SECTION BCS

BODY CONTROL SYSTEM

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PRECAUTION

PRECAUTIONS

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

INFOID:0000000010480379

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, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the 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 Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery and wait at least three minutes before performing any service.**

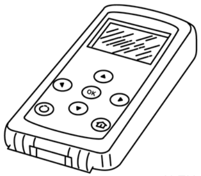
PREPARATION

PREPARATION

Special Service Tool

INFOID:0000000011103119

The actual shape of the tools may differ from those illustrated here.

Tool number (TechMate No.) Tool name	Description
— (J-50190) Signal Tech II  ALEIA0131ZZ	• Activate and display TPMS transmitter IDs • Display tire pressure reported by the TPMS transmitter • Read TPMS DTCs • Register TPMS transmitter IDs • Test remote keyless entry keyfob relative to signal strength • Check Intelligent Key relative signal strength • Confirm vehicle Intelligent Key antenna signal strength • Compatible with future sensors • Equipped with a display

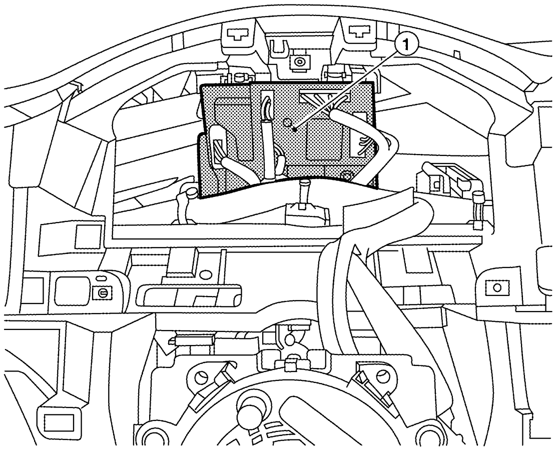
SYSTEM DESCRIPTION

COMPONENT PARTS

BODY CONTROL SYSTEM

BODY CONTROL SYSTEM : Component Parts Location

INFOID:0000000010480380

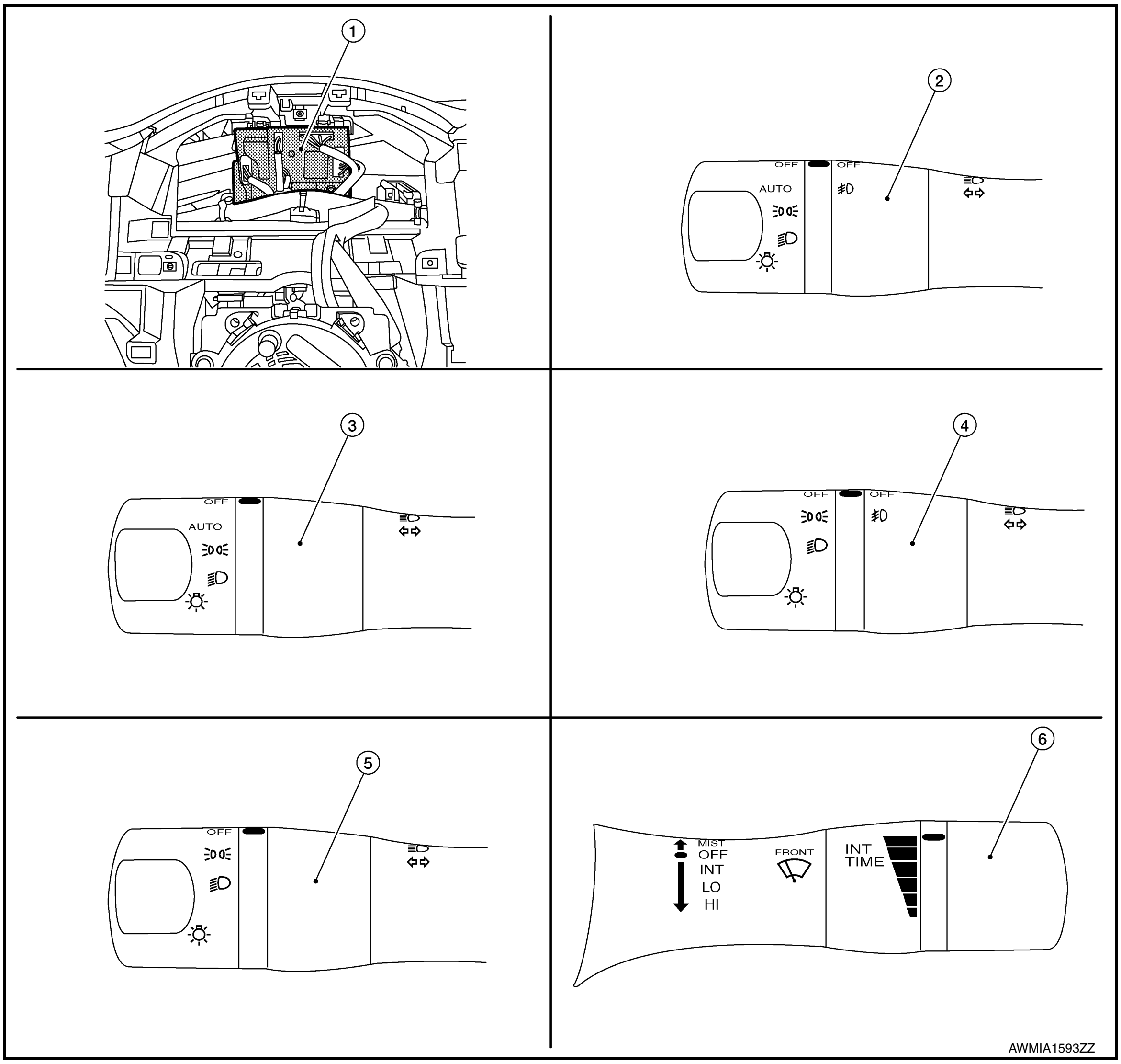


1. BCM (view with combination meter removed)

COMBINATION SWITCH READING SYSTEM

COMBINATION SWITCH READING SYSTEM : Component Parts Location

INFOID:0000000010480381

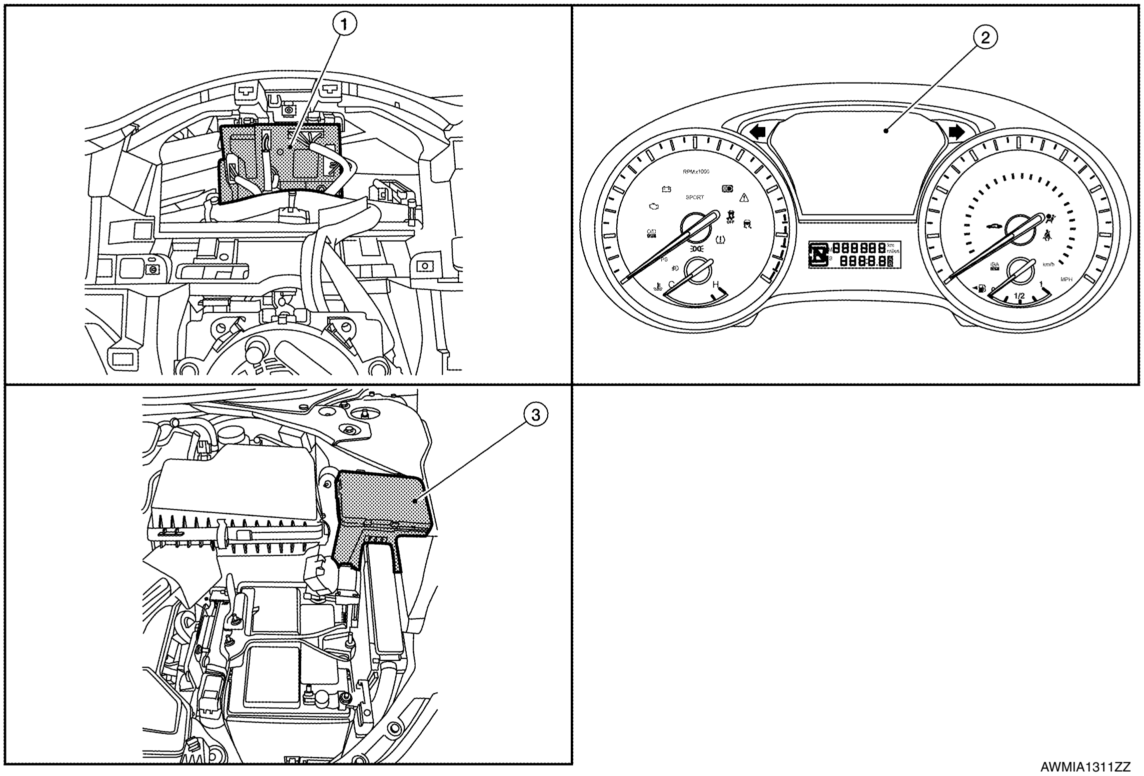

1
2
OFF
OFF
AUTO
3
OFF
AUTO
4
OFF
OFF
5
OFF
6
MIST
OFF
INT
LO
HI
FRONT
INT
TIME
AWMIA1593ZZ

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

POWER CONSUMPTION CONTROL SYSTEM

POWER CONSUMPTION CONTROL SYSTEM : Component Parts Location

INFOID:0000000010480382


1
2
RPMx1000
SPORT
C
H
km/h
MPH
1/2
3

AWMIA1311ZZ

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

SYSTEM

BODY CONTROL SYSTEM

BODY CONTROL SYSTEM : System Description

INFOID:0000000010480383

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

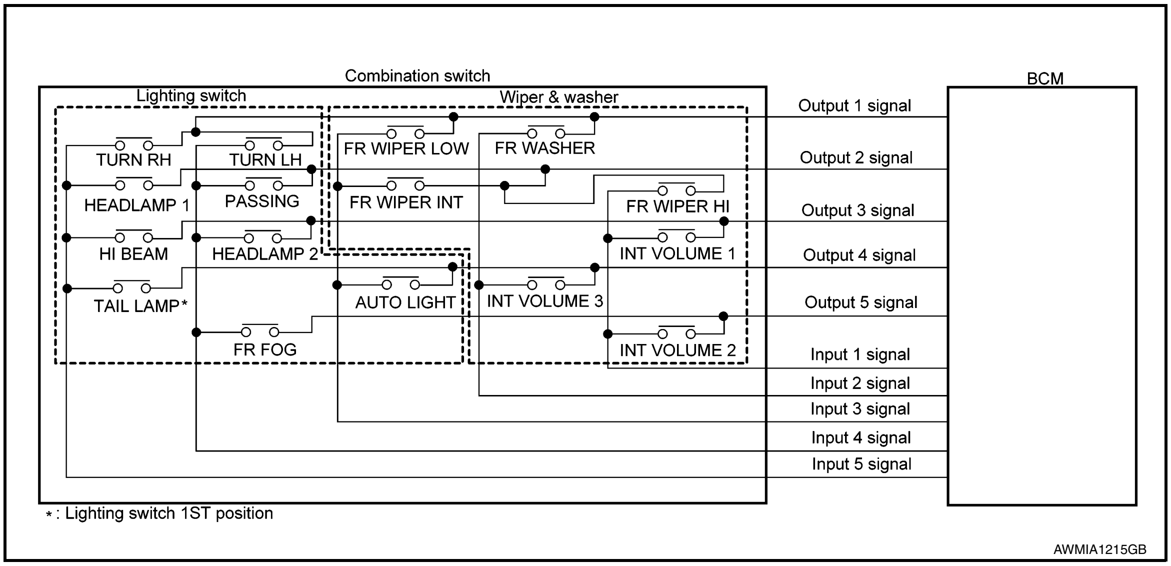
System	Refer to
Combination switch reading system	BCS-9, "COMBINATION SWITCH READING SYSTEM : System Description"
Signal buffer system	BCS-13, "SIGNAL BUFFER SYSTEM : System Description"
Power consumption control system	BCS-13, "POWER CONSUMPTION CONTROL SYSTEM : System Description"
Auto light system (if equipped)	EXL-10, "AUTO LIGHT SYSTEM : System Description"
Headlamp system	EXL-9, "HEADLAMP SYSTEM : System Description"
Daytime light system (if equipped)	EXL-11, "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-12, "TURN SIGNAL AND HAZARD WARNING LAMPS : System Description"
Parking, license plate and tail lamps system	EXL-12, "PARKING, LICENSE PLATE AND TAIL LAMPS : System Description"
Exterior lamp battery saver system	EXL-9, "HEADLAMP SYSTEM : System Description"
Interior room lamp battery saver system	INL-7, "System Description"
Interior room lamp control system	INL-7, "System Description"
Front wiper and washer system	WW-8, "System Description"
Warning chime system	WCS-6, "WARNING CHIME SYSTEM : System Description"
Door lock system	DLK-21, "System Description"
Trunk open system	DLK-41, "System Description"
Nissan vehicle immobilizer system (NVIS)	SEC-16, "NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS : System Description"
Vehicle security system	SEC-18, "VEHICLE SECURITY SYSTEM : System Description"
Panic alarm	
Rear window defogger system	DEF-7, "System Description"

System		Refer to
Intelligent Key system/engine start system	Door lock function	• DLK-25, "DOOR LOCK FUNCTION : System Description" (door request switch) (if equipped) • DLK-25, "DOOR LOCK FUNCTION : System Description" (Intelligent Key)
	Trunk open function	DLK-37, "TRUNK LID OPENER SYSTEM : System Description" (Intelligent Key)
	Warning function	DLK-33, "WARNING FUNCTION : System Description"
	Key reminder function	DLK-29, "KEY REMINDER FUNCTION : System Description"
	Engine start function	SEC-13, "INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION : System Description"
Power window system		• PWC-10, "System Description" (LH front only anti-pinch) • PWC-76, "System Description" (LH & RH front anti-pinch)
RAP (retained accessory power) system		BCS-29, "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

INFOID:0000000010480384


Combination switch
Lighting switch
Wiper & washer
BCM
TURN RH
TURN LH
HEADLAMP 1
PASSING
HI BEAM
HEADLAMP 2
TAIL LAMP*
FR FOG
FR WIPER LOW
FR WASHER
FR WIPER INT
FR WIPER HI
INT VOLUME 1
AUTO LIGHT
INT VOLUME 3
INT VOLUME 2
Output 1 signal
Output 2 signal
Output 3 signal
Output 4 signal
Output 5 signal
Input 1 signal
Input 2 signal
Input 3 signal
Input 4 signal
Input 5 signal
*: Lighting switch 1ST position
AWMIA1215GB

COMBINATION SWITCH READING SYSTEM : System Description

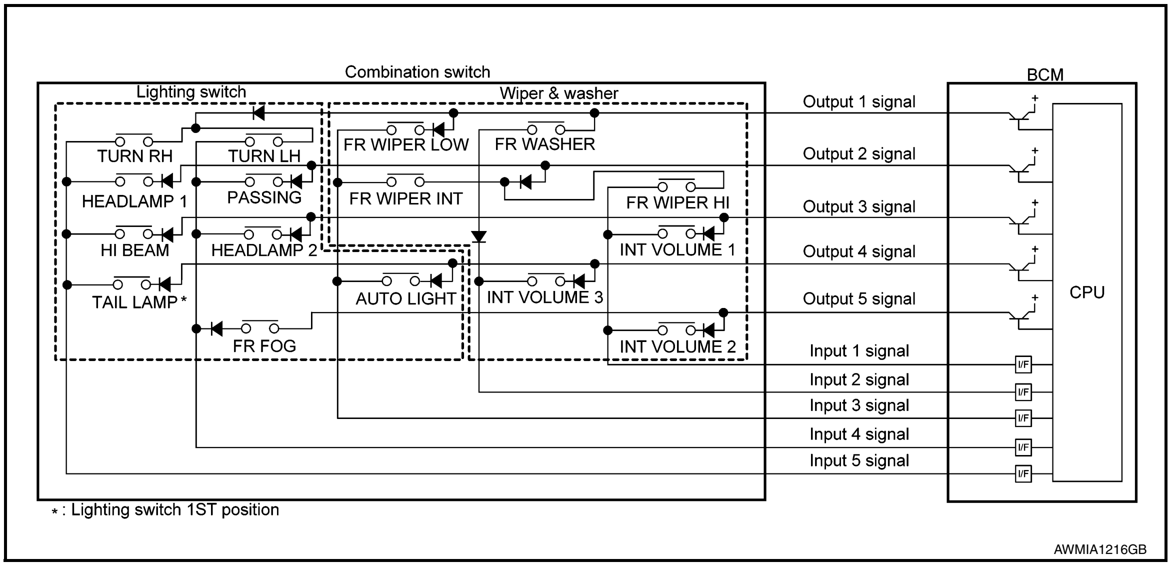
INFOID:0000000010480385

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
Lighting switch
Wiper & washer
BCM
TURN RH
TURN LH
HEADLAMP 1
PASSING
HI BEAM
HEADLAMP 2
TAIL LAMP*
FR FOG
FR WIPER LOW
FR WASHER
FR WIPER INT
FR WIPER HI
INT VOLUME 1
AUTO LIGHT
INT VOLUME 3
INT VOLUME 2
Output 1 signal
Output 2 signal
Output 3 signal
Output 4 signal
Output 5 signal
Input 1 signal
Input 2 signal
Input 3 signal
Input 4 signal
Input 5 signal
I/F
CPU
AWMIA1216GB

*: Lighting switch 1ST position

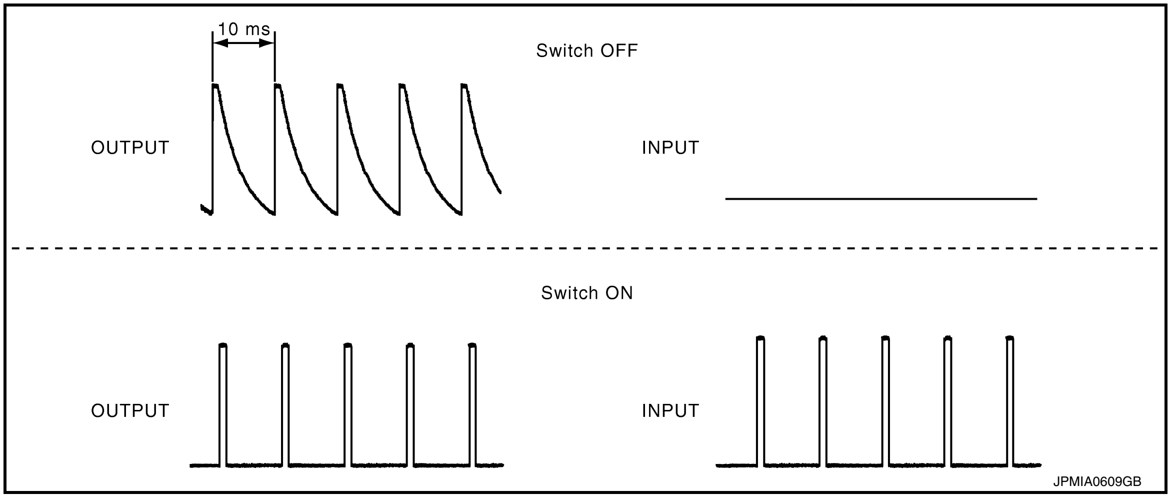
Combination switch INPUT-OUTPUT system list

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	—	—	HEADLAMP 2	HI BEAM
OUTPUT 4	—	INT VOLUME 3	AUTO LIGHT	—	TAIL LAMP
OUTPUT 5	INT VOLUME 2	—	—	FR FOG	—

COMBINATION SWITCH READING FUNCTION

Description

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

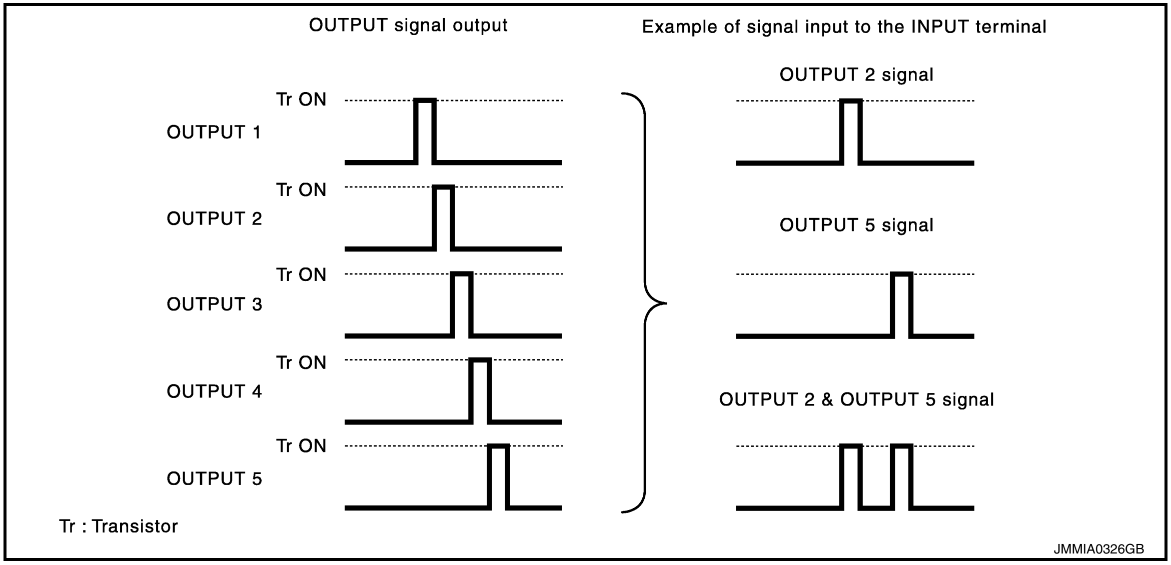


NOTE:

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.

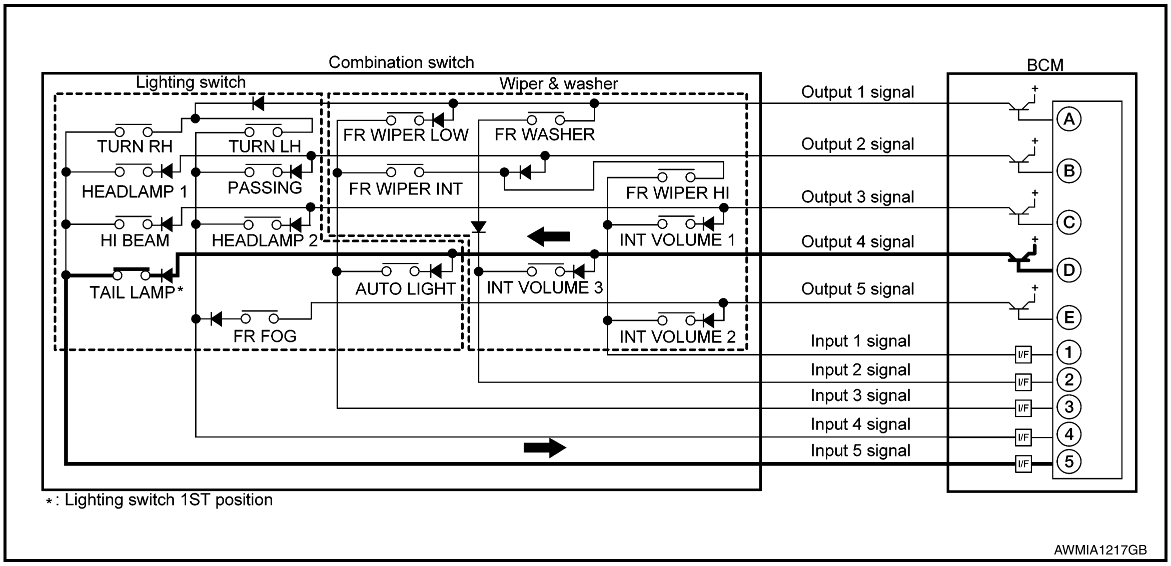

OUTPUT signal output
Example of signal input to the INPUT terminal
Tr ON
OUTPUT 1
OUTPUT 2
OUTPUT 3
OUTPUT 4
OUTPUT 5
OUTPUT 2 signal
OUTPUT 5 signal
OUTPUT 2 & OUTPUT 5 signal
Tr : Transistor
JMMIA0326GB

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

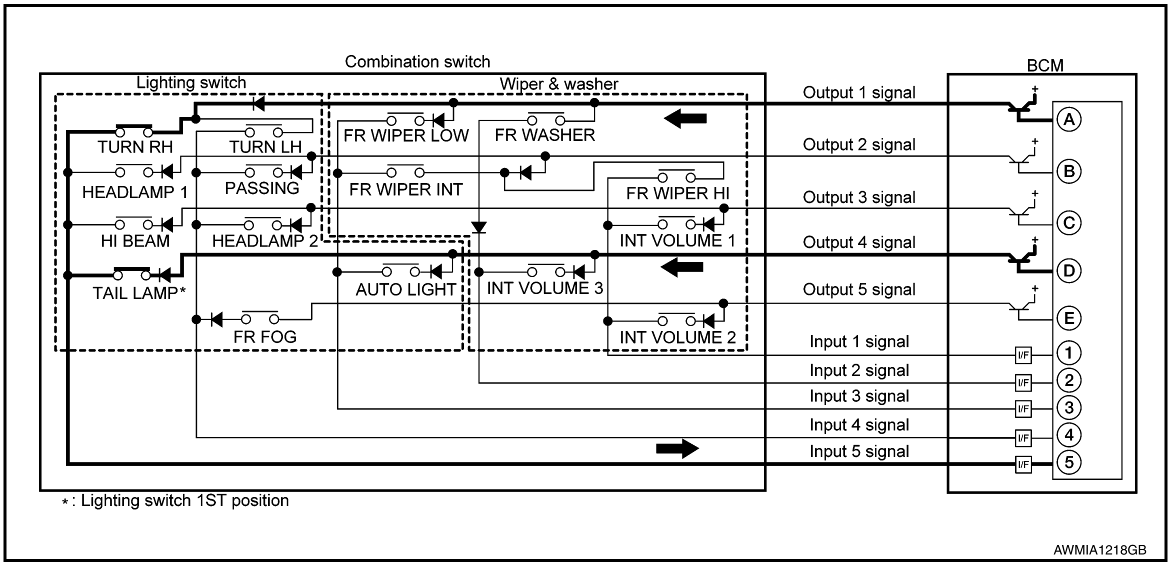
- The circuit between OUTPUT 4 and INPUT 5 is formed when the TAIL LAMP switch is turned ON.


Combination switch
Lighting switch
Wiper & washer
TURN RH
TURN LH
HEADLAMP 1
PASSING
HI BEAM
HEADLAMP 2
TAIL LAMP*
FR FOG
FR WIPER LOW
FR WASHER
FR WIPER INT
FR WIPER HI
INT VOLUME 1
AUTO LIGHT
INT VOLUME 3
INT VOLUME 2
BCM
Output 1 signal
Output 2 signal
Output 3 signal
Output 4 signal
Output 5 signal
Input 1 signal
Input 2 signal
Input 3 signal
Input 4 signal
Input 5 signal
A
B
C
D
E
1
2
3
4
5
I/F
*: Lighting switch 1ST position
AWMIA1217GB

- 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.


Combination switch
Lighting switch
Wiper & washer
BCM
TURN RH
TURN LH
HEADLAMP 1
PASSING
HI BEAM
HEADLAMP 2
TAIL LAMP*
FR FOG
FR WIPER LOW
FR WASHER
FR WIPER INT
FR WIPER HI
INT VOLUME 1
AUTO LIGHT
INT VOLUME 3
INT VOLUME 2
Output 1 signal
Output 2 signal
Output 3 signal
Output 4 signal
Output 5 signal
Input 1 signal
Input 2 signal
Input 3 signal
Input 4 signal
Input 5 signal
A
B
C
D
E
1
2
3
4
5
I/F
*: Lighting switch 1ST position
AWMIA1218GB

- 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

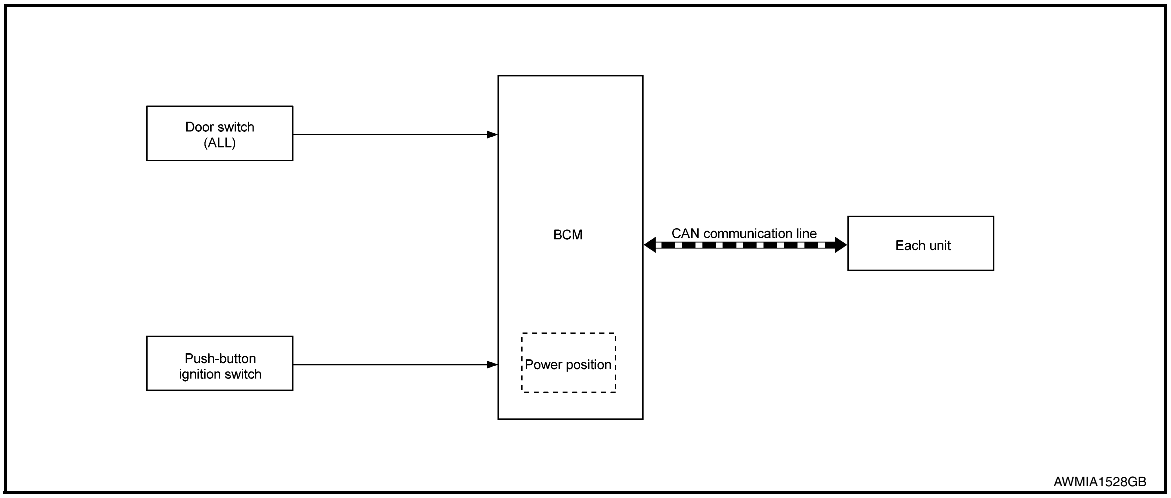
BCM judges the wiper intermittent dial 1 - 7 by the status of INT VOLUME 1, 2, and 3 switches.

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

INFOID:0000000010480386


Door switch (ALL)
BCM
CAN communication line
Each unit
Push-button ignition switch
Power position
AWMIA1528GB

SIGNAL BUFFER SYSTEM : System Description

INFOID:0000000010480387

OUTLINE

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

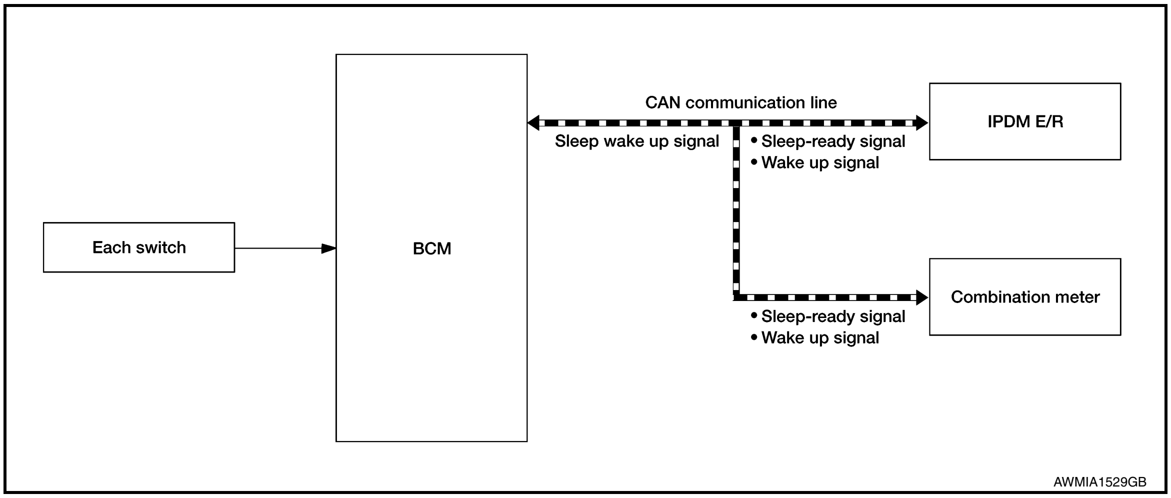
Signal transmission function list

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:0000000010480388



POWER CONSUMPTION CONTROL SYSTEM : System Description

INFOID:0000000010480389

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: No 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 changes from the low power consumption mode to the CAN communication sleep mode when the any of the BCM wake-up conditions are fulfilled. Only the control with BCM is activated.
- 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 • Trunk lid 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 • Front door switch LH: OFF→ON, ON→OFF • Front door switch RH: OFF → ON, ON → OFF • Trunk lamp switch: OFF→ON, ON→OFF • Driver door request switch (if equipped): OFF→ON • Passenger door request switch (if equipped): OFF→ON • Stop lamp switch 2 signal: ON • Remote keyless entry receiver: Receiving valid keyfob

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000010480390

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 a 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			×	×	×		
Remote keyless entry system	MULTI REMOTE ENT			×	×	×		
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			×	×			
Trunk open	TRUNK			×				
Vehicle security system	THEFT ALM			×	×	×		

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

DOOR LOCK

DOOR LOCK : CONSULT Function (BCM - DOOR LOCK)

INFOID:0000000010480391

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 a no-start condition.

SELF DIAGNOSTIC RESULT

Refer to BCS-53, "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 trunk opener 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 trunk 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:0000000010480392

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 a 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:0000000010480393

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 a 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].
ID REGIST WARNING	This test is able to check TPMS transmitter ID regist warning chime operation [On/Off].

INT LAMP

INT LAMP : CONSULT Function (BCM - INT LAMP)

INFOID:0000000010480394

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 a 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 trunk 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.
TRNK/HAT MNTR [On/Off]	Indicates condition of trunk room lamp 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

MULTI REMOTE ENT

MULTI REMOTE ENT : CONSULT Function (BCM - MULTI REMOTE ENT)

INFOID:0000000010480395

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 a no-start condition.

DATA MONITOR

Monitor Item [Unit]	Description
RKE-LOCK [On/Off]	Indicates condition of lock signal from keyfob.
RKE-UNLOCK [On/Off]	Indicates condition of unlock signal from keyfob.
RKE-TR/BD [On/Off]	Indicates condition of trunk release signal from keyfob.
RKE-PANIC [On/Off]	Indicates condition of panic signal from keyfob.
RKE-P/W OPEN [On/Off]	Indicates condition of power window down signal from keyfob.
RKE-MODE CHG [On/Off]	Indicates condition of mode change signal from keyfob.
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.
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
INT LAMP	This test is able to check interior room lamp operation [On/Off].
DOOR LOCK	This test is able to check door lock operation [OTR ULK/AS UNLK/DR UNLK/ALL ULK/ALL LCK].
PW REMOTO DOWN SET	This test is able to check keyfob power window down operation [Off/On].
FLASHER	This test is able to check hazard reminder operation [Off/LH/RH].
HORN	This test is able to check horn operation [On].
TRUNK/GLASS HATCH	This test is able to check trunk open operation [Open].

WORK SUPPORT

Support Item	Setting		Description
DOOR LOCK-UNLOCK SET	On*		Automatic door locks function ON.
	Off		Automatic door locks function OFF.
HORN CHIRP SET	Off		Horn chirp function can be changed in this mode.
	On*		
HAZARD LAMP SET	MODE4*	Lock and Unlock	Hazard warning lamp function can be changed in this mode.
	MODE3	Lock Only	
	MODE2	Unlock Only	
	MODE1	OFF	
AUTO LOCK SET	MODE3	1 min	Auto locking function can be changed in this mode.
	MODE2	OFF	
	MODE1*	5 min	
PANIC ALRM SET	MODE3	1.5 sec	Panic alarm operation can be changed in this mode.
	MODE2	OFF	
	MODE1*	0.5 sec	
PW DOWN SET	MODE3	5 sec	Keyfob power window down can be changed in this mode.
	MODE2	OFF	
	MODE1*	3 sec	

*: Initial setting

HEADLAMP

HEADLAMP : CONSULT Function (BCM - HEADLAMP)

INFOID:0000000010480396

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 a 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.

Monitor Item [Unit]	Description
DOOR SW-BK [On/Off]	Indicates condition of trunk 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.

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:0000000010480397

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 a 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.

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]	
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.

ACTIVE TEST

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

WORK SUPPORT

Support Item	Setting	Description
WIPER SPEED SETTING	On	Front wiper intermittent time linked with vehicle speed and wiper dial position.
	Off*	Front wiper intermittent time linked with wiper dial position.

* : Initial setting

FLASHER

FLASHER : CONSULT Function (BCM - FLASHER)

INFOID:0000000010480398

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 a 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].

AIR CONDITIONER

AIR CONDITIONER : CONSULT Function (BCM - AIR CONDITIONER)

INFOID:0000000010480399

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 a 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:0000000010480400

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 a no-start condition.

SELF DIAGNOSTIC RESULT

Refer to BCS-53, "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 trunk opener request switch.
PUSH SW [On/Off]		Indicates condition of push-button ignition switch.
SHFTLCK SLNID PER 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.
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.
AUTO CRNK TME [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.
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.
TRNK/HAT MNTR [On/Off]		Indicates condition of trunk room lamp 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 trunk 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.

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 trunk 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].
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].

Test Item	Description
ST CONT LOW	This test is able to check starter control relay operation [On/Off].
IGNITION RELAY	This test is able to ignition relay operation [On/Off].
REVERSE LAMP TEST	This test is able to check reverse lamp illumination operation [On/Off].
TRUNK/LUGGAGE LAMP TEST	This test is able to check cargo lamp illumination operation [On/Off].
KEYFOB PW TEST	This test is able to check power window operation using the Intelligent Key [Off/DOWN/UP].
SHIFTLOCK SOLENOID 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.
ANSWERBACK 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.
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 can check.
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 trunk opener request switch ON.
	Off		Buzzer reminder function by trunk opener 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:0000000010480401

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 a 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.
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:0000000010480402

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 a no-start condition.

ECU IDENTIFICATION

The BCM part number is displayed.

SELF DIAGNOSTIC RESULT

Refer to BCS-53, "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-66, "CONFIGURATION (BCM) : Description".

CAN DIAG SUPPORT MNTR

Refer to LAN-13, "CAN Diagnostic Support Monitor".

IMMU

IMMU : CONSULT Function (BCM - IMMU)

INFOID:0000000010480403

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 a no-start condition.

SELF DIAGNOSTIC RESULT

Refer to BCS-53, "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]	
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:0000000010480404

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 a 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.

Monitor Item [Unit]	Description
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 trunk 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.
TRNK/HAT MNTR [On/Off]	Indicates condition of trunk room lamp 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:0000000010480405

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 a 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 CANCEL SW [On/Off]	Indicates condition of trunk cancel switch.
TR/BD OPEN SW [On/Off]	Indicates condition of trunk opener switch.
TRNK/HAT MNTR [On/Off]	Indicates condition of trunk room lamp switch.
RKE-TR/BD [On/Off]	Indicates condition of trunk open signal from Intelligent Key.

THEFT ALM

THEFT ALM : CONSULT Function (BCM - THEFT ALM)

INFOID:0000000010480406

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 a 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 trunk opener 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 trunk 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 trunk opener switch.
TRNK/HAT MNTR [On/Off]	Indicates condition of trunk room lamp 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 trunk 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].
HEADLAMP(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:0000000010480407

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 a 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:0000000010480408

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 a no-start condition.

DATA MONITOR

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

AIR PRESSURE MONITOR

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

INFOID:0000000010480409

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 a 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

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-53, "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.
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].

Test Item	Description
WARNING LAMP	This test is able to check tire pressure warning lamp operation [On/Off].
ID REGIST WARNING	This test is able to check ID regist warning chime operation [On/Off].

WORK SUPPORT

Support Item	Description
ID READ	The registered ID number is displayed.
ID REGIST	Refer to WT-25, "Description".

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:0000000010480410

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
AUTO CRNK TME	Remote engine start timer duration.	sec
AUTO 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
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
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

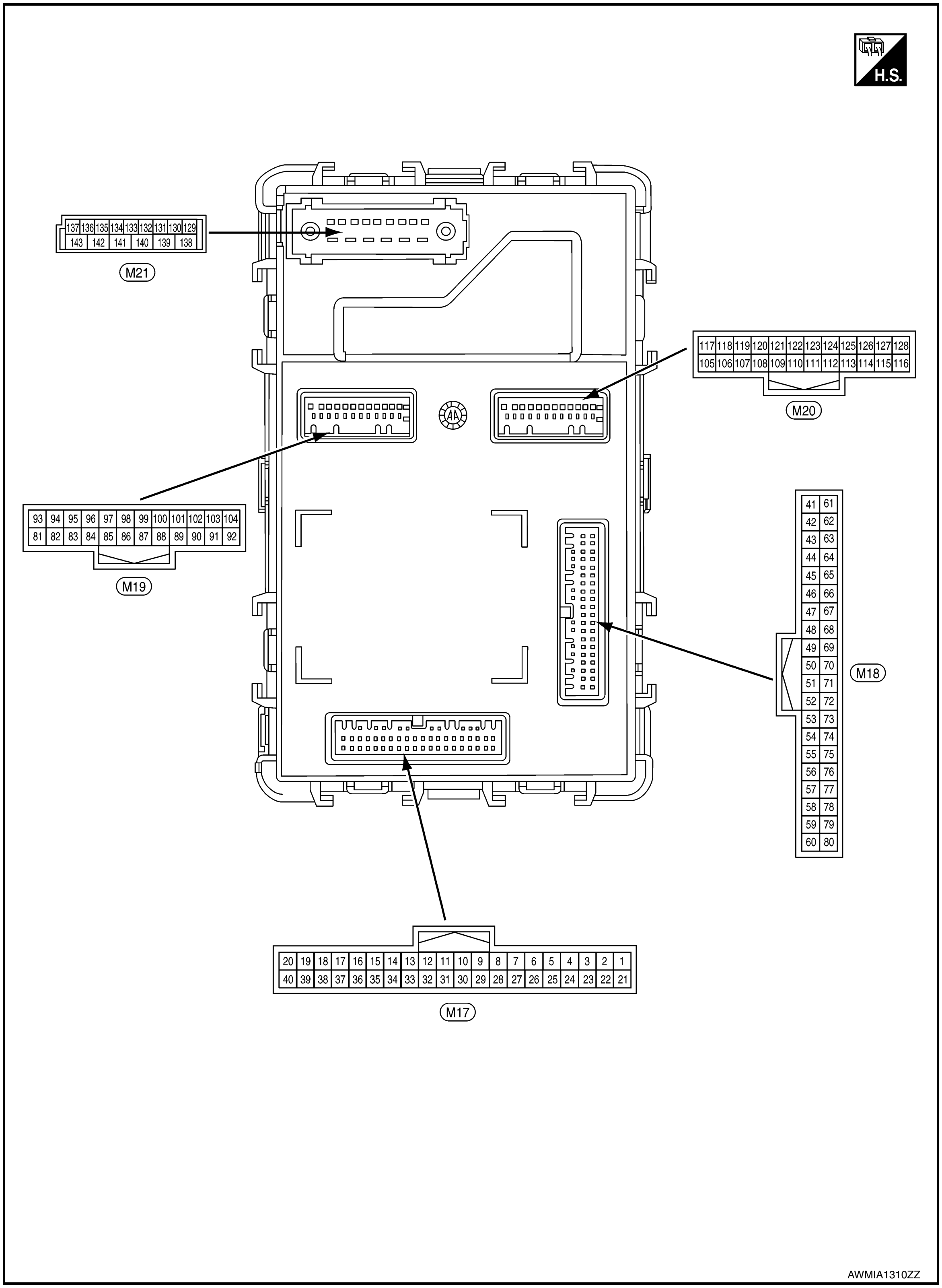
Monitor Item	Condition	Value/Status
CONFIRM ID2	The key ID does not match the second key ID registered to BCM.	Yet
	The key ID matches the second key ID registered to BCM.	DONE
CONFIRM ID1	The key ID does not match the first key ID registered to BCM.	Yet
	The key ID matches the first key ID registered 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	Trunk closed	Off
	Trunk 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
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

Monitor Item	Condition	Value/Status
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
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	Off
	Door key cylinder other than LOCK position	On
KEY CYL UN-SW	Door key cylinder UNLOCK position	Off
	Door key cylinder other than UNLOCK position	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
PASSING SW	Other than lighting switch PASS	Off
	Lighting switch PASS	On

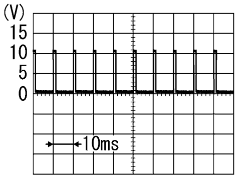
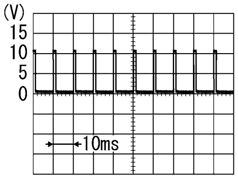
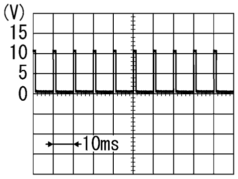
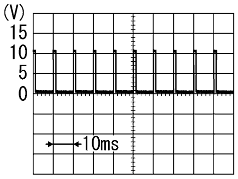
Monitor Item	Condition	Value/Status
PRBT ENG STRT	When the engine start is prohibited	Reset
	When the engine start is permitted	Set
PRMT ENG STRT	When the engine start is prohibited	Reset
	When the engine start is permitted	Set
PRMT RKE STRT	When the engine start is prohibited	Reset
	When the engine 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
REQ SW-AS	When passenger door request switch is not pressed	Off
	When passenger 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
REQ SW-BD/TR	When trunk opener request switch is not pressed	Off
	When trunk opener 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
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-P/W OPEN	When UNLOCK button of Intelligent Key is not pressed and held	Off
	When UNLOCK button of Intelligent Key is pressed and held	On
RKE-TR/BD	When TRUNK OPEN button of Intelligent Key is not pressed	Off
	When TRUNK 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 PER SPLY	When BCM is not supplying power to shiftlock.	Off
	When BCM is supplying power to shiftlock.	On

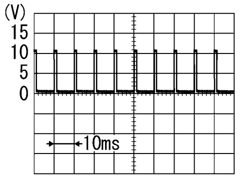
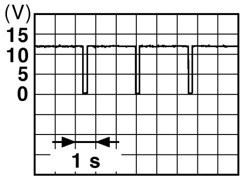
Monitor Item	Condition	Value/Status
TAIL LAMP SW	Other than lighting switch 1ST and 2ND	Off
	Lighting switch 1ST or 2ND	On
TP 4	The ID of fourth key is not registered to BCM	Yet
	The ID of fourth key is registered to BCM	DONE
TP 3	The ID of third key is not registered to BCM	Yet
	The ID of third key 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 CANCEL SW	Trunk lid opener cancel switch OFF	Off
	Trunk lid opener cancel switch ON	On
TR/BD OPEN SW	Trunk opener switch OFF	Off
	While the trunk opener switch is turned ON	On
TRNK/HAT MNTR	Trunk lid closed	Off
	Trunk lid opened	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

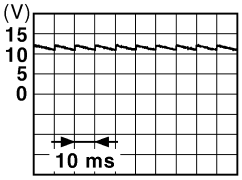
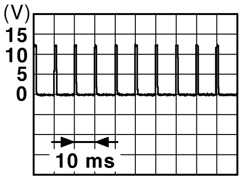
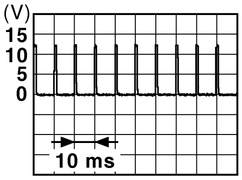
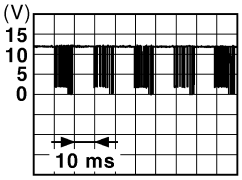
TERMINAL LAYOUT

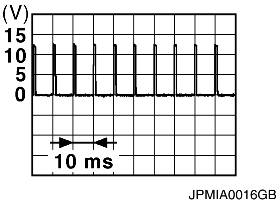
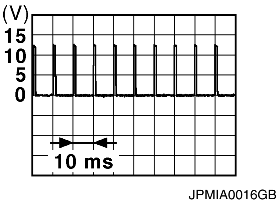

H.S.
137 136 135 134 133 132 131 130 129
143 142 141 140 139 138
M21
117 118 119 120 121 122 123 124 125 126 127 128
105 106 107 108 109 110 111 112 113 114 115 116
M20
93 94 95 96 97 98 99 100 101 102 103 104
81 82 83 84 85 86 87 88 89 90 91 92
M19
41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60
61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80
M18
20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21
M17
AWMIA1310ZZ

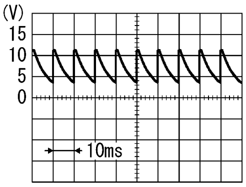
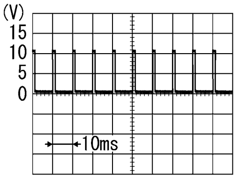
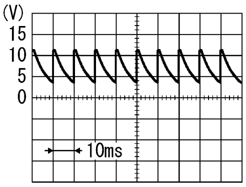
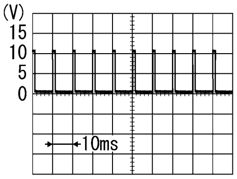
PHYSICAL VALUES

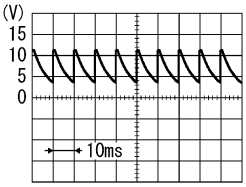
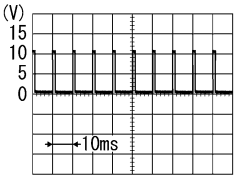
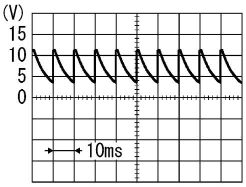
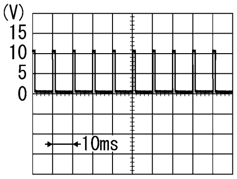
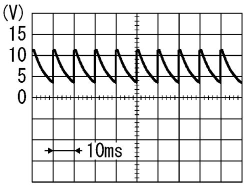
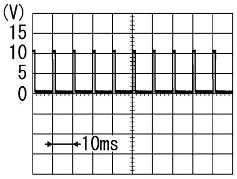
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
1 (R)	Ground	Engine start switch	Input	Push-button ignition switch	Pressed	0V
					Not pressed	Battery voltage
3 (BR)	Ground	Auto light power supply 5V	Output	Push-button ignition switch	OFF	0V
					ACC or ON	5V
4 (Y)	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 (W)	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
					INT VOLUME 3	

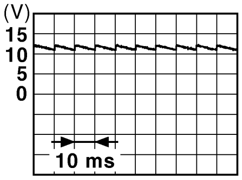
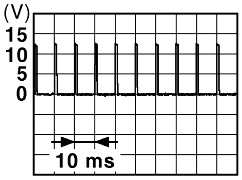
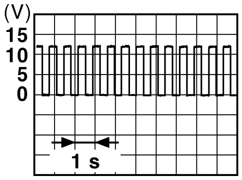
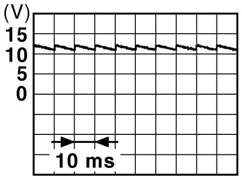
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
14 (P)	Ground	Combination switch input 1	Input	Combination switch (Wiper intermittent dial 4)	OFF	0V
					FR WIPER HI	 PKIB4958J 1.0V
					INT VOLUME 1	
					INT VOLUME 2	
17 (B)	Ground	Auto light reference ground	Input	Push-button ignition switch ON		0V
18 (G)	Ground	Security indicator	Output	Security indicator	ON	0V
					Blinking	 JPMIA0014GB 11.3V
					OFF	Battery voltage
19 (G)	Ground	Lock switch 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
23 (L)	Ground	Compressor ON signal	Input	A/C switch	OFF	9.0 - 12.0V
					ON	0V
24 (G)	Ground	Front door lock assembly LH (key cylinder switch)	Input	Key cylinder switch	OFF (neutral)	5V
					ON (unlock)	0V
25 (BG)	Ground	Brake switch fuse	Input	—		Battery voltage
26 (Y)	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
29 (Y)	Ground	Front blower monitor	Input	Front blower motor switch	ON	Battery voltage
					OFF	0V

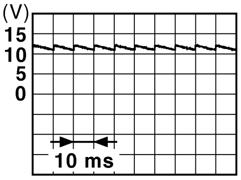
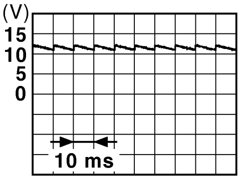
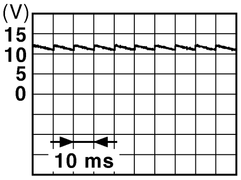
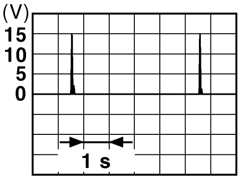
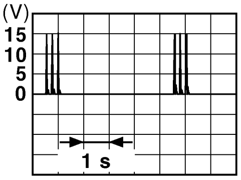
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
30 (P)	Ground	Driver door lock status	Input	Front door LH	LOCK status	 JPMIA0011GB 11.8V
					UNLOCK status	0V
32 (Y)	Ground	Rear window defogger ON signal	Input	Rear window defogger switch	OFF	5V
					ON	0V
33 (G)	Ground	Trunk lid opener cancel switch	Input	Trunk lid opener cancel switch	CANCEL	 JPMIA0012GB 1.1V
					ON	0V
34 (BG)	Ground	Unlock switch signal	Input	Door lock/unlock switch	Unlock	Battery voltage
					Lock	0V
36 (Y)	Ground	Hazard switch	Input	Hazard switch	Pressed	0V
					Not pressed	 JPMIA0012GB 1.1V
39 (L)	Ground	Shift N/P	Input	Selector lever	P or N position	Battery voltage
					Except P and N positions	0V
48 (BR)	Ground	High side start switch LED	Output	Push-button ignition switch illumination	ON	5.5V
					OFF	0V
52 (G)	Ground	Audio dongle	Input/ Output	Push-button ignition switch OFF		5V
54 (P)	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	—		—

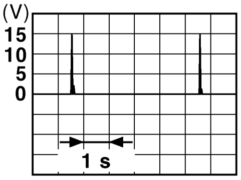
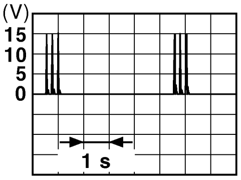
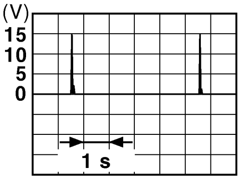
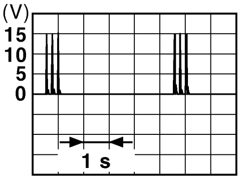
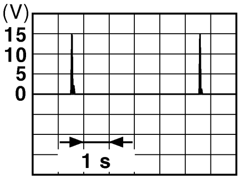
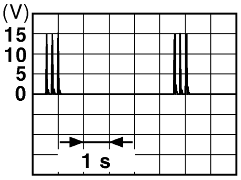
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
60 (L)	Ground	CAN high	Input/ Output	—		—
61 (Y)	Ground	Rear defogger relay output	Output	Rear window defogger	Active	Battery voltage
					Not activated	0V
62 (BR)	Ground	Starter relay output	Output	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
64 (W)	Ground	Buzzer output	Output	Outside warning buzzer	Sounding	0V
					Not sounding	Battery voltage
66 (R)	Ground	Blower fan relay output	Output	Push-button ignition switch	OFF or ACC	0V
					ON	Battery voltage
67 (W)	Ground	Ignition electrical relay output 2	Output	Push-button ignition switch	OFF or ACC	0V
					ON	Battery voltage
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 (L)	Ground	CVT device output	Output	—		Battery voltage
70 (G)	Ground	IPDM E/R ignition output 1	Output	Push-button ignition switch	OFF or ACC	0V
					ON	Battery voltage
71 (V)	Ground	Driver request switch	Input	Front door LH request switch	ON (pressed)	0V
					OFF (not pressed)	 1.0V
72 (Y)	Ground	Passenger request switch	Input	Front door RH request switch	ON (pressed)	0V
					OFF (not pressed)	 1.0V

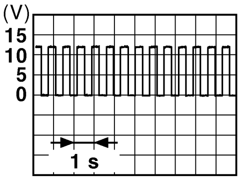
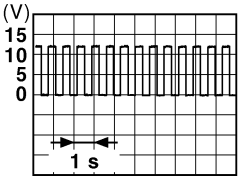
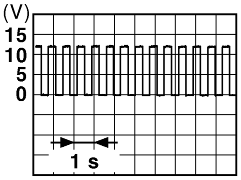
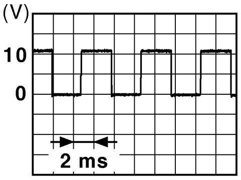
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
74 (P)	Ground	Front door lock assembly LH (key cylinder switch) (lock)	Input	Front door lock assembly LH (key cylinder switch)	OFF (neutral)	5V
					ON (lock)	0V
75 (BG)	Ground	Combination switch output 5	Output	Combination switch (Wiper intermittent dial 4)	OFF	 PKIB4960J 7.0 – 8.0V
					INT VOLUME 2	 PKIB4958J 1.2V
					FR FOG	
76 (W)	Ground	Combination switch output 4	Output	Combination switch (Wiper intermittent dial 4)	OFF	 PKIB4960J 7.0 – 8.0V
					INT VOLUME 3	 PKIB4958J 1.2V
					AUTO LIGHT	
					TAIL LAMP	

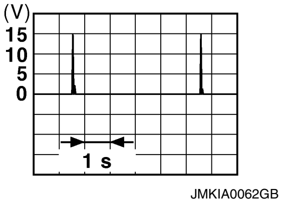
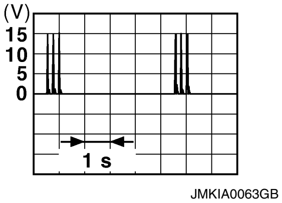
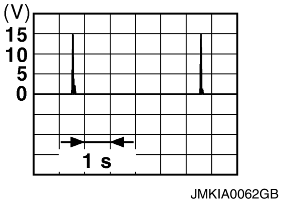
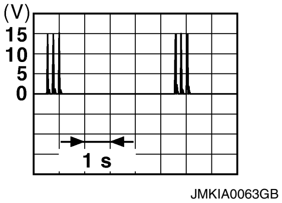
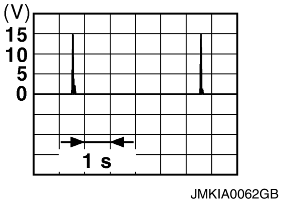
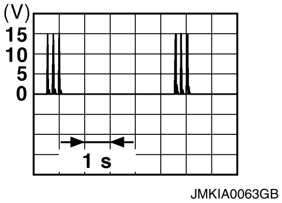
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
77 (R)	Ground	Combination switch output 3	Output	Combination switch (Wiper intermittent dial 4)	OFF	 PKIB4960J 7.0 – 8.0V
					INT VOLUME 1	 PKIB4958J 1.2V
					HEADLAMP 2	
					HI BEAM	
78 (P)	Ground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

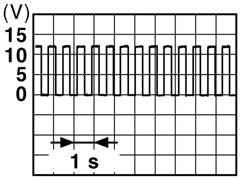
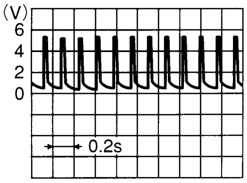
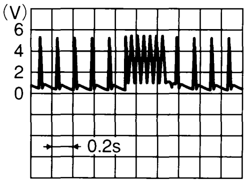
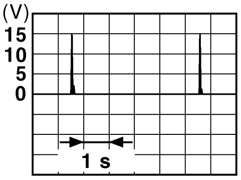
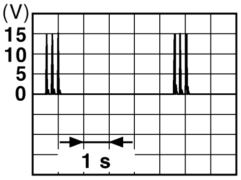
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
80 (BR)	Ground	Trunk open switch	Output	trunk	Open (trunk actuator is activated)	Battery voltage
					Close (trunk actuator is not activated)	0V
82 (Y)	Ground	Left rear door switch	Input	Rear door LH switch	OFF (when rear door LH closes)	 JPMIA0011GB 11.8V
					ON (when rear door LH opens)	0V
83 (LG)	Ground	Trunk request switch	Input	Trunk request switch	ON (pressed)	0V
					OFF (not pressed)	 JPMIA0016GB 1.0V
85 (BG)	Ground	Trunk room lamp	Output	Trunk room lamp	ON	0V
					OFF	Battery voltage
91 (V)	Ground	Trunk lid opening	Output	Trunk lid	Open (trunk lid opener actuator is activated)	Battery voltage
					Close (trunk lid opener actuator is not activated)	0V
92 (LG)	Ground	Right rear flasher	Output	Push-button ignition switch ON	Turn signal switch OFF	0V
					Turn signal switch RH	 PKID0926E 6.5 V
93 (V)	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

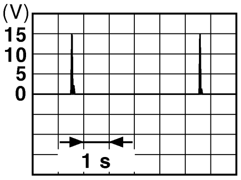
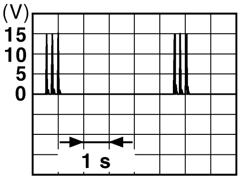
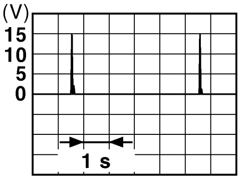
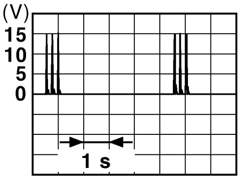
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
94 (SB)	Ground	Passenger door switch	Input	Front door RH switch	OFF (when front door RH closes)	 JPMIA0011GB 11.8 V
					ON (when front door RH opens)	0V
96 (BR)	Ground	Driver door switch	Input	Front door LH switch	OFF (front door LH CLOSE)	 JPMIA0011GB 11.8V
					ON (front door LH OPEN)	0V
97 (SB)	Ground	Trunk switch	Input	Trunk switch	OFF (trunk is closed)	 JPMIA0011GB 11.8V
					ON (trunk is open)	0V
99 (G)	Ground	Rear parcel shelf antenna 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 (R)	Ground	Rear parcel shelf antenna 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 (G)	Ground	Rear bumper antenna B	Output	When the trunk 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 (W)	Ground	Rear bumper antenna A	Output	When the trunk 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 (Y)	Ground	Left rear flasher	Output	Push-button ignition switch ON	Turn signal switch OFF	0V
					Turn signal switch LH	 PKID0926E 6.5 V
104 (BR)	Ground	Reverse lamp output	Output	Push-button ignition switch ON	R position	 PKID0926E 6.5V
					Any position other than R	0V
105 (BR)	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 (BG)	Ground	Shift lock solenoid output	Input	Selector lever	P position	0V
					Any position other than P	Battery voltage
109 (G)	Ground	Reverse signal	Output	Push-button ignition switch ON	R position	Battery voltage
					Any position other than R	0V
111 (Y)	Ground	ACC LED	Output	Push-button ignition switch	OFF	Battery voltage
					ACC or ON	0V
113 (P)	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 (P)	Ground	Outside key antenna RH 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	
					When Intelligent Key is not in the antenna detection area	
115 (R)	Ground	Outside key antenna RH 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	
					When Intelligent Key is not in the antenna detection area	
116 (W)	Ground	Front console antenna A	Output	Push-button ignition switch OFF	When Intelligent Key is in the passenger compartment	
					When Intelligent Key is not in the passenger compartment	

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 (G)	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 (R)	Ground	Outside key antenna LH 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 LH 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 (BR)	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 (L)	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 (BG)	Ground	Front console antenna 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 (G)	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 (SB)	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 (L)	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 (BR)	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 (P)	Ground	Room lamp control	Output	Interior room lamp	OFF	Battery voltage
					ON	0V
137 (V)	Ground	Driver and fuel door 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 (LG)	Ground	Power window ignition power supply	Output	Push-button ignition switch ON		Battery voltage
141 (V)	Ground	Power window battery power supply	Output	Push-button ignition switch OFF		Battery voltage
142 (BR)	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:0000000010480411

Display contents of CONSULT	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)

Display contents of CONSULT	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:0000000010480412

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 • B26F6: 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	• B2621: INSIDE ANTENNA • B2622: INSIDE ANTENNA
7	B259A: ROOM LAMP FUSE

DTC Index

INFOID:0000000010480413

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-69, "Description"
U1010: CONTROL UNIT (CAN)	—	—	—	BCS-70, "DTC Logic"
U0415: VEHICLE SPEED SIG	—	—	—	BCS-71, "Description"
B2190: NATS ANTENNA AMP	×	—	—	SEC-88, "Description"
B2191: DIFFERENCE OF KEY	×	—	—	SEC-90, "Description"
B2192: ID DISCORD BCM-ECM	×	—	—	SEC-91, "DTC Logic"
B2193: CHAIN OF BCM-ECM	×	—	—	SEC-92, "DTC Logic"
B2195: ANTI SCANNING	×	—	—	SEC-93, "DTC Logic"

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2196: DONGLE UNIT	—	—	—	SEC-94, "Description"
B2198: NATS ANTENNA AMP.	—	—	—	SEC-96, "DTC Logic"
B2555: STOP LAMP	—	—	—	SEC-98, "DTC Logic"
B2556: PUSH-BTN IGN SW	—	×	—	SEC-101, "DTC Logic"
B2557: VEHICLE SPEED	—	×	—	SEC-103, "DTC Logic"
B2560: STARTER CONT RELAY	×	×	—	SEC-104, "Description"
B2562: LOW VOLTAGE	×	—	—	BCS-72, "DTC Logic"
B259A: ROOM LAMP FUSE	—	—	—	BCS-73, "DTC Logic"
B2601: SHIFT POSITION	—	×	—	SEC-105, "DTC Logic"
B2602: SHIFT POSITION	—	×	—	SEC-108, "DTC Logic"
B2603: SHIFT POSI STATUS	—	×	—	SEC-110, "DTC Logic"
B2604: PNP SW	—	×	—	SEC-114, "DTC Logic"
B2605: PNP SW	—	×	—	SEC-117, "DTC Logic"
B2608: STARTER RELAY	×	×	—	SEC-120, "DTC Logic"
B260A: IGNITION RELAY	×	×	—	PCS-58, "DTC Logic"
B2614: ACC RELAY CIRC	—	×	—	PCS-60, "DTC Logic"
B2615: BLOWER RELAY CIRC	—	×	—	PCS-62, "DTC Logic"
B2616: IGN RELAY CIRC	—	×	—	PCS-64, "DTC Logic"
B2617: STARTER RELAY CIRC	×	×	—	SEC-122, "Description"
B2618: BCM	×	×	—	PCS-66, "DTC Logic"
B261A: PUSH-BTN IGN SW	—	×	—	PCS-68, "DTC Logic"
B261B: RES ENG RUN	—	—	—	DLK-87, "DTC Logic"
B261E: VEHICLE TYPE	×	× (Turn ON for 15 seconds)	—	SEC-124, "Description"
B2621: INSIDE ANTENNA	—	—	—	DLK-88, "DTC Logic"
B2622: INSIDE ANTENNA	—	—	—	DLK-90, "DTC Logic"
B26F1: IGNITION RELAY	—	—	—	PCS-70, "DTC Logic"
B26F2: IGNITION RELAY	—	—	—	PCS-72, "DTC Logic"
B26F6: BCM	—	—	—	PCS-74, "DTC Logic"
B26FD: SHIFT LOCK SOLENOID	—	—	—	DLK-92, "DTC Logic"
B26FE: HOOD SWITCH	—	—	—	DLK-95, "DTC Logic"
B26FF: REMOTE KEYLESS ENTRY RECEIVER	—	—	—	DLK-97, "DTC Logic"
C1704: LOW PRESSURE FL	—	—	×	WT-28, "DTC Logic"
C1705: LOW PRESSURE FR	—	—	×	
C1706: LOW PRESSURE RR	—	—	×	
C1707: LOW PRESSURE RL	—	—	×	
C1708: [NO DATA] FL	—	—	×	WT-30, "DTC Logic"
C1709: [NO DATA] FR	—	—	×	
C1710: [NO DATA] RR	—	—	×	
C1711: [NO DATA] RL	—	—	×	

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
C1712: [CHECKSUM ERR] FL	—	—	×	WT-33, "DTC Logic"
C1713: [CHECKSUM ERR] FR	—	—	×	
C1714: [CHECKSUM ERR] RR	—	—	×	
C1715: [CHECKSUM ERR] RL	—	—	×	
C1716: [PRESSDATA ERR] FL	—	—	×	WT-35, "DTC Logic"
C1717: [PRESSDATA ERR] FR	—	—	×	
C1718: [PRESSDATA ERR] RR	—	—	×	
C1719: [PRESSDATA ERR] RL	—	—	×	
C1720: [CODE ERR] FL	—	—	×	WT-37, "DTC Logic"
C1721: [CODE ERR] FR	—	—	×	
C1722: [CODE ERR] RR	—	—	×	
C1723: [CODE ERR] RL	—	—	×	
C1724: [BATT VOLT LOW] FL	—	—	×	WT-39, "DTC Logic"
C1725: [BATT VOLT LOW] FR	—	—	×	
C1726: [BATT VOLT LOW] RR	—	—	×	
C1727: [BATT VOLT LOW] RL	—	—	×	
C1729: VHCL SPEED SIG ERR	—	—	×	WT-41, "DTC Logic"
C1730: FLAT TIRE FL	—	—	×	WT-42, "DTC Logic"
C1731: FLAT TIRE FR	—	—	×	
C1732: FLAT TIRE RR	—	—	×	
C1733: FLAT TIRE RL	—	—	×	
C1734: CONTROL UNIT	—	—	×	WT-44, "DTC Logic"
C1735: IGNTION SIGNAL	—	—	×	WT-46, "DTC Logic"

WIRING DIAGRAM

BCM

Wiring Diagram

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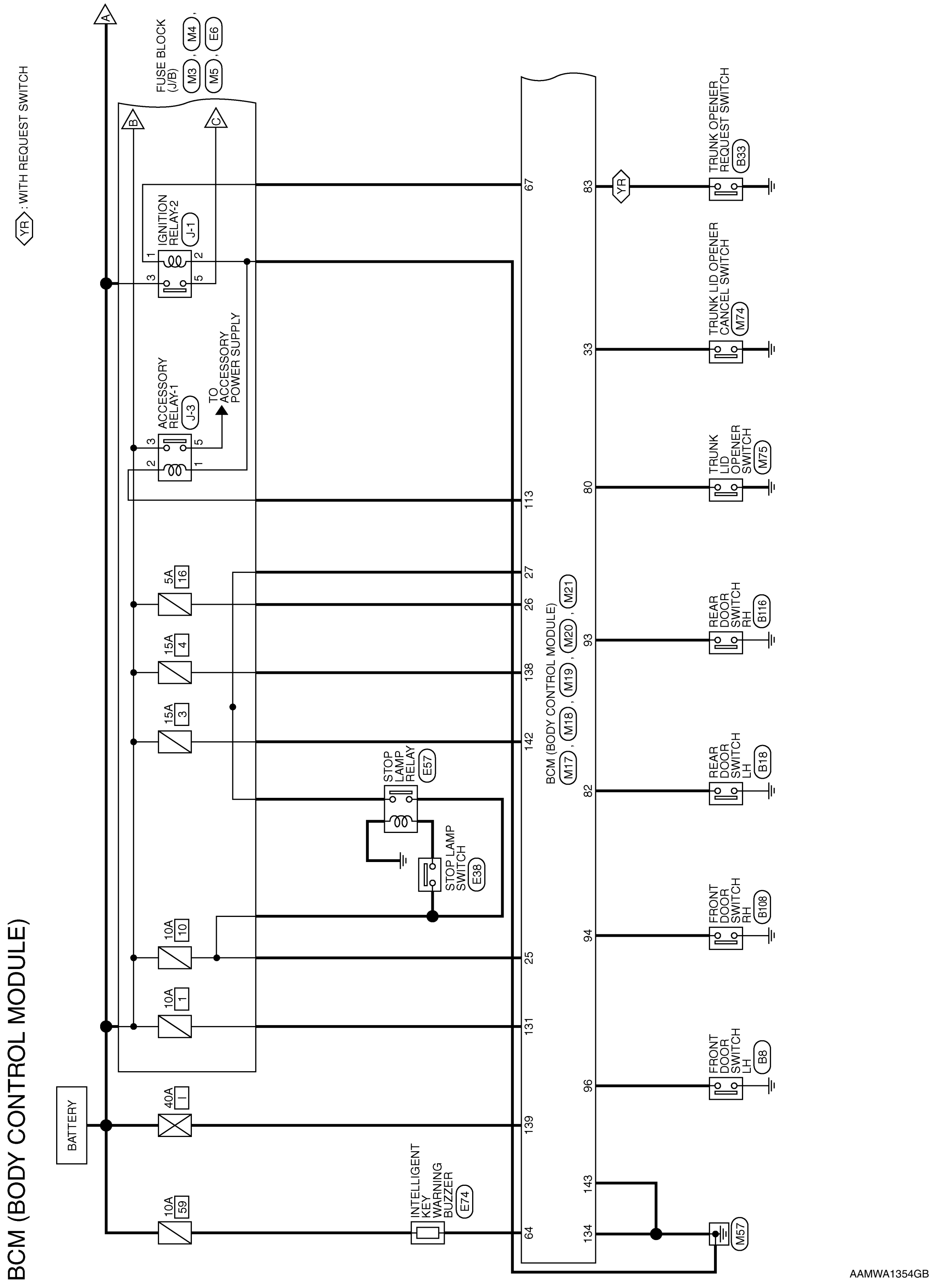
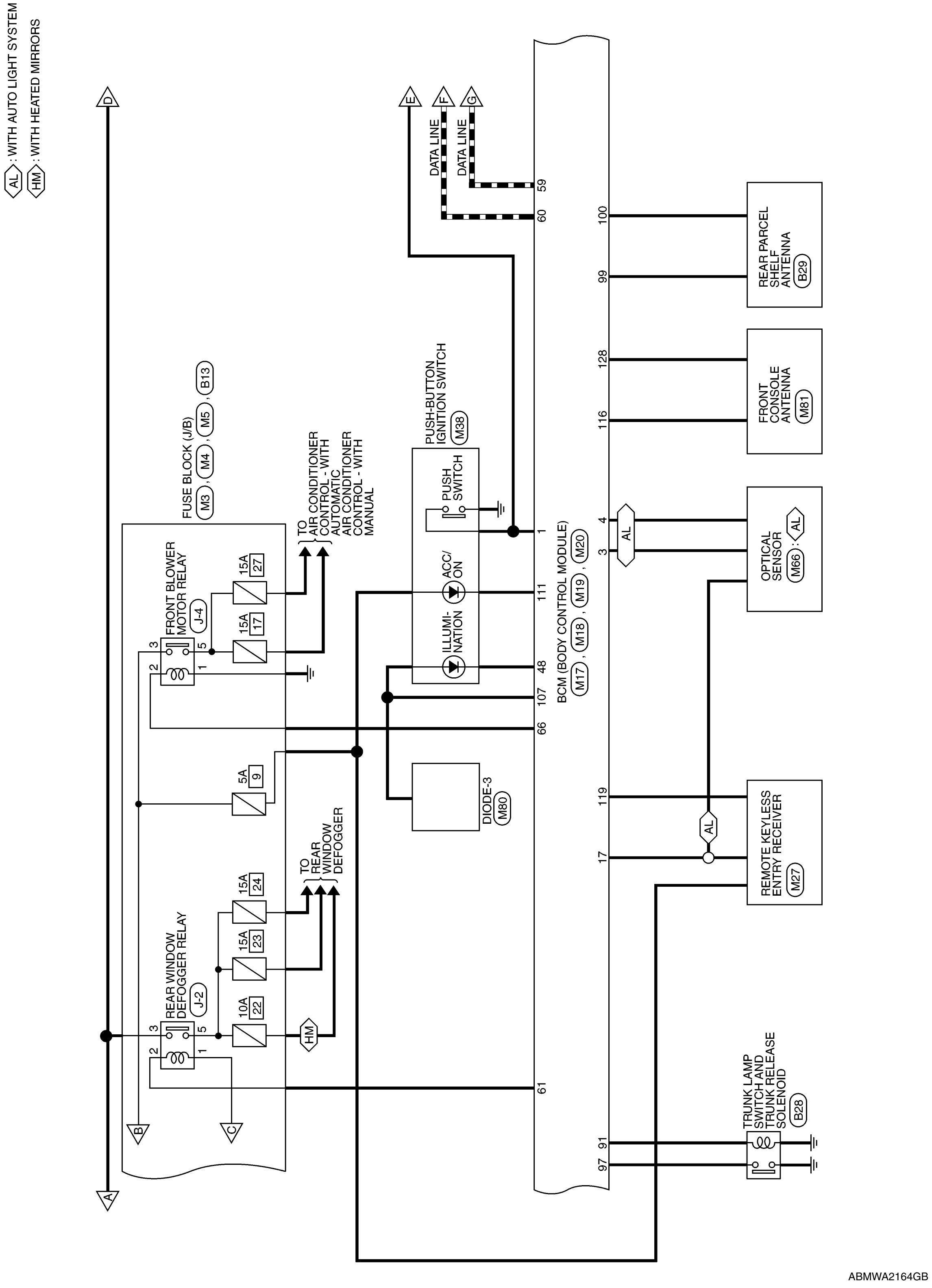
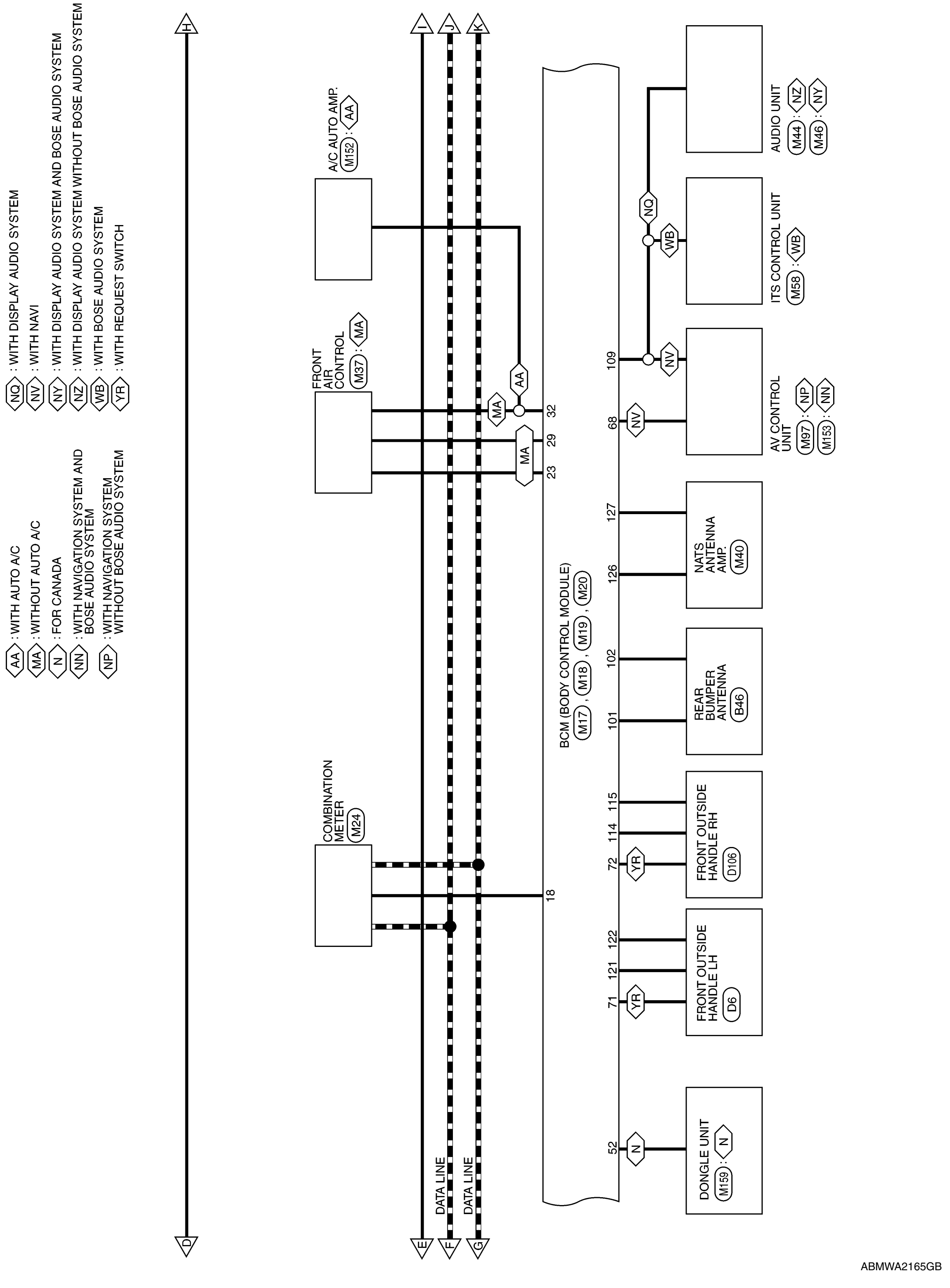
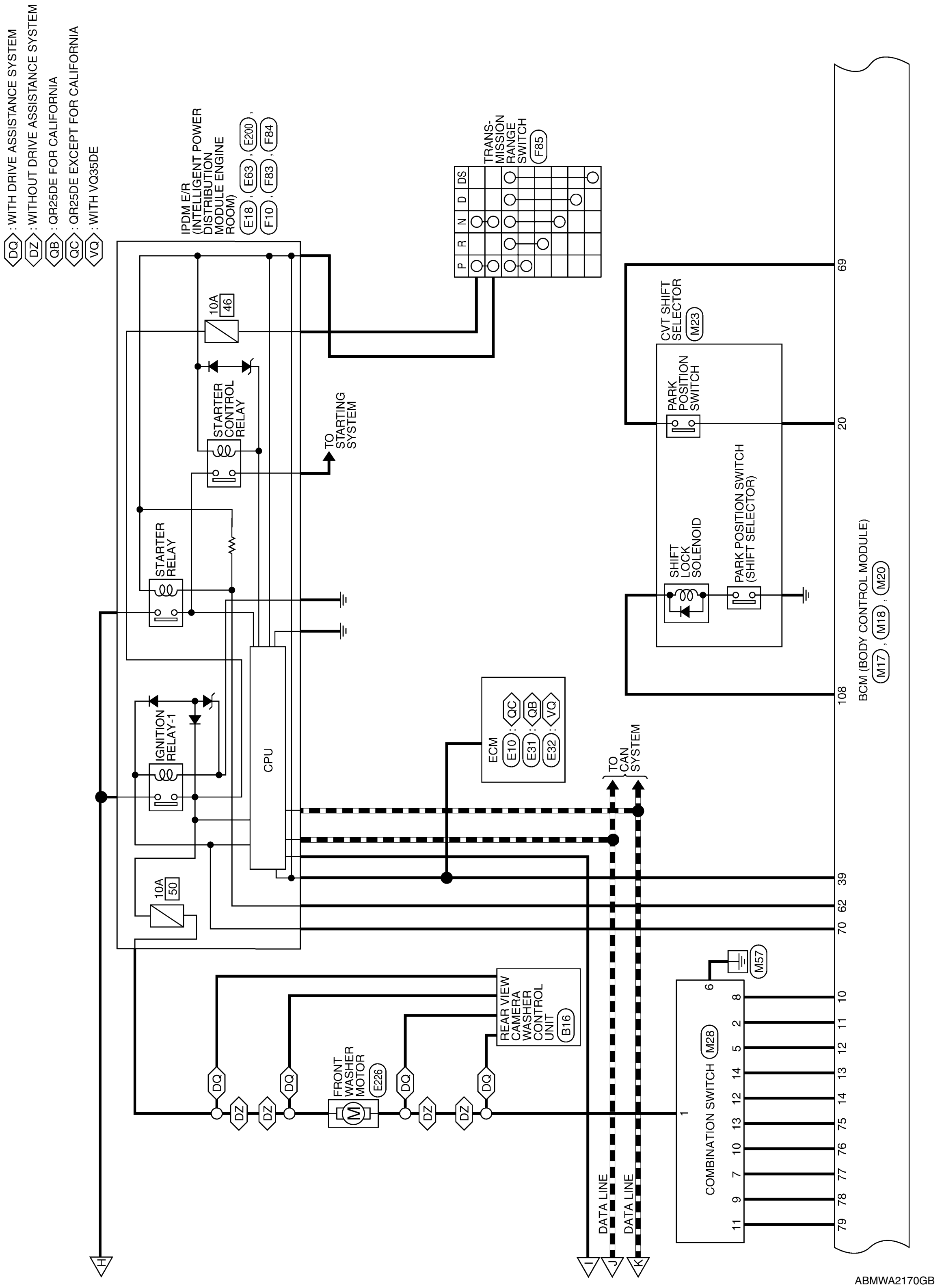
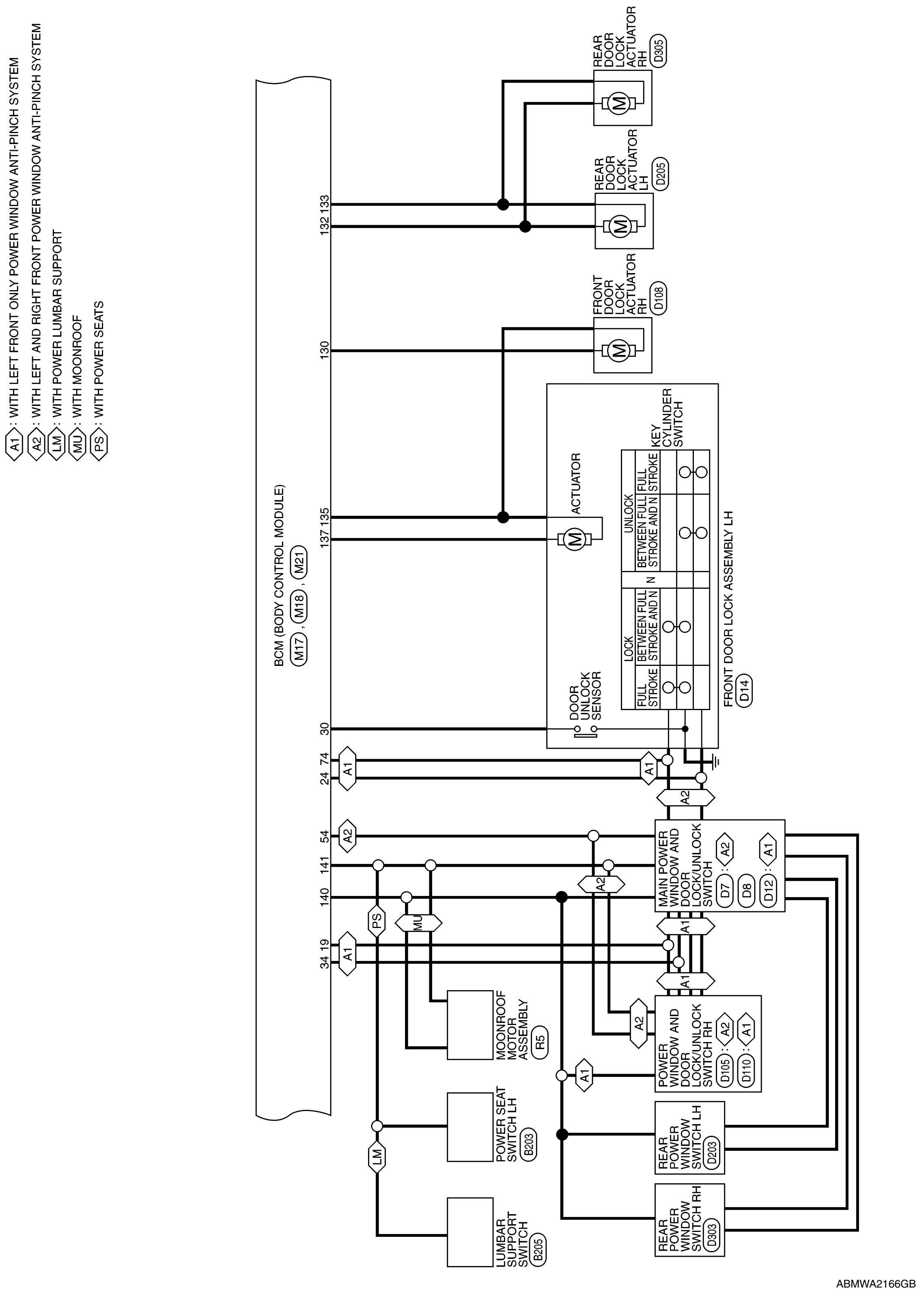
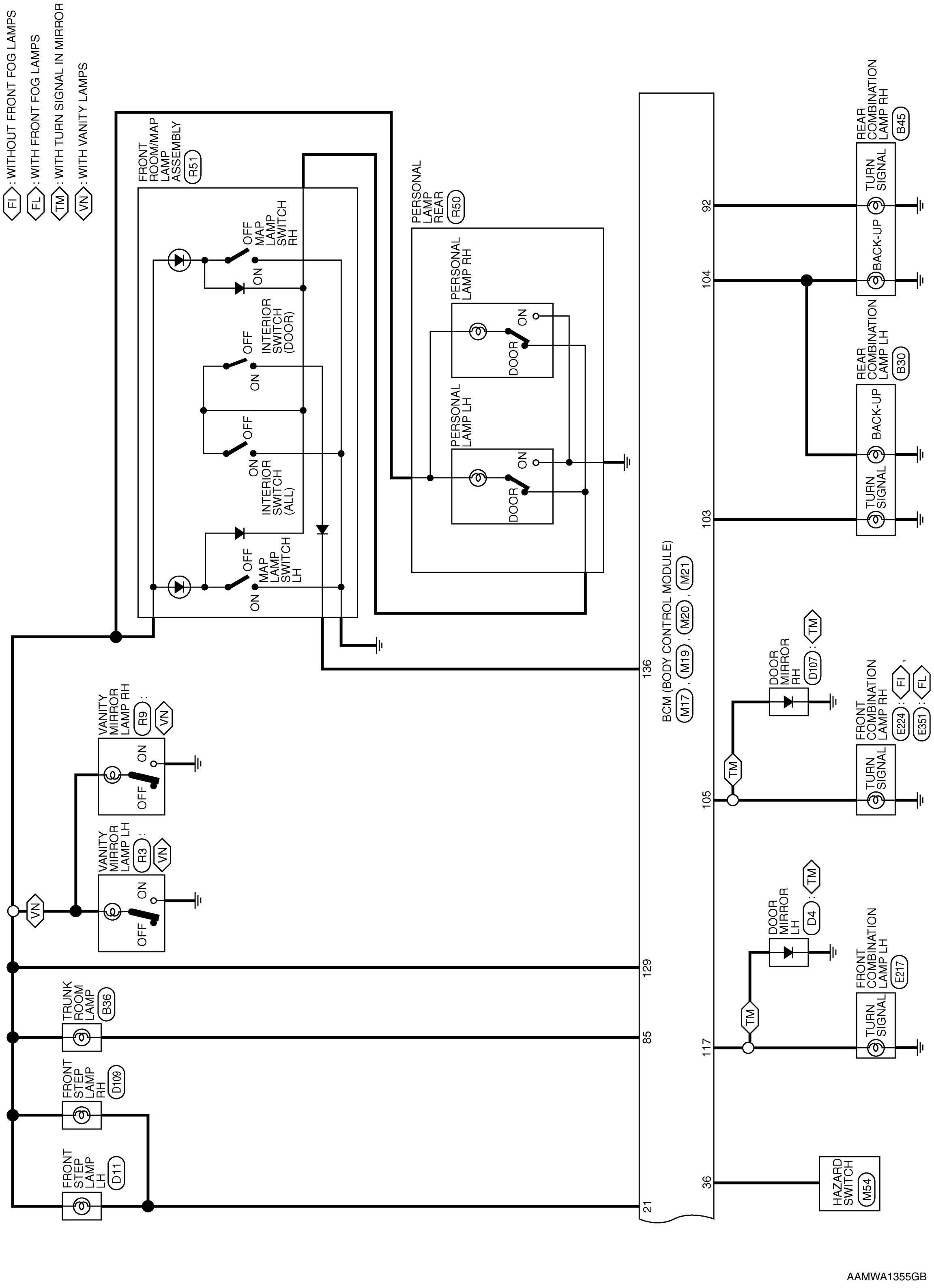

BCM (BODY CONTROL MODULE)
YR : WITH REQUEST SWITCH
A
FUSE BLOCK (J/B)
M3, M4, M5, E6
B
C
IGNITION RELAY-2
J-1
1
2
3
5
ACCESSORY RELAY-1
J-3
TO ACCESSORY POWER SUPPLY
5A 16
15A 4
15A 3
10A 10
10A 1
40A I
10A 59
BATTERY
STOP LAMP RELAY
E57
STOP LAMP SWITCH
E38
INTELLIGENT KEY WARNING BUZZER
E74
BCM (BODY CONTROL MODULE)
M17, M18, M19, M20, M21
67
113
27
26
138
142
25
131
139
64
83
33
80
93
82
94
96
143
134
YR
TRUNK OPENER REQUEST SWITCH
B33
TRUNK LID OPENER CANCEL SWITCH
M74
TRUNK LID OPENER SWITCH
M75
REAR DOOR SWITCH RH
B116
REAR DOOR SWITCH LH
B18
FRONT DOOR SWITCH RH
B108
FRONT DOOR SWITCH LH
B8
M57
AAMWA1354GB


AL : WITH AUTO LIGHT SYSTEM
HM : WITH HEATED MIRRORS
D
E
F
G
DATA LINE
DATA LINE
59
60
100
99
REAR PARCEL SHELF ANTENNA
B29
128
116
FRONT CONSOLE ANTENNA
M81
PUSH-BUTTON IGNITION SWITCH
M38
PUSH SWITCH
ACC/ON
ILLUMI-NATION
FUSE BLOCK (J/B)
M3 , M4 , M5 , B13
TO AIR CONDITIONER CONTROL - WITH AUTOMATIC AIR CONDITIONER CONTROL - WITH MANUAL
FRONT BLOWER MOTOR RELAY
J-4
15A 27
15A 17
3
5
2
1
1
111
48
107
66
BCM (BODY CONTROL MODULE)
M17 , M18 , M19 , M20
4
3
AL
OPTICAL SENSOR
M66 : AL
5A 9
DIODE-3
M80
119
17
AL
REMOTE KEYLESS ENTRY RECEIVER
M27
TO REAR WINDOW DEFOGGER
REAR WINDOW DEFOGGER RELAY
J-2
15A 24
15A 23
10A 22
3
5
2
1
HM
61
TRUNK LAMP SWITCH AND TRUNK RELEASE SOLENOID
B28
91
97
B
C
A
ABMWA2164GB


AA : WITH AUTO A/C
MA : WITHOUT AUTO A/C
N : FOR CANADA
NN : WITH NAVIGATION SYSTEM AND BOSE AUDIO SYSTEM
NP : WITH NAVIGATION SYSTEM WITHOUT BOSE AUDIO SYSTEM
NQ : WITH DISPLAY AUDIO SYSTEM
NV : WITH NAVI
NY : WITH DISPLAY AUDIO SYSTEM AND BOSE AUDIO SYSTEM
NZ : WITH DISPLAY AUDIO SYSTEM WITHOUT BOSE AUDIO SYSTEM
WB : WITH BOSE AUDIO SYSTEM
YR : WITH REQUEST SWITCH
H
D
I
J
K
E
F
G
DATA LINE
DATA LINE
A/C AUTO AMP. M152 : AA
FRONT AIR CONTROL M37 : MA
AA
MA
MA
32
29
23
COMBINATION METER M24
18
BCM (BODY CONTROL MODULE) M17 , M18 , M19 , M20
109
68
127
126
102
101
115
114
72
122
121
71
52
NQ
WB
NV
NV
YR
YR
N
AUDIO UNIT M44 : NZ M46 : NY
ITS CONTROL UNIT M58 : WB
AV CONTROL UNIT M97 : NP M153 : NN
NATS ANTENNA AMP. M40
REAR BUMPER ANTENNA B46
FRONT OUTSIDE HANDLE RH D106
FRONT OUTSIDE HANDLE LH D6
DONGLE UNIT M159 : N
ABMWA2165GB

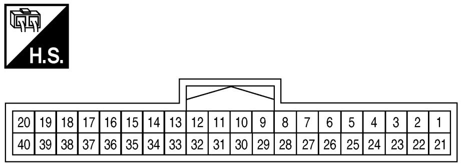

DQ : WITH DRIVE ASSISTANCE SYSTEM
DZ : WITHOUT DRIVE ASSISTANCE SYSTEM
QB : QR25DE FOR CALIFORNIA
QC : QR25DE EXCEPT FOR CALIFORNIA
VQ : WITH VQ35DE
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E18, E63, E200, F10, F83, F84
10A 46
STARTER CONTROL RELAY
TO STARTING SYSTEM
STARTER RELAY
IGNITION RELAY-1
CPU
10A 50
TRANS-MISSION RANGE SWITCH
F85
P R N D DS
CVT SHIFT SELECTOR
M23
PARK POSITION SWITCH
SHIFT LOCK SOLENOID
PARK POSITION SWITCH (SHIFT SELECTOR)
ECM
E10 : QC
E31 : QB
E32 : VQ
TO CAN SYSTEM
REAR VIEW CAMERA WASHER CONTROL UNIT
B16
FRONT WASHER MOTOR
E226
DQ
DZ
COMBINATION SWITCH
M28
M57
1
6
8
2
5
14
12
13
10
7
9
11
DATA LINE
DATA LINE
H
I
J
K
BCM (BODY CONTROL MODULE)
M17, M18, M20
69
20
108
39
62
70
10
11
12
13
14
75
76
77
78
79
ABMWA2170GB


A1 : WITH LEFT FRONT ONLY POWER WINDOW ANTI-PINCH SYSTEM
A2 : WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM
LM : WITH POWER LUMBAR SUPPORT
MU : WITH MOONROOF
PS : WITH POWER SEATS
BCM (BODY CONTROL MODULE)
M17 , M18 , M21
132 133
130
137 135
30
24 74
54
141
140
34 19
REAR DOOR LOCK ACTUATOR RH
D305
REAR DOOR LOCK ACTUATOR LH
D205
FRONT DOOR LOCK ACTUATOR RH
D108
M
ACTUATOR
DOOR UNLOCK SENSOR
KEY CYLINDER SWITCH
LOCK
FULL STROKE
BETWEEN FULL STROKE AND N
N
UNLOCK
BETWEEN FULL STROKE AND N
FULL STROKE
FRONT DOOR LOCK ASSEMBLY LH
D14
MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
A2 : D7 D8
A1 : D12
POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH
A2 : D105
A1 : D110
REAR POWER WINDOW SWITCH LH
D203
REAR POWER WINDOW SWITCH RH
D303
MOONROOF MOTOR ASSEMBLY
R5
POWER SEAT SWITCH LH
B203
LUMBAR SUPPORT SWITCH
B205
A1
A2
PS
MU
LM
ABMWA2166GB


FI : WITHOUT FRONT FOG LAMPS
FL : WITH FRONT FOG LAMPS
TM : WITH TURN SIGNAL IN MIRROR
VN : WITH VANITY LAMPS
FRONT ROOM/MAP LAMP ASSEMBLY R51
OFF MAP LAMP SWITCH RH
ON
OFF INTERIOR SWITCH (DOOR)
ON
OFF
ON INTERIOR SWITCH (ALL)
OFF MAP LAMP SWITCH LH
ON
PERSONAL LAMP REAR R50
PERSONAL LAMP RH
ON
DOOR
PERSONAL LAMP LH
ON
DOOR
BCM (BODY CONTROL MODULE) M17 , M19 , M20 , M21
136
129
85
21
92
104
103
105
117
36
REAR COMBINATION LAMP RH B45
TURN SIGNAL
BACK-UP
REAR COMBINATION LAMP LH B30
BACK-UP
TURN SIGNAL
DOOR MIRROR RH D107 : TM
FRONT COMBINATION LAMP RH E224 : FI , E351 : FL
TURN SIGNAL
TM
DOOR MIRROR LH D4 : TM
FRONT COMBINATION LAMP LH E217
TURN SIGNAL
TM
HAZARD SWITCH M54
VANITY MIRROR LAMP RH R9 : VN
ON
OFF
VANITY MIRROR LAMP LH R3 : VN
ON
OFF
VN
TRUNK ROOM LAMP B36
FRONT STEP LAMP RH D109
FRONT STEP LAMP LH D11
AAMWA1355GB

BCM (BODY CONTROL MODULE) CONNECTORS

Connector No.	M17
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GREEN

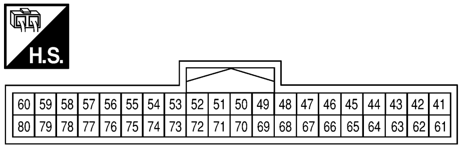

H.S.
20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21

Terminal No.	Color of Wire	Signal Name
1	R	ENG START SW NO ESCL
2	–	–
3	BR	A/L POWER SUPPLY 5V
4	Y	A/L SIGAL
5	–	–
6	–	–
7	–	–
8	–	–
9	–	–
10	W	COMBI SW IN 5
11	BG	COMBI SW IN 4
12	W	COMBI SW IN 3
13	G	COMBI SW IN 2
14	P	COMBI SW IN 1
15	–	–
16	–	–
17	B	GND RF A/L
18	G	SECURITY INDICATOR
19	G	CENTRAL DOOR LOCK SW

Terminal No.	Color of Wire	Signal Name
20	W	SHIFT P
21	W	STEP LAMP CONT
22	–	–
23	L	AIRCON SW
24	G	DOOR KEY/C UNLOCK SW
25	BG	BRAKE SW FUSE
26	Y	SHORTING IN PIN INPUT
27	G	BRAKE SW LAMP
28	–	–
29	Y	BLOWER FAN SW
30	P	DR DOOR LOCK STATUS
31	–	–
32	Y	REAR DEFOGGER SW
33	G	TRUNK CANCEL SW
34	BG	CENTRAL DOOR UNLOCK SW
35	–	–
36	Y	HAZARD SW
37	–	–
38	–	–
39	L	SHIFT N/P
40	–	–

AAMIA2698GB

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK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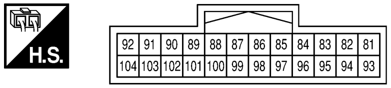
Terminal No.	Color of Wire	Signal Name
41	–	–
42	–	–
43	–	–
44	–	–
45	–	–
46	–	–
47	–	–
48	BR	HIGH SIDE START SW LED
49	–	–
50	–	–
51	–	–
52	G	AUDIO DONGLE
53	–	–
54	P	PW LIN
55	–	–
56	–	–
57	–	–
58	–	–
59	P	CAN-L
60	L	CAN-H
61	Y	REAR DEFOGGER RELAY OUT
62	BR	STARTER RELAY OUT
63	–	–
64	W	BUZZER OUT
65	–	–
66	R	BLOWER FAN RELAY OUT
67	W	IGN ELEC RELAY OUT 2
68	P	MR OUTPUT
69	L	AT DEVICE OUT
70	G	IGN USM OUT 1
71	V	DR REQUEST SW
72	Y	AS REQUEST SW
73	–	–
74	P	DOOR KEY/C LOCK SW
75	BG	COMBI SW OUT 5
76	W	COMBI SW OUT 4
77	R	COMBI SW OUT 3
78	P	COMBI SW OUT 2
79	G	COMBI SW OUT 1
80	BR	TRUNK OPEN SW

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY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Terminal No.	Color of Wire	Signal Name
81	–	–
82	Y	RL DOOR SW
83	LG	TRUNK REQUEST SW
84	–	–
85	BG	TRUNK LAMP CONT
86	–	–
87	–	–
88	–	–
89	–	–
90	–	–
91	V	TRUNK OPEN OUT
92	LG	RR FLASHER
93	V	RR DOOR SW
94	SB	AS DOOR SW
95	–	–
96	BR	DR DOOR SW
97	SB	TRUNK SW
98	–	–
99	G	ROOM ANT 3 B
100	R	ROOM ANT 3 A
101	G	REAR BUMPER ANT B
102	W	REAR BUMPER ANT A
103	Y	RL FLASHER
104	BR	REVERSE LAMP OUT

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

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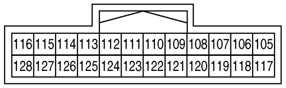
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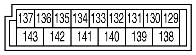
Terminal No.	Color of Wire	Signal Name
105	BR	FR FLASHER
106	–	–
107	W	LOW SIDE START SW LED
108	BG	SHIFT LOCK SOLENOID OUT
109	G	REVERSE SIGNAL
110	–	–
111	Y	ACC LED
112	–	–
113	P	ACC RELAY OUT
114	P	AS DOOR ANT A
115	R	AS DOOR ANT B
116	W	ROOM ANT 2 A
117	SB	FL FLASHER
118	–	–
119	G	RF NIMOCO
120	–	–
121	R	DR DOOR ANT B
122	P	DR DOOR ANT A
123	–	–
124	–	–
125	–	–
126	BR	IMMO START BUTTON ANT B
127	L	IMMO START BUTTON ANT A
128	BG	ROOM ANT 2 B

Connector No.	M21
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

H.S.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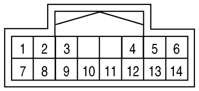
Terminal No.	Color of Wire	Signal Name
129	G	BATTERY SAVER OUT
130	SB	DOOR UNLOCK AS
131	W	BAT BCM FUSE
132	L	DOOL LOCK RR/RL
133	Y	DOOL UNLOCK RR/RL
134	B	GND2
135	BR	DOOL LOCK DR/AS/FL
136	P	ROOM LAMP CONT
137	V	DOOR UNLOCK DR/FL
138	V	BAT REAR DOOR
139	W	BAT POWER F/L
140	LG	P/W POWER SUPPLY IGN
141	V	P/W POWER SUPPLY BAT
142	BR	BAT FRONT DOOR
143	B	GND1

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

H.S.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Terminal No.	Color of Wire	Signal Name
1	LG	– WITH REAR VIEW CAMERA WASHER CONTROL SYSTEM
1	BG	– WITHOUT REAR VIEW CAMERA WASHER CONTROL SYSTEM
2	BG	–
3	–	–
4	–	–
5	W	–
6	B	–
7	R	–
8	W	–
9	P	–
10	W	–
11	G	–
12	P	–
13	BG	–
14	G	–

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BASIC INSPECTION

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

INFOID:0000000010480415

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 : Work Procedure

INFOID:0000000010480416

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-66, "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-66, "CONFIGURATION (BCM) : Work Procedure".

>> GO TO 4.

4.INITIALIZE BCM (NATS)

Perform BCM initialization. (NATS)

>> Work End.

CONFIGURATION (BCM)

CONFIGURATION (BCM) : Description

INFOID:0000000010480417

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:0000000010480418

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-67, "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:0000000010480419

CAUTION:

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

SETTING ITEM		NOTE
Items	Setting value	
AUTO LIGHT	WITHOUT ⇔ MODE3 ⇔ MODE4	• WITHOUT: Without auto light • MODE3: Canada auto light w/o enhanced • MODE4: USA auto light w/enhanced (if equipped)
FR FOG LAMP	WITHOUT ⇔ MODE1	• WITHOUT: Without fog lamps • MODE1: With fog lamps
TIRE PRESSURE	220kPa ⇔ 230kPa	• 220 kPa: TPMS threshold (16" tire) • 230 kPa: TPMS threshold (17" or 18" tire)
BCM AC CONTROL	MODE1 ⇔ MODE2	• MODE1: Manual HVAC • MODE2: Automatic HVAC
Key Fob Type	ENST/LCK/UNLCK/TRNK/ALRM ⇔ LCK/UNLCK/TRNK/ALRM	• ENST/LCK/UNLCK/TRNK/ALRM: 5 button (w/engine start) • LCK/UNLCK/TRNK/ALRM: 4 button (w/o engine start)
Pressure Warning	MODE1 ⇔ MODE3	• MODE1: Warning (2.5 only) • MODE3: Location and warning (2.5S+)

TRANSIT MODE CANCEL OPERATION

Description

INFOID:0000000010480420

- BCM is in transit mode if turn signal indicator on combination meter turns ON for 1 minute when ignition switch is turned from OFF to ON.
- In this case, cancel operation must be performed.

NOTE:

Do not cancel transit mode during storage of the vehicle. Always cancel transit mode before delivery of the vehicle to customer.

Work Procedure

INFOID:0000000010480421

1.TRANSIT MODE CANCEL OPERATION

1. Turn ignition switch OFF.
2. Turn and hold front wiper switch to HI, and then operate turn signal switch to RH or LH.

>> GO TO 2.

2.TRANSIT MODE CANCEL CHECK

1. Turn front wiper switch and turn signal switch OFF.
2. Turn ignition switch ON.
3. Check that turn signal indicator on combination meter does not turn ON.

>> Work End.

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:0000000010480422

Refer to BCS-8, "BODY CONTROL SYSTEM : System Description".

DTC Logic

INFOID:0000000010480423

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:0000000010480424

1. PERFORM SELF DIAGNOSTIC RESULT

1. Turn ignition switch ON and wait for 2 second or more.
2. Perform “Self Diagnostic Result” of “BCM” using CONSULT.

Is “CAN COMM CIRCUIT” displayed?

YES >> Perform CAN Diagnosis as described in DIAGNOSIS section of CONSULT Operation Manual.
NO >> Refer to GI-44, "Intermittent Incident".

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:0000000010480425

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:0000000010480426

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:0000000010480427

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:0000000010480428

DTC DETECTION LOGIC

NOTE:

- If DTC U0415 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-69, "DTC Logic".
- If DTC U0415 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to BCS-70, "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” using CONSULT, after the ignition switch has been turned ON for 2 seconds or more.

Is any DTC detected?

YES >> Refer to BCS-53, "DTC Index".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000010480429

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

Perform “Self Diagnostic Result” of “ABS” using CONSULT. Refer to BRC-33, "CONSULT Function (ABS)".

Is any DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to BRC-45, "DTC Index".
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-71, "Diagnosis Procedure".

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” using 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-27, "DTC Index".
NO >> Refer to GI-44, "Intermittent Incident".

B2562 LOW VOLTAGE

DTC Logic

INFOID:0000000010480430

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” using CONSULT, after the ignition switch has been turned ON for 120 seconds or more.

Is any DTC detected?

YES >> Refer to BCS-72, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000010480431

1. CHECK BATTERY VOLTAGE

Check battery voltage.

Is battery voltage less than 8.8V?

YES >> Charge battery and retest. Refer to CHG-17, "Work Flow (With EXP-800 NI or GR8-1200 NI)" or CHG-20, "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-75, "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” using CONSULT. Refer to BCS-26, "BCM : CONSULT Function (BCM - BCM)".

Is DTC B2562 CRNT?

YES >> Replace BCM. Refer to BCS-81, "Removal and Installation".
NO >> Refer to GI-44, "Intermittent Incident".

B259A ROOM LAMP FUSE

DTC Logic

INFOID:0000000010480432

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 “Self Diagnostic Result” of “BCM” using CONSULT, after the ignition switch has been turned ON for 2 minutes or more.

Is any DTC detected?

YES >> Refer to BCS-73, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000010480433

Regarding Wiring Diagram information, refer to BCS-56, "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 M21.
2. Check voltage between BCM connector M21 terminal 131 and ground.

BCM		Ground	Voltage (Approx.)
Connector	Terminal		
M21	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 M21 terminal 129 and ground.

BCM		Ground	Continuity
Connector	Terminal		
M21	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:0000000010480434

Regarding Wiring Diagram information, refer to BCS-56, "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	I (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 M21.
2. Check voltage between BCM connector M21 terminals 131, 139 and ground.

BCM		Ground	Voltage (Approx.)
Connector	Terminal		
M21	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 M21 terminals 134, 143 and ground.

BCM		Ground	Continuity
Connector	Terminal		
M21	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:0000000010480435

Regarding Wiring Diagram information, refer to BCS-56, "Wiring Diagram".

1. CHECK INPUT 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	
INPUT 1	M18	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 M18 and ground.

Signal	BCM			Continuity
	Connector	Terminal		
INPUT 1	M18	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 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		
INPUT 1	M18	79	—	Refer to BCS-32, "Reference Value".
INPUT 2		78		
INPUT 3		77		
INPUT 4		76		
INPUT 5		75		

Is the inspection result normal?

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

COMBINATION SWITCH OUTPUT CIRCUIT

Diagnosis Procedure

INFOID:0000000010480436

Regarding Wiring Diagram information, refer to BCS-56, "Wiring Diagram".

1. CHECK OUTPUT 1 - 5 SYSTEM CIRCUIT FOR OPEN

1. Turn ignition switch OFF.
2. Disconnect BCM connector M17 and combination switch connector.
3. Check continuity between BCM connector M17 and combination switch connector.

Signal	BCM		Combination switch		Continuity
	Connector	Terminal	Connector	Terminal	
OUTPUT 1	M17	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 M17 and ground.

Signal	BCM			Continuity
	Connector	Terminal		
OUTPUT 1	M17	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 M17 and combination switch connector.
2. Turn ignition switch ON.
3. Check voltage between BCM connector M17 and ground.

Signal	BCM		Ground	Voltage
	Connector	Terminal		
OUTPUT 1	M17	14	—	Refer to BCS-32, "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.

SYMPTOM DIAGNOSIS

COMBINATION SWITCH SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000010480437

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/AUTO	INT VOLUME	TURN SIGNAL R	TURN SIGNAL L	TAIL LAMP SW	HI BEAM SW	HEAD LAMP SW 1	HEAD LAMP SW 2	PASSING SW	AUTO LIGHT SW	FR FOG SW
A		×	×			×	×							
B	×			×						×		×		
C					×				×		×			
D					×			×					×	
E					×									×
F	×				×									
G			×		×									
H		×		×									×	
I							×				×	×		×
J						×		×	×	×				
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-76, "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-78, "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.

REMOVAL AND INSTALLATION

BCM (BODY CONTROL MODULE)

Removal and Installation

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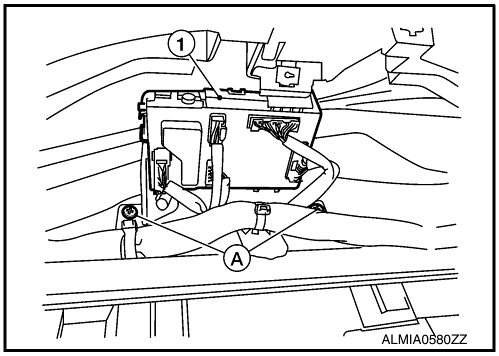
A
B
C
D
E
F
G
H
I
J
K
L
BCS
N
O
P

REMOVAL

CAUTION:

Before replacing BCM, perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to BCS-65, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description".

1. Disconnect the negative battery terminal. Refer to PG-78, "Removal and Installation".
2. Remove the combination meter. Refer to MWI-81, "Removal and Installation".
3. Remove the BCM screws (A) and pull out the BCM (1).
4. Disconnect the harness connectors from the BCM (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

- **When replacing BCM, perform "WRITE CONFIGURATION" Refer to BCS-66, "CONFIGURATION (BCM) : Work Procedure".**
- **When replacing BCM, perform the system initialization (NATS). Refer to BCS-65, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Work Procedure".**
- **When replacing BCM, if new BCM does not come with keyfobs attached, all existing keyfobs must be re-registered. Refer to the CONSULT immobilizer mode and follow the on-screen instructions.**

COMBINATION SWITCH

Exploded View

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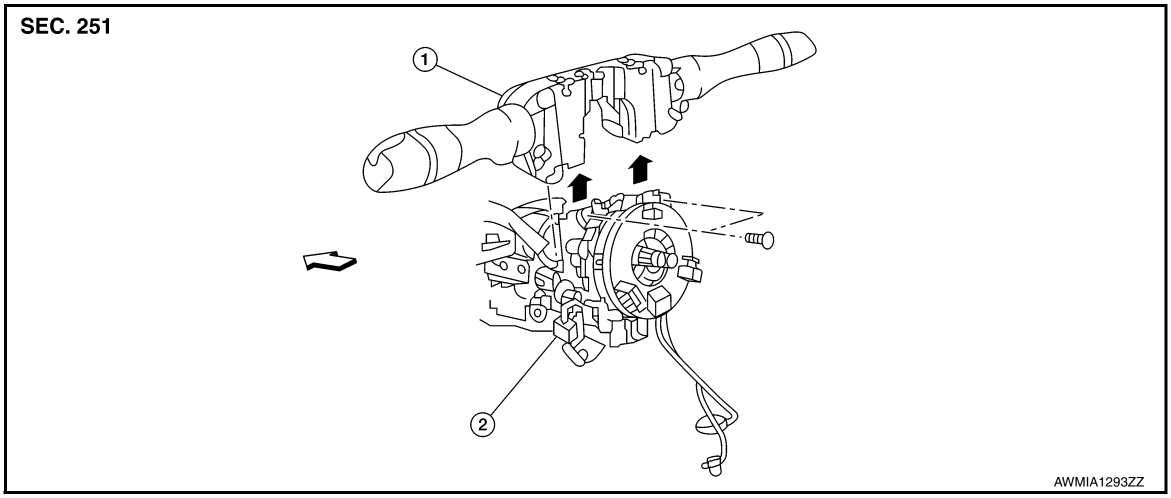

1. Combination switch 2. Combination switch harness connector ⇦ Front

NOTE:
Shown with the steering wheel removed for clarity only.

Removal and Installation

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REMOVAL

CAUTION:

- **Before servicing, turn the ignition switch OFF, disconnect both battery terminals and wait at least three minutes.**
- **Do not use air tools or electric tools for servicing.**

1. Disconnect both the negative and positive battery terminals, then wait at least three minutes. Refer to PG-78, "Exploded View".
2. Remove the steering column covers. Refer to IP-17, "Removal and Installation".
3. Rotate steering wheel clockwise to access first combination switch bolt and remove.
4. Rotate steering wheel counter-clockwise to access second combination switch bolt and remove.
5. Disconnect the harness connector from the combination switch and remove.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

- **After the work is completed, make sure no system malfunction is detected by air bag warning lamp.**
- **In case a malfunction is detected by the air bag warning lamp, reset with the self-diagnosis function and delete the memory with CONSULT.**
- **If a malfunction is still detected after the above operation, perform self-diagnosis to repair malfunctions. Refer to SRC-17, "SRS Final Check".**