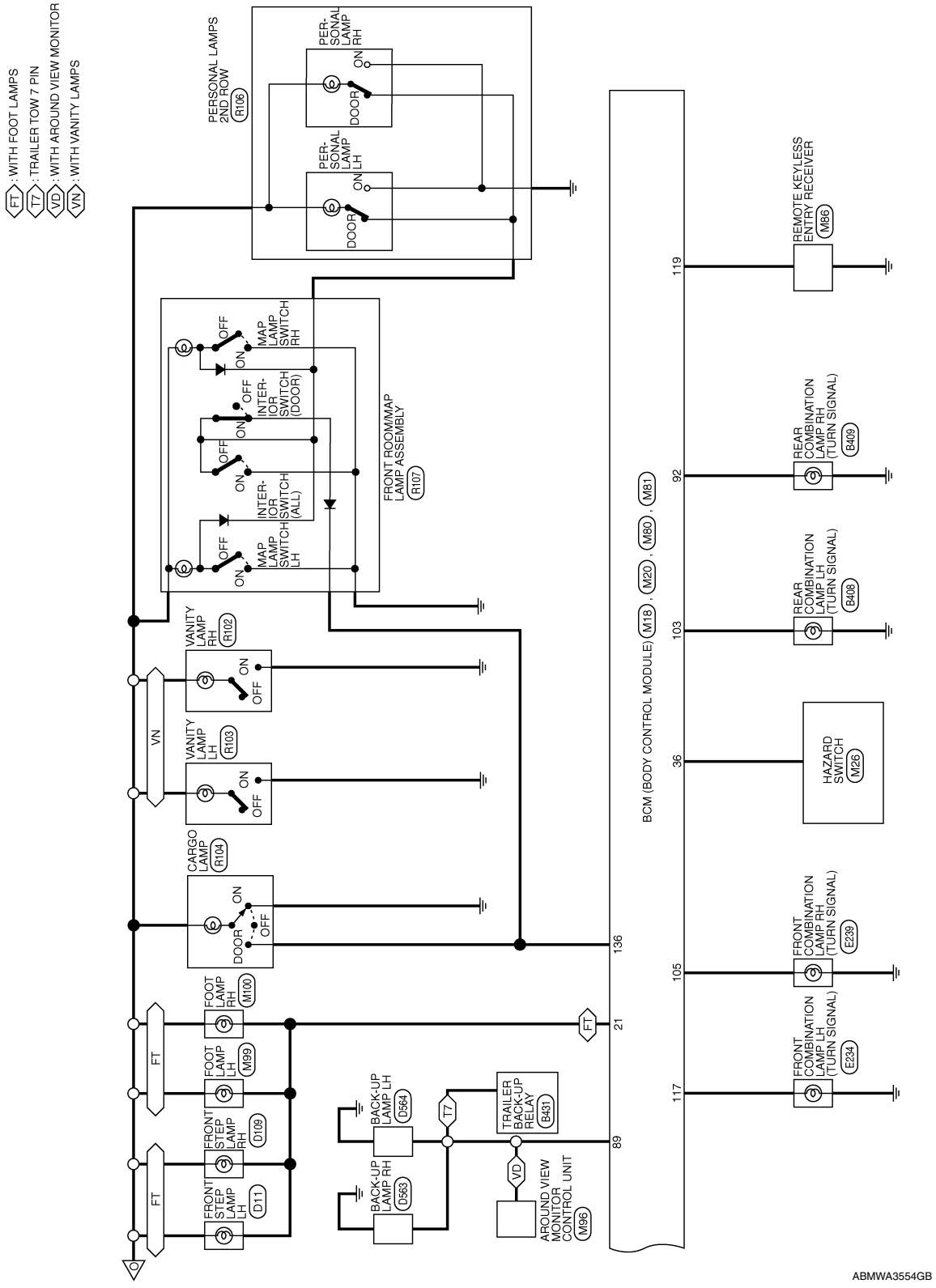

PB : WITH POWER BACK DOOR
T7 : TRAILER TOW 7 PIN
XB : WITHOUT POWER BACK DOOR
YR : WITH REQUEST SWITCH
BATTERY
T7
15A
73
TRAILER
B453
TRAILER TURN RELAY RH
E25
TRAILER TURN RELAY LH
E24
COMBINATION METER
M24
DATA LINE
DATA LINE
E
F
G
BCM (BODY CONTROL MODULE)
M18 , M19 , M20 , M80 , M81
87
86
18
129
91
97
71
121
122
115
114
72
126
127
XB
PB
YR
AUTOMATIC BACK DOOR CLOSE SWITCH
D566
DIODE-2
D558
BACK DOOR LOCK ASSEMBLY
D557
D565
FRONT OUTSIDE HANDLE ASSEMBLY LH
D15
FRONT OUTSIDE HANDLE ASSEMBLY RH
D115
NATS ANTENNA AMP.
M21
ABMWA2112GB

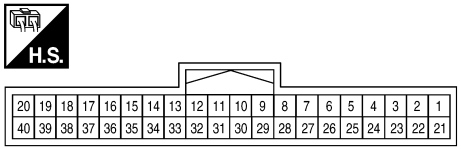

PS : WITH POWER SEATS
ZX : WITH DUAL PANEL MOONROOF
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E119, E121, E217, F17, F24
TRANSMISSION RANGE SWITCH F36
P R N D L
10A 46
10A 50
IGNITION SWITCH ON OR START
STARTER CONTROL RELAY
STARTER RELAY
TO STARTING SYSTEM
FRONT AND REAR WASHER MOTOR E224
COMBINATION SWITCH M28
M57
BATTERY
IGNITION RELAY-1
CPU
TO CAN SYSTEM - WITH AROUND VIEW MONITOR SYSTEM
CAN SYSTEM - WITHOUT AROUND VIEW MONITOR SYSTEM
CAN GATEWAY SYSTEM
DATA LINE
DATA LINE
CVT SHIFT SELECTOR M78
BCM (BODY CONTROL MODULE) M18, M19, M80, M81
REAR POWER WINDOW SWITCH RH D308
REAR POWER WINDOW SWITCH LH D208
SUNSHADE MOTOR ASSEMBLY B85
MOONROOF MOTOR ASSEMBLY F4
POWER SEAT SWITCH RH B313
ABMWA2993GB


AL : WITH AUTO LIGHT SYSTEM
BA : WITH BASE AUDIO SYSTEM
PS : WITH POWER SEATS
YT : WITH LEFT AND RIGHT FRONT AUTO UP/DOWN
ZL : WITH LEFT FRONT ONLY AUTO DOWN
A/C AUTO AMP. M50
OPTICAL SENSOR M15
BCM (BODY CONTROL MODULE) M18 , M19 , M81
REAR DOOR LOCK ACTUATOR RH D305
REAR DOOR LOCK ACTUATOR LH D205
FRONT DOOR LOCK ACTUATOR RH D114
FUEL LID DOOR LOCK ACTUATOR B20
ACTUATOR
KEY CYLINDER SWITCH
UNLOCK
LOCK
FULL STROKE
BETWEEN FULL STROKE AND N
N
DOOR UNLOCK SENSOR
FRONT DOOR LOCK ASSEMBLY LH D14
MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH D23 D25 D24
POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH D125 D129
POWER SEAT SWITCH LH B208
ABMWA2994GB


FT : WITH FOOT LAMPS
T7 : TRAILER TOW 7 PIN
VD : WITH AROUND VIEW MONITOR
VN : WITH VANITY LAMPS
PERSONAL LAMPS 2ND ROW R106
PER-SONAL LAMP RH
PER-SONAL LAMP LH
DOOR
ON
FRONT ROOM/MAP LAMP ASSEMBLY R107
MAP LAMP SWITCH RH
INTER-IOR SWITCH (DOOR)
INTER-IOR SWITCH (ALL)
MAP LAMP SWITCH LH
OFF
ON
VANITY LAMP RH R102
VANITY LAMP LH R103
CARGO LAMP R104
FOOT LAMP RH M100
FOOT LAMP LH M99
FRONT STEP LAMP RH D109
FRONT STEP LAMP LH D11
BACK-UP LAMP LH D564
BACK-UP LAMP RH D563
TRAILER BACK-UP RELAY B431
AROUND VIEW MONITOR CONTROL UNIT M96
BCM (BODY CONTROL MODULE) M18 , M20 , M80 , M81
119
92
103
36
136
105
21
117
89
REMOTE KEYLESS ENTRY RECEIVER M86
REAR COMBINATION LAMP RH (TURN SIGNAL) B409
REAR COMBINATION LAMP LH (TURN SIGNAL) B408
HAZARD SWITCH M26
FRONT COMBINATION LAMP RH (TURN SIGNAL) E239
FRONT COMBINATION LAMP LH (TURN SIGNAL) E234
ABMWA3554GB

BCM (BODY CONTROL SYSTEM) CONNECTORS

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



Terminal No.	Color of Wire	Signal Name
1	G	ENG START SW
2	–	–
3	W	A/L POWER SUPPLY 5V
4	G	A/L SIGNAL
5	–	–
6	–	–
7	–	–
8	–	–
9	–	–
10	W	COMBI SW IN 5
11	BG	COMBI SW IN 4
12	R	COMBI SW IN 3
13	G	COMBI SW IN 2
14	P	COMBI SW IN 1
15	–	–

Terminal No.	Color of Wire	Signal Name
16	–	–
17	R	GND RF A/L
18	V	SECURITY INDICATOR
19	Y	CENTRAL DOOR LOCK SW
20	W	SHIFT P
21	W	STEP LAMP CONT
22	–	–
23	–	–
24	SB	DOOR KEY/C UNLOCK SW
25	W	BRAKE SW FUSE
26	L	SHORTING INPUT
27	G	BRAKE SW LAMP
28	–	–
29	–	–
30	P	DR DOOR LOCK STATUS
31	–	–
32	R	RR DEF SW
33	–	–
34	BR	CENTRAL DOOR UNLOCK SW
35	–	–
36	W	HAZARD SW
37	–	–
38	–	–
39	G	SHIFT N/P
40	–	–

AAMIA1242GB

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

H.S.

60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61

Terminal No.	Color of Wire	Signal Name
41	–	–
42	–	–
43	–	–
44	–	–
45	–	–
46	–	–
47	–	–
48	R	HIGH SIDE START SW LED

Terminal No.	Color of Wire	Signal Name
49	–	–
50	–	–
51	–	–
52	W	AUDIO DONGLE
53	–	–
54	W	PW LIN/COM
55	–	–
56	–	–
57	–	–
58	–	–
59	P	CAN-L
60	L	CAN-H
61	BG	REAR DEFOGGER RELAY OUT
62	W	STARTER RELAY OUT
63	BG	I-KEY LINK SIGNAL
64	P	BUZZER OUT

Terminal No.	Color of Wire	Signal Name
65	–	–
66	W	BLOWER FAN RELAY OUT
67	G	IGN ELEC RELAY OUT 2
68	P	MR OUTPUT
69	G	AT DEVICE OUT
70	P	IGN USM OUT 1
71	R	DR REQUEST SW
72	G	AS REQUEST SW
73	–	–
74	BR	DOOR KEY/C LOCK SW
75	BG	COMBI SW OUT 5
76	P	COMBI SW OUT 4
77	R	COMBI SW OUT 3
78	G	COMBI SW OUT 2
79	W	COMBI SW OUT 1
80	R	BACK DOOR OPEN SW

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY

H.S.

92	91	90	89	88	87	86	85	84	83	82	81
104	103	102	101	100	99	98	97	96	95	94	93

Terminal No.	Color of Wire	Signal Name
81	L	BAT REAR WIPER FUSE
82	W	RL DOOR SW

Terminal No.	Color of Wire	Signal Name
83	BG	BACK DOOR REQUEST SW
84	BR	R WIPER AUTOSTOP SW
85	–	–
86	R	TRAILER FLASHER RL
87	P	TRAILER FLASHER RR
88	–	–
89	LG	REVERSE LAMP OUT
90	–	–
91	BR	BACK DOOR OPEN OUT
92	R	RR FLASHER
93	R	RR DOOR SW

Terminal No.	Color of Wire	Signal Name
94	G	AS DOOR SW
95	V	REAR WIPER OUT
96	BG	DR DOOR SW
97	W	BACK DOOR SW
98	–	–
99	P	ROOM ANT 3 B
100	W	ROOM ANT 3 A
101	R	REAR BUMPER ANT B
102	G	REAR BUMPER ANT A
103	BG	RL FLASHER
104	–	–

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Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	BG	–
3	Y	–
4	Y	–
5	R	–
6	B	–
7	R	–
8	W	–
9	G	–
10	P	–
11	W	–
12	P	–
13	BG	–
14	G	–

Connector No.	M80
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

116	115	114	113	112	111	110	109	108	107	106	105
128	127	126	125	124	123	122	121	120	119	118	117

Terminal No.	Color of Wire	Signal Name
105	LG	FR FLASHER
106	–	–
107	W	LOW SIDE START SW LED
108	GR	SHIFT LOCK SOLENOID OUT
109	R	REVERSE SIGNAL
110	–	–
111	P	ACC LED
112	–	–

Terminal No.	Color of Wire	Signal Name
113	L	ACC RELAY OUT
114	W	AS DOOR ANT A
115	BG	AS DOOR ANT B
116	W	ROOM ANT A
117	SB	FL FLASHER
118	–	–
119	R	RF NIMOCO
120	–	–
121	G	DR DOOR ANT B
122	P	DR DOOR ANT A
123	–	–
124	–	–
125	–	–
126	P	IMMO START BUTTON ANT B
127	BG	IMMO START BUTTON ANT A
128	R	ROOM ANT B

Terminal No.	Color of Wire	Signal Name
130	LG	DOOR UNLOCK AS
131	W	BAT BCM FUSE
132	BR	DOOR LOCK RR/RL
133	Y	DOOR UNLOCK RR/RL
134	B	GND 2
135	L	DOOR LOCK DR/AS/FL
136	LG	ROOM LAMP CONT

Terminal No.	Color of Wire	Signal Name
137	V	DOOR UNLOCK DR/FL
138	V	BAT REAR DOOR
139	W	BAT POWER F/L
140	BR	P/W POWER SUPPLY IGN
141	Y	P/W POWER SUPPLY BAT
142	Y	BAT FRONT DOOR
143	B	GND 1

Connector No.	M81
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

H.S.

137	136	135	134	133	132	131	130	129
143	142	141	140	139	138			

Terminal No.	Color of Wire	Signal Name
129	SB	BATTERY SAVER OUT

ABMIA7981GB

BASIC INSPECTION

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM)

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Description

INFOID:0000000012548415

BEFORE REPLACEMENT

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

NOTE:

If “Before Replace ECU” cannot be used, use the “After Replace ECU” or “Manual Configuration” after replacing BCM.

AFTER REPLACEMENT

CAUTION:

- **When replacing BCM, you must perform “After Replace ECU” with CONSULT.**
- **Complete the procedure of “After Replace ECU” in order.**
- **If you set incorrect “After Replace ECU”, incidents might occur.**
- **Configuration is different for each vehicle model. Confirm configuration of each vehicle model.**
- **When replacing BCM, perform the system initialization (NATS).**

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Work Procedure

INFOID:0000000012548416

1. SAVING VEHICLE SPECIFICATION

CONSULT

Enter "Re/Programming, Configuration" and perform “Before Replace ECU” to save or print current vehicle specification.

NOTE:

If “Before Replace ECU” cannot be used, use the "After Replace ECU" or "Manual Configuration" after replacing BCM.

>> GO TO 2.

2. REPLACE BCM

Replace BCM. Refer to BCS-81, "Removal and Installation".

>> GO TO 3.

3. WRITING VEHICLE SPECIFICATION

CONSULT

1. Enter "Re/Programming, Configuration".
2. If “Before Replace ECU” operation was performed, automatically an "Operation Log Selection" screen will be displayed. Select the applicable file from the "Saved Data List" and press “Confirm” to write vehicle specification. Refer to BCS-65, "CONFIGURATION (BCM) : Work Procedure".
3. If “Before Replace ECU” operation was not performed, select "After Replace ECU" or "Manual Configuration" to write vehicle specification. Refer to BCS-65, "CONFIGURATION (BCM) : Work Procedure".

>> GO TO 4.

4. REGISTER INTELLIGENT KEYS

For initialization and registration of Intelligent Keys, refer to CONSULT Immobilizer mode and follow the on-screen instructions.

>> Work End.

CONFIGURATION (BCM)

CONFIGURATION (BCM) : Description

INFOID:0000000012548417

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

Function	Description
"Before Replace ECU"	• Reads the vehicle configuration of current BCM. • Saves the read vehicle configuration.
"After Replace ECU"	Writes the vehicle configuration with manual selection.
"Select Saved Data List"	Writes the vehicle configuration with saved data.

CAUTION:
- **When replacing BCM, you must perform “Select Saved Data List” or "After Replace ECU" with CONSULT.**
- **Complete the procedure of “Select Saved Data List” or "After Replace ECU" in order.**
- **If you set incorrect “Select Saved Data List” or "After Replace ECU", incidents might occur.**
- **Configuration is different for each vehicle model. Confirm configuration of each vehicle model.**
- **Never perform “Select Saved Data List” or "After Replace ECU" except for new BCM.**

CONFIGURATION (BCM) : Work Procedure

INFOID:0000000012548418

1.WRITING MODE SELECTION

CONSULT
Select “Reprogramming, Configuration” of BCM.

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

2.PERFORM “SAVED DATA LIST”

CONSULT
Automatically “Operation Log Selection” window will display if “Before Replace ECU” was performed. Select applicable file from the “Save Data List” and press “Confirm”.

>> Work End.

3.PERFORM “AFTER REPLACE ECU” OR “MANUAL CONFIGURATION”

CONSULT
1. Select “After Replace ECU” or “Manual Configuration”.
2. Identify the correct model and configuration list. Refer to BCS-66, "CONFIGURATION (BCM) : 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.
4. Select “Next”.
   CAUTION:
   Make sure to select “Next”, confirm each setting value and press “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.
5. When "Completed", select "End".

>> GO TO 4.

4.OPERATION CHECK

Confirm that each function controlled by BCM operates normally.

>> Work End.

CONFIGURATION (BCM) : Configuration List

INFOID:0000000012960225

CAUTION:
Thoroughly read and understand the vehicle specification. Incorrect settings may result in abnormal control of ECU.

BCM

SETTING ITEM		NOTE
Items	Setting value	
AUTO LIGHT	WITHOUT ⇔ MODE4	• WITHOUT: Without auto light • MODE4: With enhanced auto light
DOOR MIRROR LAMP	WITH ⇔ WITHOUT	• WITH: With foot and step lamps • WITHOUT: Without foot and step lamps
TPMS	MODE1 ⇔ MODE3	• MODE1: Without easy fill tire alert • MODE3: With easy fill tire alert
TIRE PRESSURE	230 kPa ⇔ 240 kPa	• 230 kPa: TPMS threshold depends on tire size 18" • 240 kPa: TPMS threshold depends on tire size 20"
TPMS INFO STYLE	MODE1 ⇔ MODE3	• MODE1: Without individual tire pressure display in combination meter • MODE3: With individual tire pressure display in combination meter
CAN ERR DETECT ABD	WITH ⇔ WITHOUT	• WITH: With automatic back door • WITHOUT: Without automatic back door

INTELLIGENT KEY

Key Fob Type	LCK/UNLCK/ALRM ⇔ LCK/UNLCK/PBD/ALRM ⇔ ENST/LCK/UNLCK/BD/ALRM ⇔ ENST/LCK/UNLCK/ALRM	• LCK/UNLCK/ALRM: 3 button (Lock/Unlock/Panic) • LCK/UNLCK/PBD/ALRM: 4 button (wo/engine start) • ENST/LCK/UNLCK/BD/ALRM: 5 button (w/engine start) • ENST/LCK/UNLCK/ALRM: 4 button (w/engine start)

SHIPPING MODE CANCEL OPERATION

Work Procedure

INFOID:0000000012960220

1.SHIPPING MODE CANCEL OPERATION

1. Turn ignition switch OFF.
2. Press in (turn on) the extended storage switch. Refer to PG-88, "How To Check".
3. Turn ignition switch ON.
4. Turn ignition switch OFF and wait at least 2 seconds.

NOTE:
Pressing in the extended storage switch moves the mode from Shipping to Normal.

>> GO TO 2.

2.SHIPPING MODE CANCEL CHECK

1. Turn ignition switch ON.
2. Check that extended storage warning message is not displayed in combination meter or display.

>> WORK END

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:0000000012548422

Refer to LAN-12, "CAN COMMUNICATION SYSTEM : System Description".

DTC Logic

INFOID:0000000012548423

DTC DETECTION LOGIC

NOTE:
U1000 can be set if a module harness was disconnected and reconnected, perhaps during a repair. Confirm that there are actual CAN diagnostic symptoms and a present DTC by performing the Self Diagnostic Result procedure.

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

Diagnosis Procedure

INFOID:0000000012548424

1. PERFORM SELF DIAGNOSTIC

1. Turn ignition switch ON and wait for 2 second or more.
2. Check “SELF- DIAG RESULTS”.

Is “CAN COMM CIRCUIT” displayed?

YES >> Perform CAN Diagnosis as described in DIAGNOSIS section of CONSULT Operation Manual.
NO >> Refer to GI-47, "Intermittent Incident".

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:0000000012548425

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CAN COMM CIRCUIT [U1010]	BCM detected internal CAN communication circuit malfunction.	BCM

Diagnosis Procedure

INFOID:0000000012548426

1. REPLACE BCM

When DTC U1010 is detected, replace BCM.

>> Replace BCM. Refer to BCS-81, "Removal and Installation".

U0415 VEHICLE SPEED SIG

Description

INFOID:0000000012548427

U0415 is displayed if any unusual condition is present in the reception status of the vehicle speed signal from the ABS actuator and electric unit (control unit).

DTC Logic

INFOID:0000000012548428

DTC DETECTION LOGIC

NOTE:

- If DTC U0415 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-68, "DTC Logic".
- If DTC U0415 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-69, "DTC Logic".

CONSULT Display	DTC Detection Condition	Possible Cause
VEHICLE SPEED SIG [U0415]	When the vehicle speed signal received from the ABS actuator and electric unit (control unit) remains abnormal for 2 seconds or more.	• ABS system • Combination meter system • CAN bus harness

DTC CONFIRMATION PROCEDURE

1. DTC CONFIRMATION

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

Is any DTC detected?

YES >> Refer to BCS-52, "DTC Index".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000012548429

1. ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF DIAGNOSTIC RESULT

Perform Self Diagnostic Result of ABS with CONSULT. Refer to BRC-36, "CONSULT Function" (Type 1) or BRC-195, "CONSULT Function" (Type 2).

Is any DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to BRC-47, "DTC Index" (Type 1) or BRC-206, "DTC Index" (Type 2).
NO >> GO TO 2.

2. CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) POWER SUPPLY AND GROUND CIRCUIT

Check ABS actuator and electric unit (control unit) power and ground. Refer to BRC-136, "Diagnosis Procedure" (Type 1) or BRC-295, "Diagnosis Procedure" (Type 2).

Is the inspection result normal?

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

3. COMBINATION METER SELF DIAGNOSTIC RESULT

Perform Self Diagnostic Result of METER M&A with CONSULT. Refer to MWI-18, "CONSULT Function (METER/M&A)".

Is any DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to MWI-29, "DTC Index".
NO >> Refer to GI-47, "Intermittent Incident".

B2562 LOW VOLTAGE

DTC Logic

INFOID:0000000012548430

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible cause
LOW VOLTAGE [B2562]	When the power supply voltage to BCM remains less than 8.8V for 120 seconds or more	• Harness or connector (power supply circuit) • Vehicle battery

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 120 seconds or more.

Is any DTC detected?

YES >> Refer to BCS-71, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000012548431

1. CHECK BATTERY VOLTAGE

Check battery voltage.

Is battery voltage less than 8.8V?

YES >> Charge battery and retest. Refer to CHG-10, "Work Flow (With EXP-800 NI or GR8-1200 NI)" or CHG-13, "Work Flow (Without EXP-800 NI or GR8-1200 NI)".
NO >> GO TO 2.

2. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit. Refer to BCS-74, "Diagnosis Procedure".

Is the inspection result normal?

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

3. BCM SELF DIAGNOSTIC RESULT

Perform Self Diagnostic Result of BCM with CONSULT. Refer to BCS-25, "BCM : CONSULT Function (BCM - BCM)".

Is DTC B2562 CRNT?

YES >> Replace BCM. Refer to BCS-81, "Removal and Installation".
NO >> Refer to GI-47, "Intermittent Incident".

B259A ROOM LAMP FUSE

DTC Logic

INFOID:0000000012548432

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible cause
ROOM LAMP FUSE [B259A]	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.	Harness or connector (power supply circuit)

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-72, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000012548433

Regarding Wiring Diagram information, refer to BCS-55, "Wiring Diagram".

1. CHECK FUSE

Check that the following fuse is not blown.

Terminal No.	Signal name	Fuse No.
131	BCM battery fuse	1 (10A)

Is the fuse or fusible link blown?

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

2. CHECK BAT BCM FUSE CIRCUIT

1. Disconnect BCM connector M81.
2. Check voltage between BCM connector M81 terminal 131 and ground.

BCM		Ground	Voltage (Approx.)
Connector	Terminal		
M81	131	—	Battery voltage

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-81, "Removal and Installation".
NO >> Repair or replace harness or connectors. GO TO 3.

3. CHECK BATTERY SAVER OUTPUT CIRCUIT FOR SHORT TO GROUND

1. Turn ignition OFF.
2. Check continuity between BCM connector M81 terminal 129 and ground.

BCM		Ground	Continuity
Connector	Terminal		
M81	129	—	No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-81, "Removal and Installation".
NO >> Repair or replace harness or connectors.

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

INFOID:0000000012548434

Regarding Wiring Diagram information, refer to BCS-55, "Wiring Diagram".

1. CHECK FUSE AND FUSIBLE LINK

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

Terminal No.	Signal name	Fuse and fusible link No.
139	Fusible link battery power	O (40A)
131	BCM battery fuse	1 (10A)

Is the fuse or fusible link blown?

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

2. CHECK POWER SUPPLY CIRCUIT

1. Disconnect BCM connector M81.
2. Check voltage between BCM connector M81 terminals 131, 139 and ground.

BCM		Ground	Voltage (Approx.)
Connector	Terminal		
M81	131	—	Battery voltage
	139		

Is the inspection result normal?

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

3. CHECK GROUND CIRCUIT

Check continuity between BCM connector M81 terminals 134, 143 and ground.

BCM		Ground	Continuity
Connector	Terminal		
M81	134	—	Yes
	143		

Is the inspection result normal?

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

COMBINATION SWITCH INPUT CIRCUIT

Diagnosis Procedure

INFOID:0000000012548435

Regarding Wiring Diagram information, refer to BCS-55, "Wiring Diagram".

1. CHECK INPUT 1 - 5 SYSTEM CIRCUIT FOR OPEN

1. Turn ignition switch OFF.
2. Disconnect BCM connector M19 and combination switch connector.
3. Check continuity between BCM connector M19 and combination switch connector.

Signal	BCM		Combination switch		Continuity
	Connector	Terminal	Connector	Terminal	
INPUT 1	M19	79	M28	11	Yes
INPUT 2		78		9	
INPUT 3		77		7	
INPUT 4		76		10	
INPUT 5		75		13	

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connectors.

2. CHECK INPUT 1 - 5 SYSTEM CIRCUIT FOR SHORT

Check continuity between BCM connector M19 and ground.

Signal	BCM		Ground	Continuity
	Connector	Terminal		
INPUT 1	M19	79	Ground	No
INPUT 2		78		
INPUT 3		77		
INPUT 4		76		
INPUT 5		75		

Is the inspection result normal?

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

3. CHECK BCM OUTPUT VOLTAGE

1. Connect BCM connector M19 and combination switch connector.
2. Turn ignition switch ON.
3. Check voltage between BCM connector M19 and ground.

Signal	BCM		Ground	Voltage
	Connector	Terminal		
INPUT 1	M19	79	—	Refer to BCS-31, "Reference Value".
INPUT 2		78		
INPUT 3		77		
INPUT 4		76		
INPUT 5		75		

Is the inspection result normal?

YES >> Replace the combination switch. Refer to BCS-82, "Removal and Installation".
NO >> Replace BCM. Refer to BCS-81, "Removal and Installation".

COMBINATION SWITCH OUTPUT CIRCUIT

Diagnosis Procedure

INFOID:0000000012548436

Regarding Wiring Diagram information, refer to BCS-55, "Wiring Diagram".

1. CHECK OUTPUT 1 - 5 SYSTEM CIRCUIT FOR OPEN

1. Turn ignition switch OFF.
2. Disconnect BCM connector M18 and combination switch connector.
3. Check continuity between BCM connector M18 and combination switch connector.

Signal	BCM		Combination switch		Continuity
	Connector	Terminal	Connector	Terminal	
OUTPUT 1	M18	14	M28	12	Yes
OUTPUT 2		13		14	
OUTPUT 3		12		5	
OUTPUT 4		11		2	
OUTPUT 5		10		8	

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connectors.

2. CHECK OUTPUT 1 - 5 SYSTEM CIRCUIT FOR SHORT

Check continuity between BCM connector M18 and ground.

Signal	BCM		Ground	Continuity
	Connector	Terminal		
OUTPUT 1	M18	14	Ground	No
OUTPUT 2		13		
OUTPUT 3		12		
OUTPUT 4		11		
OUTPUT 5		10		

Is the inspection result normal?

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

3. CHECK BCM INPUT VOLTAGE

1. Connect BCM connector M18 and combination switch connector.
2. Turn ignition switch ON.
3. Check voltage between BCM connector M18 and ground.

Signal	BCM		Ground	Voltage
	Connector	Terminal		
OUTPUT 1	M18	14	—	Refer to BCS-31, "Reference Value".
OUTPUT 2		13		
OUTPUT 3		12		
OUTPUT 4		11		
OUTPUT 5		10		

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-81, "Removal and Installation".
NO >> Replace the combination switch. Refer to BCS-82, "Removal and Installation".

SYMPTOM DIAGNOSIS

COMBINATION SWITCH SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000012548437

1. Perform the data monitor of CONSULT to check for any malfunctioning item.
2. Check the malfunction combinations.

Malfunction item: ×

Malfunction combination	Data monitor item																
	FR WIPER HI	FR WIPER LOW	FR WASHER SW	FR WIPER INT	INT VOLUME	RR WIPER ON	RR WIPER INT	RR WASHER SW	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									×		×	×	×				
K	All Items																
L	If only one item is detected or the item is not applicable to the combinations A to K																

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 input circuit applicable to the malfunctioning part. Refer to BCS-75, "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 output circuit applicable to the malfunctioning part. Refer to BCS-77, "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-81, "Removal and Installation".
L	Combination switch	Replace the combination switch. Refer to BCS-82, "Removal and Installation".

NORMAL OPERATING CONDITION

Description

INFOID:0000000012960221

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 does not operate in shipping mode.
- For shipping mode cancel operation, refer to BCS-67, "Work Procedure".

NOTE:
Do not cancel shipping mode during storage of the vehicle. Shipping mode should not be canceled until just prior to customer delivery.

REMOVAL AND INSTALLATION

BCM (BODY CONTROL MODULE)

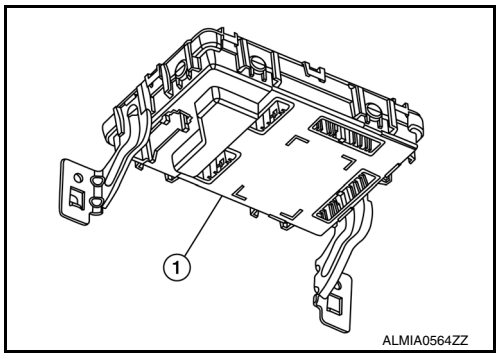
Removal and Installation

INFOID:0000000012548438

CAUTION:
Before replacing the BCM, perform “READ CONFIGURATION” to save or print current vehicle specification. Refer to BCS-64, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Description".

REMOVAL

1. Disconnect the negative battery terminal. Refer to PG-93, "Removal and Installation".
2. Remove the combination meter. Refer to MWI-85, "Removal and Installation".
3. Remove the BCM bolts.
4. Disconnect the harness connectors from the BCM (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

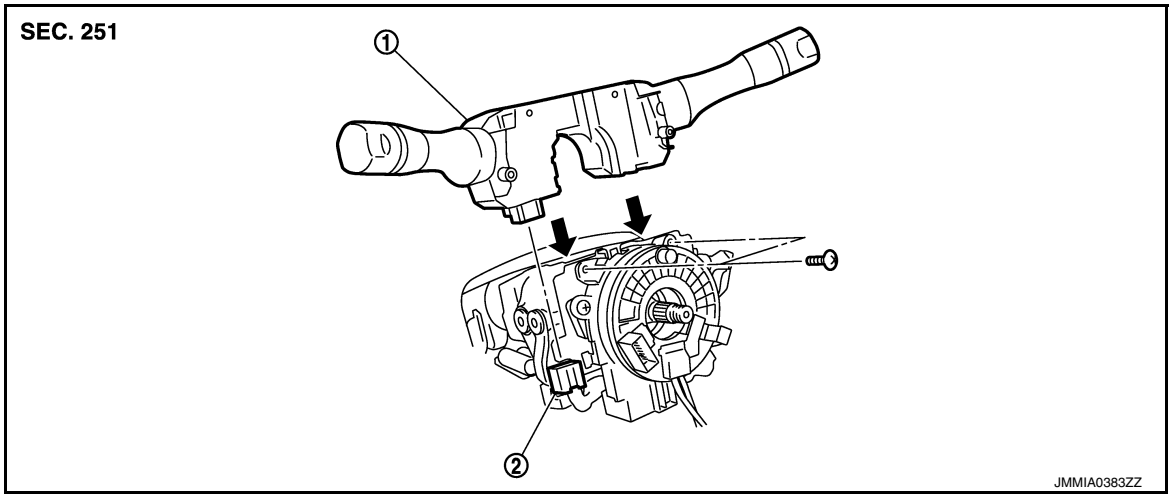
CAUTION:

- **Be sure to perform “WRITE CONFIGURATION” when replacing BCM. Refer to BCS-65, "CONFIGURATION (BCM) : Description".**
- **Be sure to perform the system initialization (NATS) when replacing BCM. Refer to BCS-64, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Description".**
- **When replacing BCM, if new BCM does not come with keyfobs attached, all existing keyfobs must be re-registered.**
- **For initialization and registration of Intelligent Keys, refer to CONSULT Immobilizer mode and follow the on-screen instructions.**

COMBINATION SWITCH

Exploded View

INFOID:0000000012548439



1. Combination switch
2. Combination switch harness connector

Removal and Installation

INFOID:0000000012548440

REMOVAL

1. Remove the steering wheel. Refer to ST-45, "Removal and Installation".
2. Remove the steering column covers. Refer to IP-17, "Removal and Installation".
3. Remove the combination switch screws.
4. Disconnect the harness connector from the combination switch and remove.

INSTALLATION

Installation is in the reverse order of removal.