

SECTION **BCS**

BODY CONTROL SYSTEM

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BCS

PRECAUTIONS

PRECAUTIONS

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Precautions for Supplemental Restraint System (SRS) “AIR BAG” and “SEAT BELT PRE-TENSIONER”

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

BCM (BODY CONTROL MODULE)

PFP:284B2

BCM (BODY CONTROL MODULE)

System Description

BCM (Body Control Module) controls the operation of various electrical units installed on the vehicle.

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BCM FUNCTION

BCM has a combination switch reading function for reading the operation of combination switches (light, wiper washer, turn signal) in addition to the function for controlling the operation of various electrical components. Also, it functions as an interface that receives signals from the front air control, and sends signals to ECM using CAN communication.

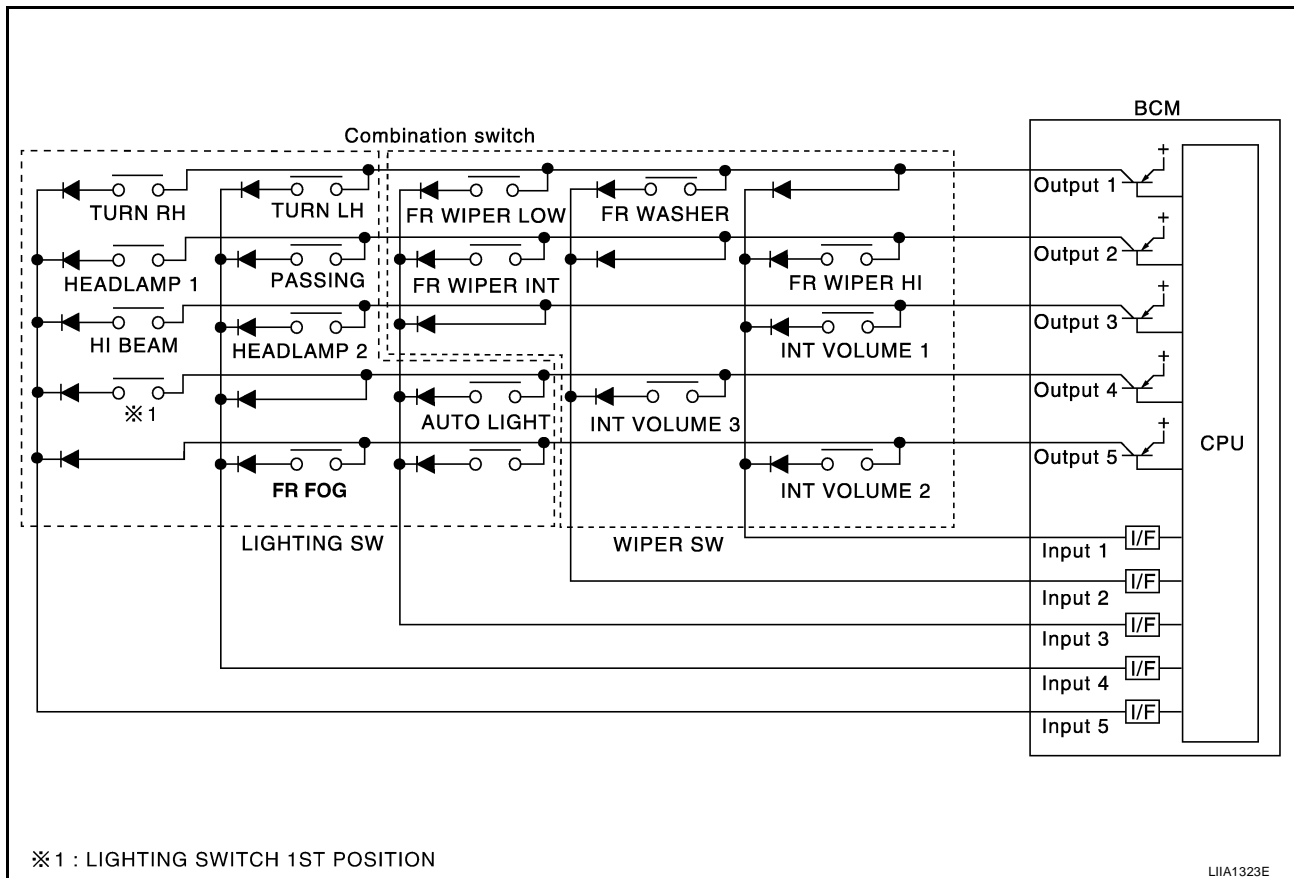
COMBINATION SWITCH READING FUNCTION

1. Description

- BCM reads combination switch (light, wiper) status, and controls various electrical components according to the results.
- BCM reads information of a maximum of 20 switches by combining five output terminals (OUTPUT 1-5) and five input terminals (INPUT 1-5).

2. Operation description

- BCM activates transistors of output terminals (OUTPUT 1-5) periodically and allows current to flow in turn.
- If any (1 or more) of the switches are turned ON, circuit of output terminals (OUTPUT 1-5) and input terminals (INPUT 1-5) becomes active.
- At this time, transistors of output terminals (OUTPUT 1-5) are activated to allow current to flow. When voltage of input terminals (INPUT 1-5) corresponding to that switch changes, interface in BCM detects voltage change and BCM determines that switch is ON.



3. BCM - Operation table of combination switch

- BCM reads operation status of combination switch by the combination shown in the following table.

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| | COMB SW OUTPUT 1 | | COMB SW OUTPUT 2 | | COMB SW OUTPUT 3 | | COMB SW OUTPUT 4 | | COMB SW OUTPUT 5 | |
|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|----------------------|-----------------------|------------------|------------------|
| | ON | OFF | ON | OFF | ON | OFF | ON | OFF | ON | OFF |
| COMB SW INPUT 1 | — | — | FR WIPER HI ON | FR WIPER HI OFF | INT VOLUME 1 ON | INT VOLUME 1 OFF | — | — | INT VOLUME 2 ON | INT VOLUME 2 OFF |
| COMB SW INPUT 2 | FR WASHER ON | FR WASHER OFF | — | — | — | — | INT VOLUME 3 ON | INT VOLUME 3 OFF | | |
| COMB SW INPUT 3 | FR WIPER LOW ON | FR WIPER LOW OFF | FR WIPER INT ON | FR WIPER INT OFF | — | — | AUTO LIGHT ON | AUTO LIGHT OFF | — | — |
| COMB SW INPUT 4 | TURN LH ON | TURN LH OFF | PASSING ON | PASSING OFF | HEAD-LAMP 2 ON | HEAD-LAMP 2 OFF | — | — | FR FOG ON | FR FOG OFF |
| COMB SW INPUT 5 | TURN RH ON | TURN RH OFF | HEAD-LAMP 1 ON | HEAD-LAMP 1 OFF | HI BEAM ON | HI BEAM OFF | LIGHTING SW (1st) ON | LIGHTING SW (1st) OFF | — | — |

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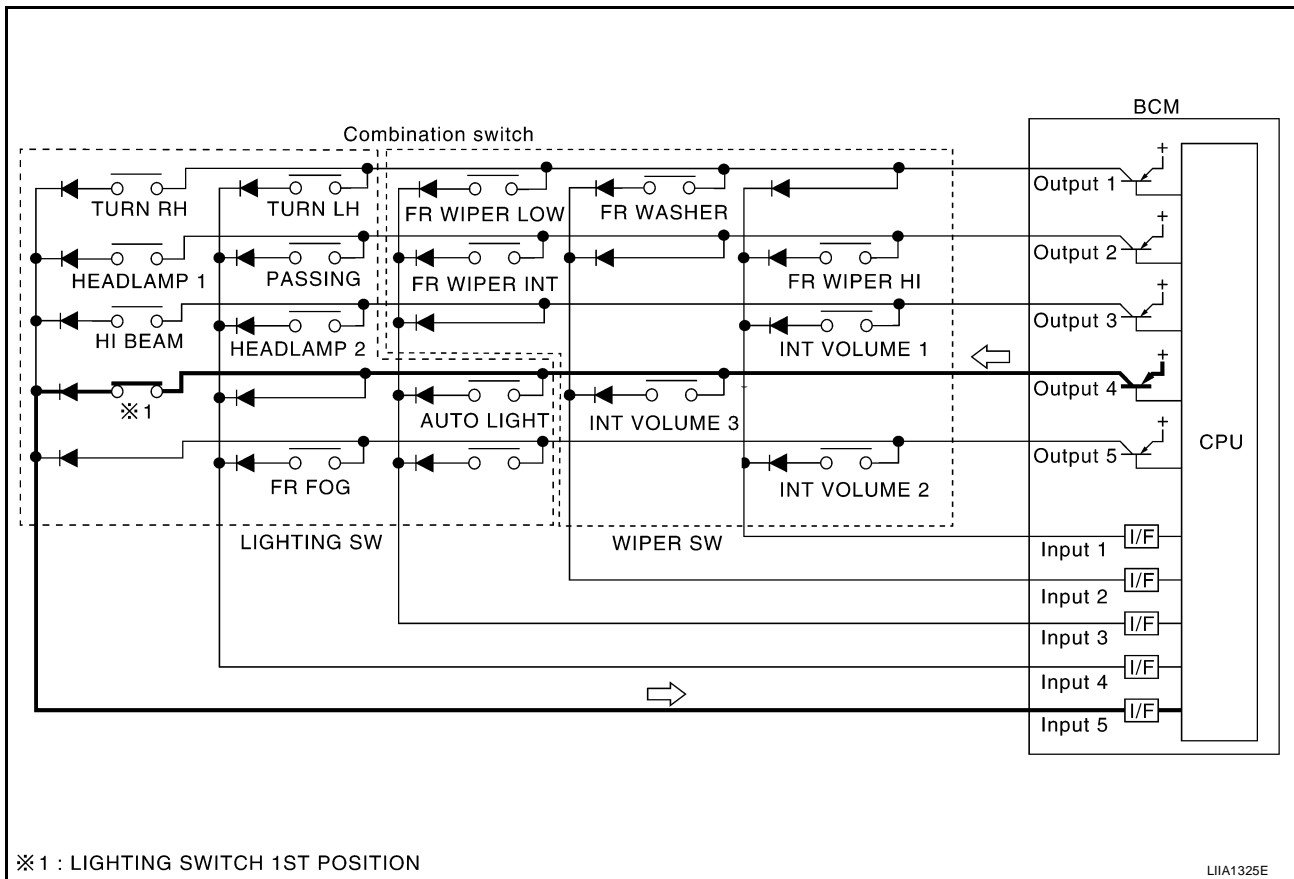
NOTE:

Headlamp has a dual system switch.

4. Example operation: (When lighting switch 1st position turned ON)

- When lighting switch 1st position is turned ON, contact in combination switch turns ON. At this time if OUTPUT 4 transistor is activated, BCM detects that voltage changes in INPUT 5.
- When OUTPUT 4 transistor is ON, BCM detects that voltage changes in INPUT 5, and judges lighting switch 1st position is ON. Then BCM sends tail lamp ON signal to IPDM E/R using CAN communication.
- When OUTPUT 4 transistor is activated again, BCM detects that voltage changes in INPUT 5 and recognizes that lighting switch 1st position is continuously ON.

BCM (BODY CONTROL MODULE)



NOTE:

Each OUTPUT terminal transistor is activated at 10ms intervals. Therefore, after a switch is turned ON, electrical loads are activated with a time delay. But this time delay is so short that it cannot be noticed.

5. Operation mode

- Combination switch reading function has operation modes as follows:

Normal status

- When BCM is not in sleep status, OUTPUT terminals (1-5) each turn ON-OFF every 10ms.

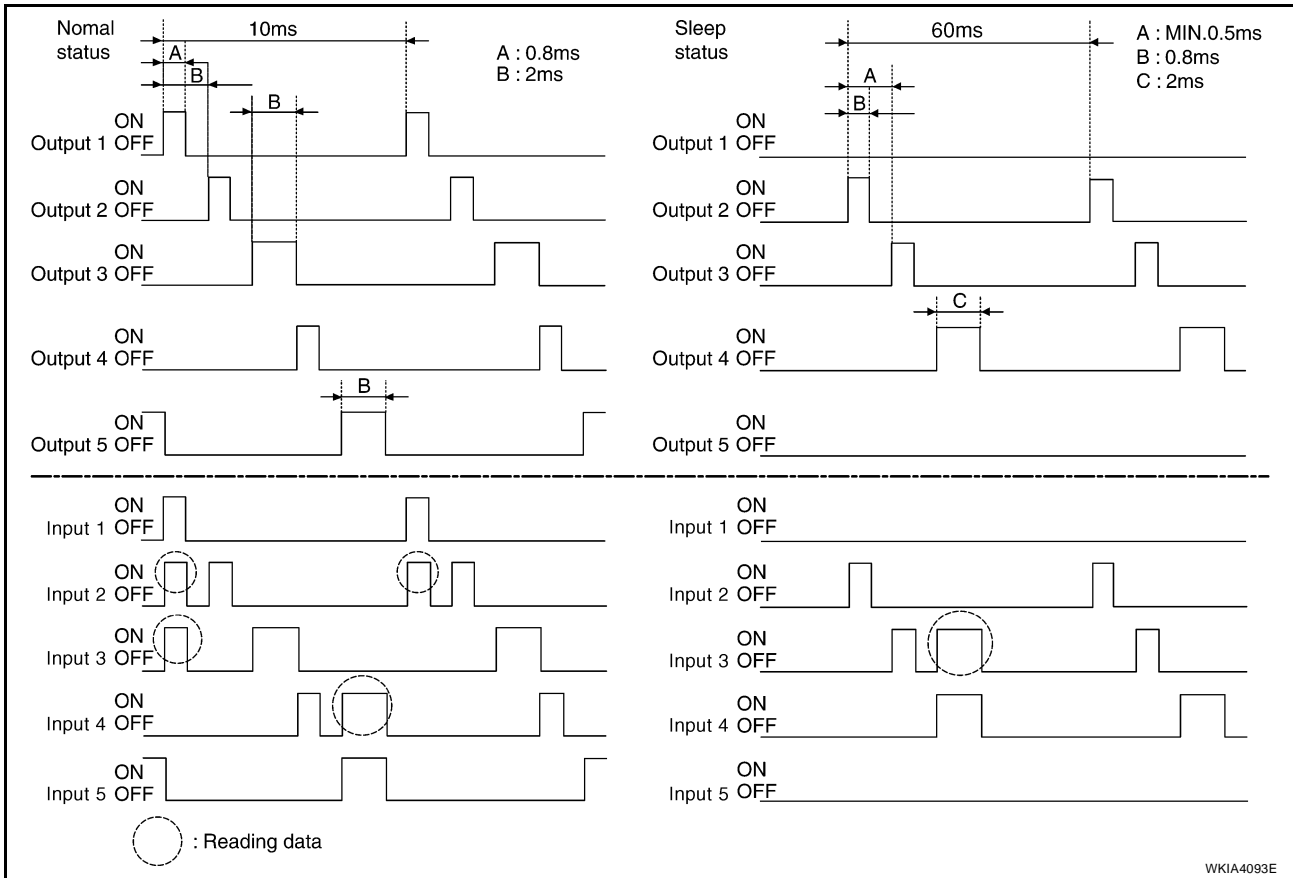
Sleep status

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BCM (BODY CONTROL MODULE)

- When BCM is in sleep mode, transistors of OUTPUT 1 and 5 stop the output, and BCM enters low-current-consumption mode. OUTPUTS (2, 3, and 4) turn ON-OFF at 60ms intervals, and receives lighting switch input only.



CAN COMMUNICATION CONTROL

CAN communication allows a high rate of information through the two communication lines (CAN-L, CAN-H) connecting the various control units in the system. Each control unit transmits/receives data, but selectively reads required data only.

BCM STATUS CONTROL

BCM changes its status depending on the operation status in order to reduce power consumption.

- CAN communication status
 - With ignition switch ON, CAN communicates with other control units normally.
 - Control by BCM is being operated properly.
 - When ignition switch is OFF, switching to sleep mode is possible.
 - Even when ignition switch is OFF, if CAN communication with IPDM E/R and combination meter is active, CAN communication status is active.
- Sleep transient status
 - This status shuts down CAN communication when ignition switch is turned OFF.
 - It transmits sleep request signal to IPDM E/R and combination meter.
 - Two seconds after CAN communication of all control units stops, CAN communication switches to inactive status.
- CAN communication inactive status
 - With ignition switch OFF, CAN communication is not active.
 - With ignition switch OFF, control performed only by BCM is active.
 - Three seconds after CAN communication of all control units stops, CAN communication switches to inactive status.
- Sleep status

BCM (BODY CONTROL MODULE)

- BCM is activated with low current consumption mode.
- CAN communication is not active.
- When CAN communication operation is detected, it switches to CAN communication status.
- When a state of the following switches changes, it switches to CAN communication state:
 - Ignition switch
 - Key switch (insert)
 - Hazard switch
 - Main door lock/unlock switch
 - Front door switch (LH, RH)
 - Rear door switch (LH, RH) (Crew Cab)
 - Rear door switch upper (LH, RH) (King Cab)
 - Rear door switch lower (LH, RH) (King Cab)
 - Combination switch (passing, lighting switch 1st position, front fog lamp)
 - Keyfob (lock/unlock signal)
 - Front door lock assembly LH (key cylinder switch)
- When control performed only by BCM is required by switch, it shifts to CAN communication inactive mode.
- Status of combination switch reading function is changed.

SYSTEMS CONTROLLED BY BCM DIRECTLY

- Power door lock system. Refer to [BL-16, "POWER DOOR LOCK SYSTEM"](#) .
- Remote keyless entry system. Refer to [BL-52, "REMOTE KEYLESS ENTRY SYSTEM"](#) .
- Power window system. Refer to [GW-20, "POWER WINDOW SYSTEM"](#) . NOTE
- Sunroof system. Refer to [RF-10, "SUNROOF"](#) . NOTE
- Room lamp timer. Refer to [LT-107, "INTERIOR ROOM LAMP"](#) .
- Warning chime system. Refer to [DI-37, "WARNING CHIME"](#) .
- Turn signal and hazard warning lamps system. Refer to [LT-59, "TURN SIGNAL AND HAZARD WARNING LAMPS"](#) .
- Trailer turn signal and hazard warning lamps system (if equipped). Refer to [LT-99, "TRAILER TOW"](#) .

NOTE:

Power supply only. No system control.

SYSTEMS CONTROLLED BY BCM AND IPDM E/R

- Panic system. Refer to [BL-52, "REMOTE KEYLESS ENTRY SYSTEM"](#) .
- Vehicle security (theft warning) system. Refer to [BL-84, "VEHICLE SECURITY \(THEFT WARNING\) SYSTEM"](#) .
- NVIS (NATS) system. Refer to [BL-128, "NVIS\(NISSAN Vehicle Immobilizer System-NATS\)"](#) .
- Headlamp, tail lamp, front fog lamp, auto light and battery saver control systems. Refer to [LT-5, "HEADLAMP \(FOR USA\)"](#) , [LT-27, "HEADLAMP \(FOR CANADA\) - DAYTIME LIGHT SYSTEM -"](#) , [LT-86, "PARKING, LICENSE PLATE AND TAIL LAMPS"](#) , [LT-50, "FRONT FOG LAMP"](#) or [LT-37, "AUTO LIGHT SYSTEM"](#) .
- Front wiper and washer system. Refer to [WW-3, "FRONT WIPER AND WASHER SYSTEM"](#) .

MAJOR COMPONENTS AND CONTROL SYSTEM

| System | Input | Output |
|-----------------------------|---|---|
| Remote keyless entry system | Remote keyless entry receiver (keyfob) | <ul style="list-style-type: none"> ● All door locking actuators ● Turn signal lamps |
| Power door lock system | <ul style="list-style-type: none"> ● Front power door lock/unlock switch (LH, RH) ● All door switches ● Key switch | All door locking actuators |

BCM (BODY CONTROL MODULE)

| System | Input | Output |
|--|--|---|
| Power supply [ignition (IGN)/retained accessory power (RAP)] to power window and sunroof | IGN/RAP supply | Power supply to power window and sunroof system |
| Power supply (BAT) to power window and sunroof | Battery power supply | Power supply to power window and sunroof system |
| Panic alarm | <ul style="list-style-type: none"> ● Key switch ● Remote keyless entry receiver (keyfob) | IPDM E/R |
| Auto light system | <ul style="list-style-type: none"> ● Optical sensor ● Combination switch | IPDM E/R |
| Battery saver control | <ul style="list-style-type: none"> ● Ignition switch ● Combination switch ● Front door switch LH and RH | IPDM E/R |
| Headlamp | Combination switch | IPDM E/R |
| Tail lamp | Combination switch | IPDM E/R |
| Front fog lamp | Combination switch | IPDM E/R |
| Turn signal lamp | Combination switch | <ul style="list-style-type: none"> ● Turn signal lamp ● Combination meter |
| Hazard lamp | Hazard switch | <ul style="list-style-type: none"> ● Turn signal lamp ● Combination meter |
| Room lamp timer | <ul style="list-style-type: none"> ● Key switch ● Remote keyless entry receiver (keyfob) ● Main power window and door lock/unlock switch ● Front door lock assembly LH (key cylinder switch) ● All door switches | Interior room lamp |
| Key warning chime | <ul style="list-style-type: none"> ● Key switch ● Front door switch LH | Combination meter (warning buzzer) |
| Light warning chime | <ul style="list-style-type: none"> ● Combination switch ● Key switch ● Front door switch LH | Combination meter (warning buzzer) |
| Vehicle-speed-sensing intermittent wiper | <ul style="list-style-type: none"> ● Combination switch ● Combination meter | IPDM E/R |
| Rear window defogger (Crew Cab models only) | Rear window defogger switch | IPDM E/R |
| Air conditioner switch signal | Front air control | ECM |
| Blower fan switch signal | Front air control | ECM |
| Low tire pressure warning system | Remote keyless entry receiver | <ul style="list-style-type: none"> ● Combination meter ● Display control unit |
| Trailer tow (if equipped) | Combination switch | Trailer turn signal relays |
| Vehicle security system | <ul style="list-style-type: none"> ● Remote keyless entry receiver (keyfob) ● Main power window and door lock/unlock switch ● Power window and door lock/unlock switch RH ● Front door lock assembly LH (key cylinder switch) ● All door switches | <ul style="list-style-type: none"> ● IPDM E/R ● Security indicator lamp |

CAN Communication System Description

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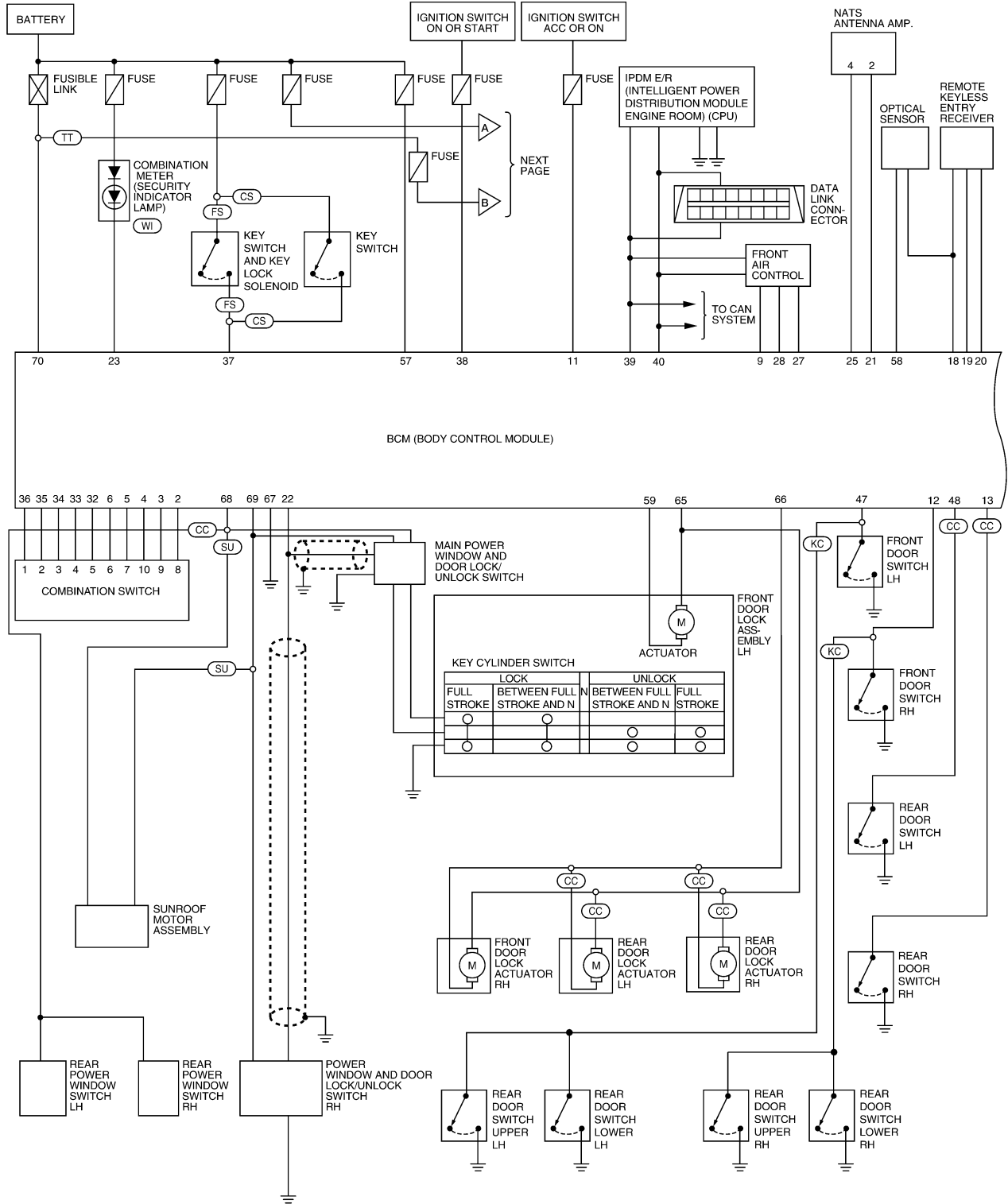
Refer to [LAN-2, "SYSTEM DESCRIPTION"](#) .

BCM (BODY CONTROL MODULE)

Schematic

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- (CC) : CREW CAB
- (CS) : COLUMN SHIFT
- (FS) : FLOOR SHIFT
- (KC) : KING CAB
- (SU) : WITH SUNROOF
- (TT) : TRAILER TOW 7 PIN
- (WI) : WITH IMMOBILIZER



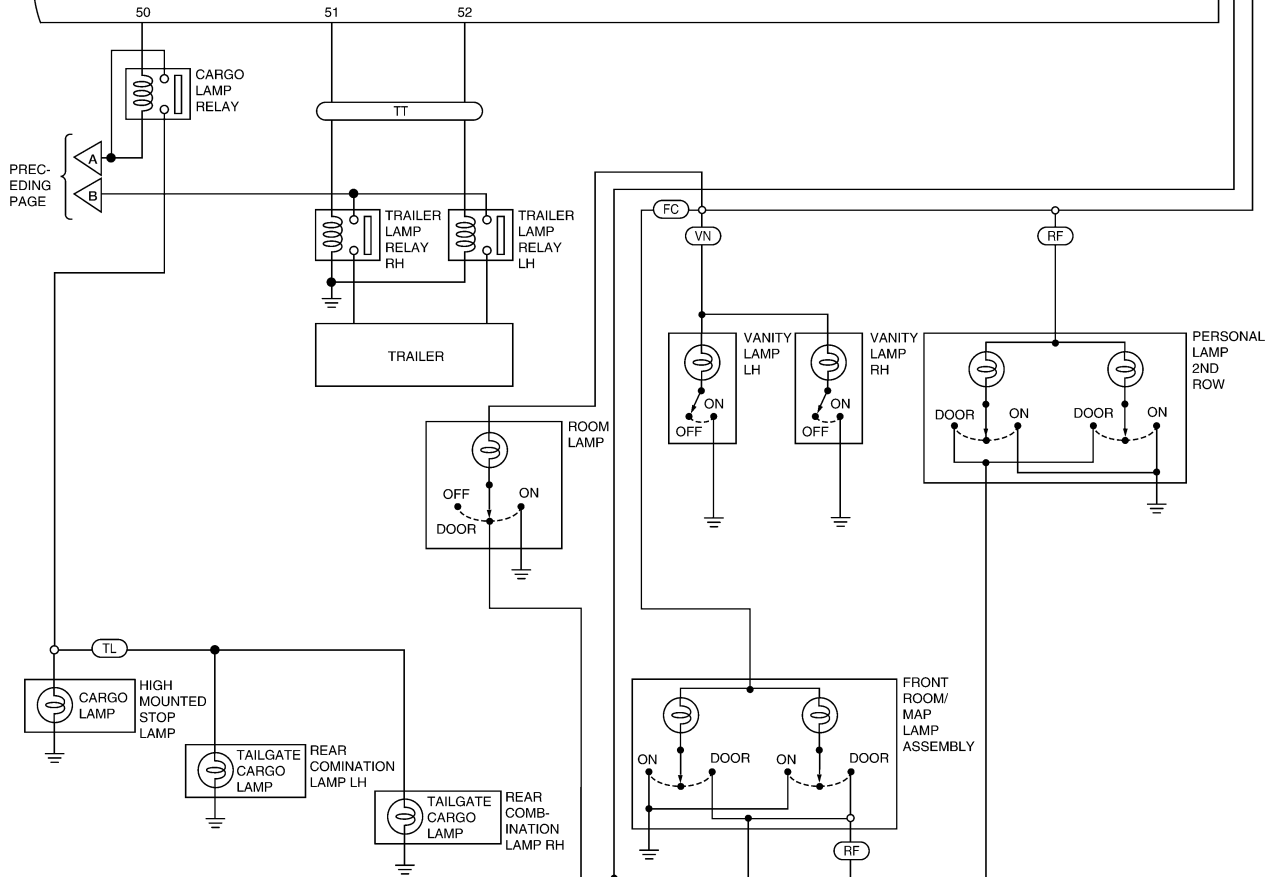
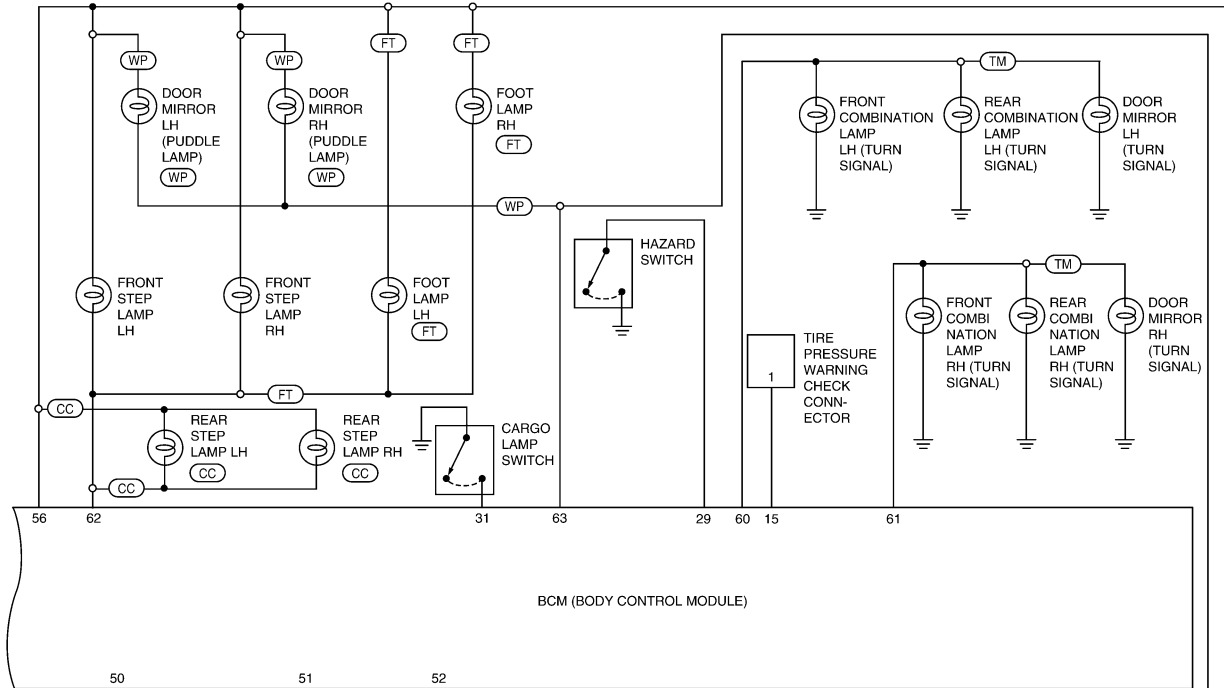
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BCM (BODY CONTROL MODULE)

- (CC) : CREW CAB
- (FC) : WITH FRONT ROOF CONSOLE
- (FT) : WITH FOOT LAMPS
- (RF) : WITH REAR ROOF CONSOLE
- (TL) : WITH TAILGATE CARGO LAMPS
- (TM) : WITH TURN SIGNAL IN MIRROR
- (TT) : TRAILER TOW 7 PIN
- (VN) : WITH VANITY LAMPS
- (WP) : WITH PUDDLE LAMPS

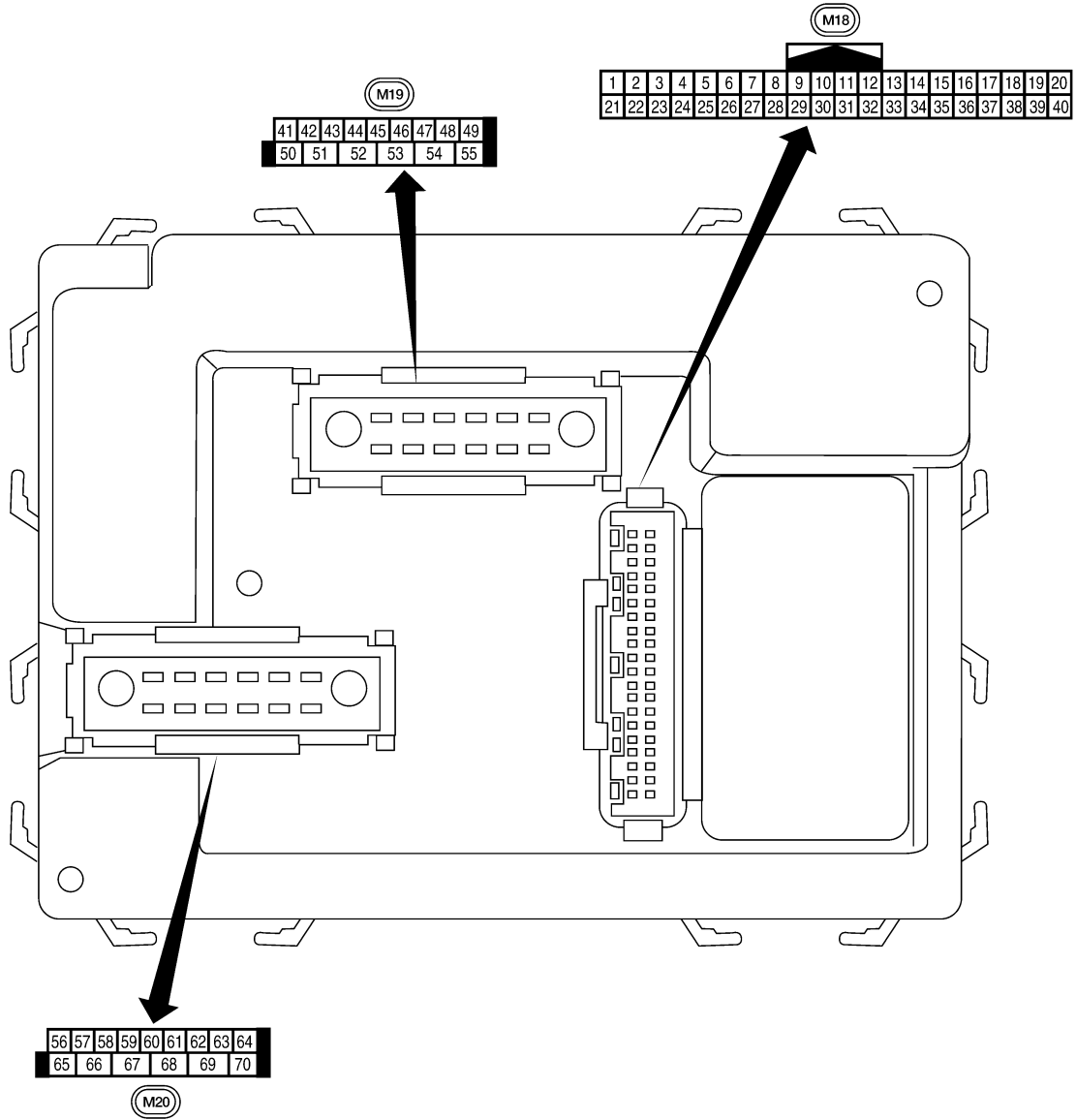


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BCM (BODY CONTROL MODULE)

BCM Terminal Arrangement

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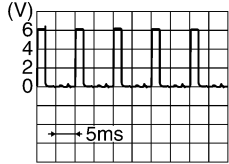
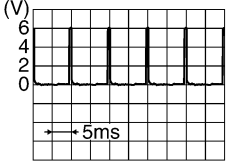
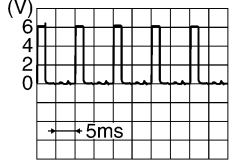
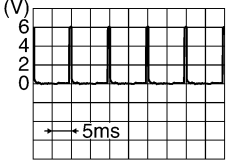
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BCM (BODY CONTROL MODULE)

Terminals and Reference Values for BCM

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| Terminal | Wire color | Signal name | Signal input/output | Measuring condition | | Reference value or waveform (Approx.) |
|----------|------------|---|---------------------|---------------------|--|---|
| | | | | Ignition switch | Operation or condition | |
| 2 | SB | Combination switch input 5 | Input | ON | Lighting, turn, wiper OFF Wiper dial position 4 |  <p style="text-align: right; font-size: small;">SKIA5291E</p> |
| 3 | G/Y | Combination switch input 4 | Input | ON | Lighting, turn, wiper OFF Wiper dial position 4 |  <p style="text-align: right; font-size: small;">SKIA5292E</p> |
| 4 | Y | Combination switch input 3 | Input | ON | Lighting, turn, wiper OFF Wiper dial position 4 |  <p style="text-align: right; font-size: small;">SKIA5291E</p> |
| 5 | G/B | Combination switch input 2 | Input | ON | Lighting, turn, wiper OFF Wiper dial position 4 |  <p style="text-align: right; font-size: small;">SKIA5292E</p> |
| 6 | V | Combination switch input 1 | | | | |
| 9 | Y/B | Rear window defogger switch (Crew Cab) | Input | ON | Rear window defogger switch ON | 0V |
| | | | | | Rear window defogger switch OFF | 5V |
| 11 | O | Ignition switch (ACC or ON) | Input | ACC or ON | Ignition switch ACC or ON | Battery voltage |
| 12 | R/L | Front door switch RH (All) | Input | OFF | ON (open) | 0V |
| | | Rear door switch lower RH (King Cab) | | | OFF (closed) | Battery voltage |
| | | Rear door switch upper RH (King Cab) | | | | |
| 13 | GR | Rear door switch RH (Crew Cab) | Input | OFF | ON (open) | 0V |
| | | | | | OFF (closed) | Battery voltage |
| 15 | L/W | Tire pressure warning check connector | Input | OFF | — | 5V |
| 18 | P | Remote keyless entry receiver and optical sensor (ground) | Output | OFF | — | 0V |

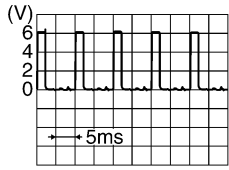
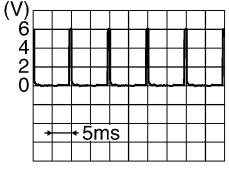
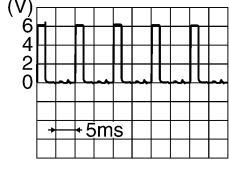
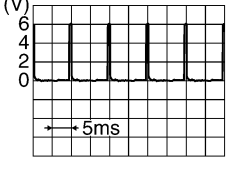
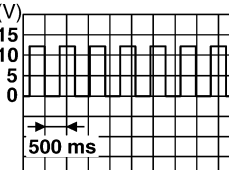
BCM (BODY CONTROL MODULE)

| Terminal | Wire color | Signal name | Signal input/output | Measuring condition | | Reference value or waveform (Approx.) |
|----------|------------|---|---------------------|---------------------|---|--|
| | | | | Ignition switch | Operation or condition | |
| 19 | V/W | Remote keyless entry receiver (power supply) | Output | OFF | Ignition switch OFF | <p style="text-align: right; font-size: small;">LIIA1893E</p> |
| 20 | G/W | Remote keyless entry receiver signal (Signal) | Input | OFF | Stand-by (keyfob buttons released) | <p style="text-align: right; font-size: small;">LIIA1894E</p> |
| | | | | | When remote keyless entry receiver receives signal from keyfob (keyfob buttons pressed) | <p style="text-align: right; font-size: small;">LIIA1895E</p> |
| 21 | G | NATS antenna amp. | Input | OFF → ON | Ignition switch (OFF → ON) | Just after turning ignition switch ON: Pointer of tester should move for approx. 1 second, then return to battery voltage. |
| 22 | G | BUS | — | — | Ignition switch ON or power window timer operates | <p style="text-align: right; font-size: small;">PIIA2344E</p> |
| 23 | G/O | Security indicator lamp | Output | OFF | Goes OFF → illuminates (Every 2.4 seconds) | Battery voltage → 0V |
| 25 | BR | NATS antenna amp. | Input | OFF → ON | Ignition switch (OFF → ON) | Just after turning ignition switch ON: Pointer of tester should move for approx. 1 second, then return to battery voltage. |
| 27 | W/R | Compressor ON signal | Input | ON | A/C switch OFF | 5V |
| | | | | | A/C switch ON | 0V |
| 28 | L/R | Front blower monitor | Input | ON | Front blower motor OFF | Battery voltage |
| | | | | | Front blower motor ON | 0V |
| 29 | W/B | Hazard switch | Input | OFF | ON | 0V |
| | | | | | OFF | 5V |
| 31 | P/L | Cargo lamp switch | Input | OFF | Cargo lamp switch ON | 0V |
| | | | | | Cargo lamp switch OFF | Battery voltage |

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BCM (BODY CONTROL MODULE)

| Terminal | Wire color | Signal name | Signal input/output | Measuring condition | | Reference value or waveform (Approx.) |
|----------|------------|--------------------------------------|---------------------|---------------------|--|---|
| | | | | Ignition switch | Operation or condition | |
| 32 | R/G | Combination switch output 5 | Output | ON | Lighting, turn, wiper OFF Wiper dial position 4 |  <p style="text-align: right;">SKIA5291E</p> |
| 33 | R/Y | Combination switch output 4 | Output | ON | Lighting, turn, wiper OFF Wiper dial position 4 |  <p style="text-align: right;">SKIA5292E</p> |
| 34 | L | Combination switch output 3 | Output | ON | Lighting, turn, wiper OFF Wiper dial position 4 |  <p style="text-align: right;">SKIA5291E</p> |
| 35 | O/B | Combination switch output 2 | Output | ON | Lighting, turn, wiper OFF Wiper dial position 4 |  <p style="text-align: right;">SKIA5292E</p> |
| 36 | R/W | Combination switch output 1 | | | | |
| 37 | B/R | Key switch and key lock solenoid | Input | OFF | Key inserted Key removed | Battery voltage 0V |
| 38 | W/L | Ignition switch (ON) | Input | ON | — | Battery voltage |
| 39 | L | CAN-H | — | — | — | — |
| 40 | P | CAN-L | — | — | — | — |
| 47 | SB | Front door switch LH (All) | Input | OFF | ON (open) | 0V |
| | | Rear door switch lower LH (King Cab) | | | OFF (closed) | Battery voltage |
| | | Rear door switch upper LH (King Cab) | | | | |
| 48 | R/Y | Rear door switch LH (Crew Cab) | Input | OFF | ON (open) | 0V |
| | | | | | OFF (closed) | Battery voltage |
| 50 | R/Y | Cargo bed lamp control | Output | OFF | Cargo lamp switch ON | 0V |
| | | | | | Cargo lamp switch OFF | Battery voltage |
| 51 | Y/B | Trailer turn signal (right) | Output | ON | Turn right ON |  <p style="text-align: right;">SKIA3009J</p> |

BCM (BODY CONTROL MODULE)

| Terminal | Wire color | Signal name | Signal input/output | Measuring condition | | Reference value or waveform (Approx.) | |
|----------|------------|--|---------------------|---------------------|--|---------------------------------------|----|
| | | | | Ignition switch | Operation or condition | | |
| 52 | G/B | Trailer turn signal (left) | Output | ON | Turn left ON | | |
| 56 | R/G | Battery saver output | Output | OFF | 30 minutes after ignition switch is turned OFF | 0V | |
| | | | | ON | — | Battery voltage | |
| 57 | Y/R | Battery power supply | Input | OFF | — | Battery voltage | |
| 58 | W/R | Optical sensor | Input | ON | When optical sensor is illuminated | 3.1V or more | |
| | | | | | When optical sensor is not illuminated | 0.6V or less | |
| 59 | G | Front door lock assembly LH actuator (unlock) | Output | OFF | OFF (neutral) | 0V | |
| | | | | | ON (unlock) | Battery voltage | |
| 60 | G/B | Turn signal (left) | Output | ON | Turn left ON | | |
| 61 | G/Y | Turn signal (right) | Output | ON | Turn right ON | | |
| 62 | R/W | Step lamp LH and RH | Output | OFF | ON (any door open) | 0V | |
| | | | | | OFF (all doors closed) | Battery voltage | |
| 63 | L | Interior room/map lamp | Output | OFF | Any door switch | ON (open) | 0V |
| | | | | | OFF (closed) | Battery voltage | |
| 65 | V | All door lock actuators (lock) | Output | OFF | OFF (neutral) | 0V | |
| | | | | | ON (lock) | Battery voltage | |
| 66 | G/Y | Front door lock actuator RH, rear door lock actuators LH/RH and back door lock actuator (unlock) | Output | OFF | OFF (neutral) | 0V | |
| | | | | | ON (unlock) | Battery voltage | |
| 67 | B | Ground | Input | ON | — | 0V | |

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BCM (BODY CONTROL MODULE)

| Terminal | Wire color | Signal name | Signal input/output | Measuring condition | | Reference value or waveform (Approx.) |
|----------|------------|---------------------------------|---------------------|---------------------|---|---------------------------------------|
| | | | | Ignition switch | Operation or condition | |
| 68 | W/L | Power window power supply (RAP) | Output | — | Ignition switch ON | Battery voltage |
| | | | | | Within 45 seconds after ignition switch OFF | Battery voltage |
| | | | | | More than 45 seconds after ignition switch OFF | 0V |
| | | | | | When front door LH or RH is open or power window timer operates | 0V |
| 69 | W/R | Power window power supply | Output | — | — | Battery voltage |
| 70 | W/B | Battery power supply | Input | OFF | — | Battery voltage |

BCM Power Supply and Ground Circuit Check

EKS00K0H

1. CHECK FUSES AND FUSIBLE LINK

- Check 50A fusible link (letter **f**, located in the fuse and fusible link box).
- Check 10A fuse [No. 4, located in the fuse block (J/B)] and 15A fuse [No. 22, located in the fuse block (J/B)].
- Check 10A fuse (No. 59, located in the fuse and relay box).

OK or NG

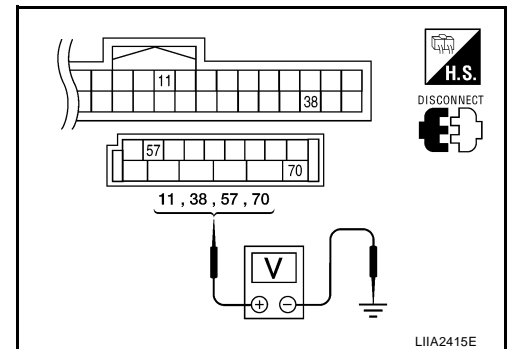
OK >> GO TO 2.

NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2. CHECK BCM POWER SUPPLY CIRCUIT

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

| Connector | Terminals | | Power source | Condition | Voltage (V) (Approx.) |
|-----------|-----------|--------|-----------------------|-----------------------------|-----------------------|
| | (+) | (-) | | | |
| M18 | 11 | Ground | ACC power supply | Ignition switch ACC or ON | Battery voltage |
| | 38 | Ground | Ignition power supply | Ignition switch ON or START | Battery voltage |
| M20 | 57 | Ground | Battery power supply | Ignition switch OFF | Battery voltage |
| | 70 | Ground | Battery power supply | Ignition switch OFF | Battery voltage |



OK or NG

OK >> GO TO 3.

NG >> Repair or replace the harness.

BCM (BODY CONTROL MODULE)

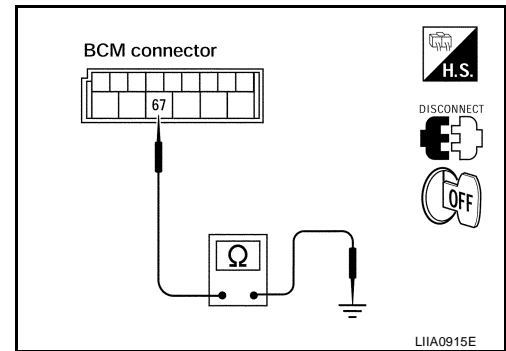
3. CHECK GROUND CIRCUIT

Check continuity between BCM connector M20 terminal 67 and ground.

67 - Ground : Continuity should exist.

OK or NG

- OK >> Power supply and ground circuit is OK.
- NG >> Repair or replace harness.



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BCM (BODY CONTROL MODULE)

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CONSULT-II Function (BCM)

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

| BCM diagnostic test item | Diagnostic mode | Content |
|--------------------------|-----------------------|--|
| Inspection by part | WORK SUPPORT | Supports inspections and adjustments. Commands are transmitted to the BCM for setting the status suitable for required operation, input/output signals are received from the BCM and received data is displayed. |
| | DATA MONITOR | Displays BCM input/output data in real time. |
| | ACTIVE TEST | Operation of electrical loads can be checked by sending drive signal to them. |
| | SELF-DIAG RESULTS | Displays BCM self-diagnosis results. |
| | CAN DIAG SUPPORT MNTR | The results of transmit/receive diagnosis of CAN communication can be read. |
| | ECU PART NUMBER | BCM part number can be read. |
| | CONFIGURATION | Performs BCM configuration read/write functions. |

CONSULT-II START PROCEDURE

Refer to [GI-38, "CONSULT-II Start Procedure"](#) .

ITEMS OF EACH PART

NOTE:

CONSULT-II will only display systems the vehicle possesses.

| System and item | CONSULT-II display | Diagnostic test mode (Inspection by part) | | | | | | |
|---|--------------------|---|-------------------|-----------------------|--------------|-----------------|-------------|---------------|
| | | WORK SUPPORT | SELF-DIAG RESULTS | CAN DIAG SUPPORT MNTR | DATA MONITOR | ECU PART NUMBER | ACTIVE TEST | CONFIGURATION |
| BCM | BCM | × | × | × | | × | | × |
| Power door lock system | DOOR LOCK | × | | | × | | × | |
| Rear defogger | REAR DEFOGGER | | | | × | | × | |
| Warning chime | BUZZER | | | | × | | × | |
| Room lamp timer | INT LAMP | × | | | × | | × | |
| Remote keyless entry system | MULTI REMOTE ENT | × | | | × | | × | |
| Headlamp | HEAD LAMP | × | | | × | | × | |
| Wiper | WIPER | × | | | × | | × | |
| Turn signal lamp Hazard lamp | FLASHER | | | | × | | × | |
| Blower fan switch signal Air conditioner switch signal | AIR CONDITIONER | | | | × | | | |
| Combination switch | COMB SW | | | | × | | | |
| NVIS (NATS) | IMMU | | | | × | | × | |
| Interior lamp battery saver | BATTERY SAVER | × | | | × | | × | |
| Back door | TRUNK | | | | × | | × | |
| Theft alarm | THEFT ALM | × | | | × | | × | |
| Retained accessory power control | RETAINED PWR | × | | | × | | × | |
| Oil pressure switch | SIGNAL BUFFER | | | | × | | × | |

BCM (BODY CONTROL MODULE)

| System and item | CONSULT-II display | Diagnostic test mode (Inspection by part) | | | | | | |
|---------------------------|----------------------|---|-------------------|-----------------------|--------------|-----------------|-------------|----------------|
| | | WORK SUPPORT | SELF-DIAG RESULTS | CAN DIAG SUPPORT MNTR | DATA MONITOR | ECU PART NUMBER | ACTIVE TEST | CON-FIGURATION |
| Low tire pressure warning | AIR PRESSURE MONITOR | × | × | | × | | × | |
| Panic alarm | PANIC ALARM | | | | | | × | |

WORK SUPPORT

Display Item List

| Item | Description |
|---------------------|---|
| RESET SETTING VALUE | Return a value set with WORK SUPPORT of each system to a default value in factory shipment. |

CAN Communication Inspection Using CONSULT-II (Self-Diagnosis)

EKS00K0J

1. SELF-DIAGNOSTIC RESULT CHECK

CAUTION:

If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carry out CAN communication.

1. Connect CONSULT-II and CONSULT-II CONVERTER, and select "BCM" on "SELECT SYSTEM" screen.
2. Select "BCM" on "SELECT TEST ITEM" screen, and select "SELF-DIAG RESULTS".
3. Check display content in self-diagnostic results.

| CONSULT-II display code | Diagnosis item |
|-------------------------|----------------|
| U1000 | INITIAL DIAG |
| | TRANSMIT DIAG |
| | ECM |
| | IPDM E/R |
| | METER/M&A |
| | I-KEY |

Contents displayed

No malfunction>>Inspection end.

Malfunction in CAN communication system>>After printing the monitor items, go to [LAN-5, "TROUBLE DIAGNOSIS"](#).

Configuration DESCRIPTION

EKS00K0K

CONFIGURATION has two functions as follows:

- READ CONFIGURATION is the function to confirm vehicle configuration of current BCM.
- WRITE CONFIGURATION is the function to write vehicle configuration on BCM.

CAUTION:

- When replacing BCM, you must perform WRITE CONFIGURATION with CONSULT-II.
- Complete the procedure of WRITE CONFIGURATION in order.
- If you set incorrect WRITE CONFIGURATION, incidents will occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.

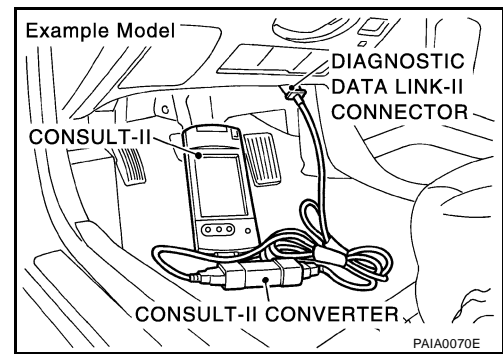
READ CONFIGURATION PROCEDURE

CAUTION:

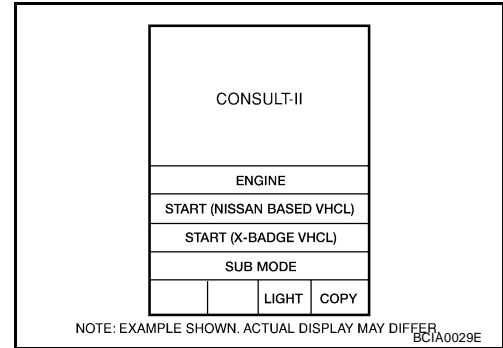
If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carries out CAN communication.

BCM (BODY CONTROL MODULE)

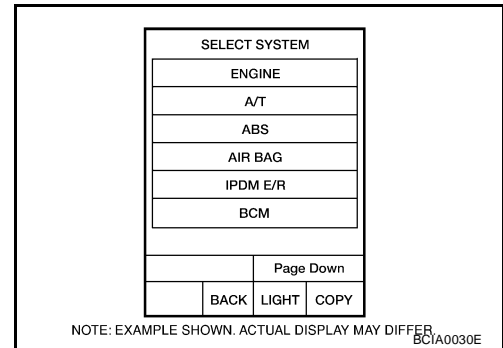
1. With ignition switch OFF, connect CONSULT-II and CONSULT-II CONVERTER to data link connector and turn ignition switch ON.



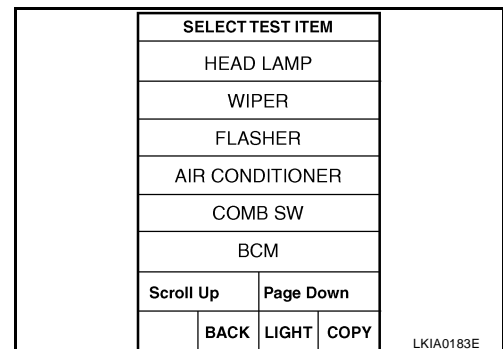
2. Touch "START (NISSAN BASED VHCL)".



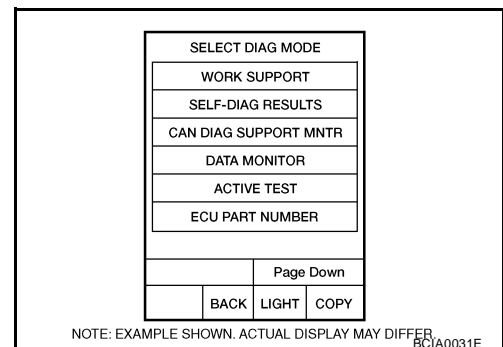
3. Touch "BCM" on "SELECT SYSTEM" screen. If "BCM" is not indicated, go to [GI-40, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#).



4. Touch "BCM" on "SELECT TEST ITEM" screen.



5. Touch "CONFIGURATION" on "SELECT DIAG MODE" screen.

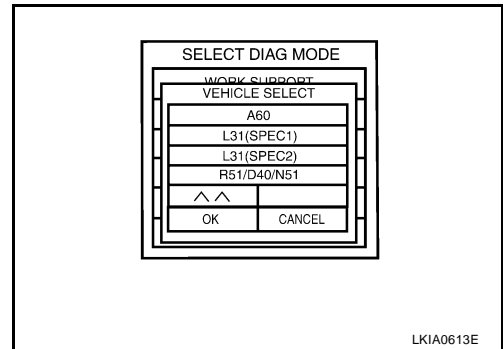


BCM (BODY CONTROL MODULE)

6. Touch "A60" and "OK" on "VEHICLE SELECT" screen. For canceling, touch "CANCEL" on "VEHICLE SELECT" screen.

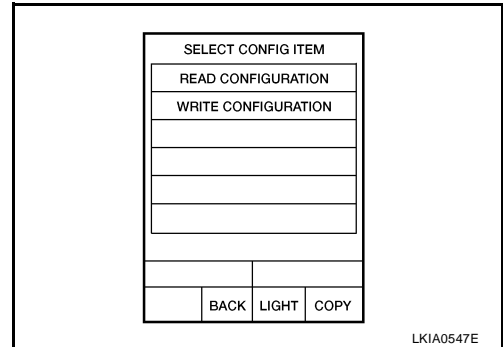
NOTE:

Confirm vehicle model. Refer to [GI-48, "Model Variation"](#) in GI section.



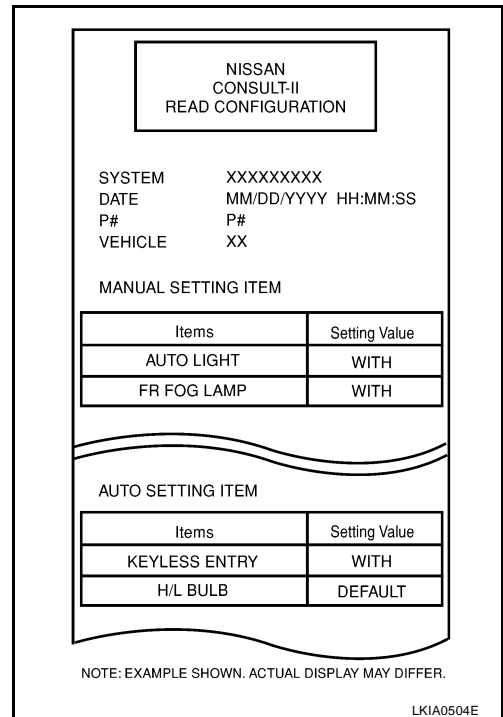
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7. Touch "READ CONFIGURATION" on "SELECT CONFIG ITEM" screen.



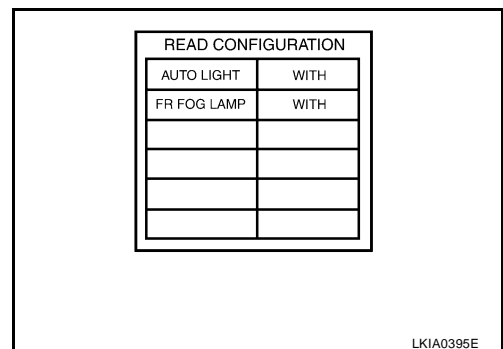
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8. Configuration of current BCM is printed out automatically. A listing of manual setting items and auto setting items will be displayed. Auto setting items are preset and cannot be changed. Manual setting items can be set by using WRITE CONFIGURATION PROCEDURE. Refer to [BCS-22, "WRITE CONFIGURATION PROCEDURE"](#).



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9. Touch "BACK" on "READ CONFIGURATION" screen.



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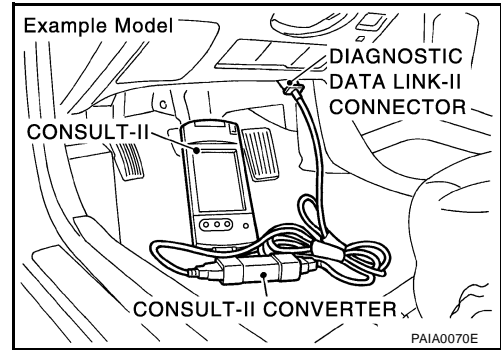
BCM (BODY CONTROL MODULE)

WRITE CONFIGURATION PROCEDURE

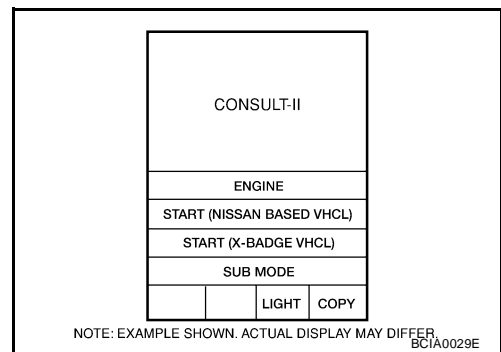
CAUTION:

If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carries out CAN communication.

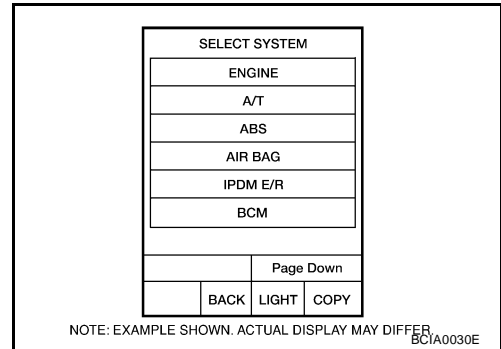
1. With ignition switch OFF, connect CONSULT-II and CONSULT-II CONVERTER to data link connector and turn ignition switch ON.



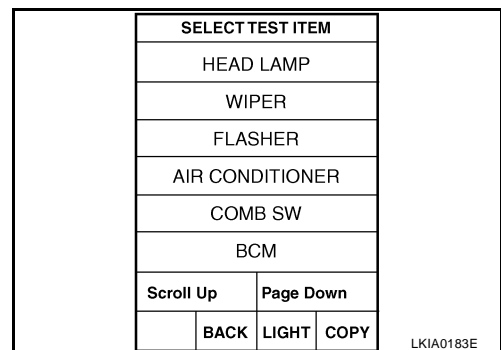
2. Touch "START (NISSAN BASED VHCL)".



3. Touch "BCM" on "SELECT SYSTEM" screen.
If "BCM" is not indicated, go to [GI-40, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#).

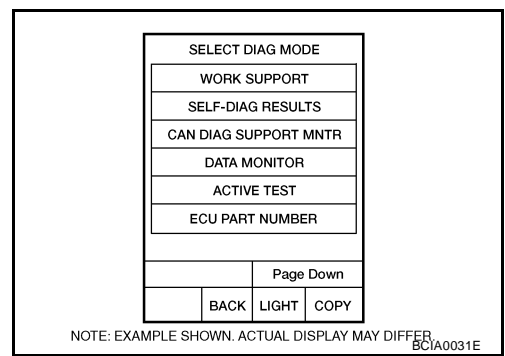


4. Touch "BCM" on "SELECT TEST ITEM" screen.



BCM (BODY CONTROL MODULE)

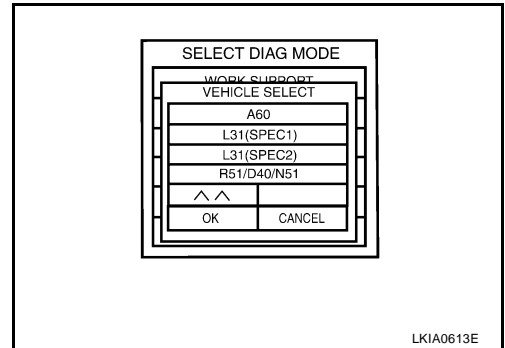
5. Touch "CONFIGURATION" on "SELECT DIAG MODE" screen.



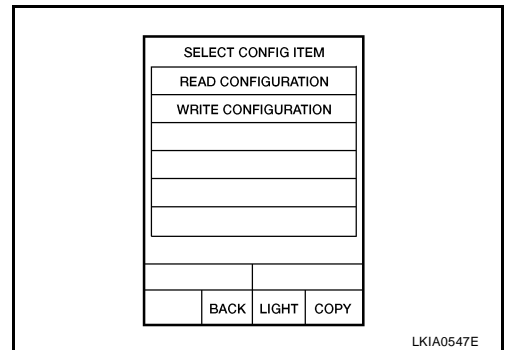
6. Touch "A60" and "OK" on "VEHICLE SELECT" screen. For canceling, touch "CANCEL" on "VEHICLE SELECT" screen.

NOTE:

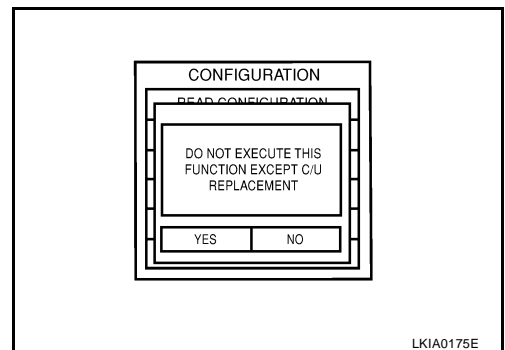
Confirm vehicle model. Refer to [GI-48, "Model Variation"](#) in GI section.



7. Touch "WRITE CONFIGURATION" on "SELECT CONFIG ITEM" screen.



8. Touch "YES".
For canceling, touch "NO".



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BCM (BODY CONTROL MODULE)

9. Set by touching selection on "WRITE CONFIGURATION" screen based on the following ITEM LIST.

| ITEM | SET VAL |
|---------------|-------------------|
| KEYLESS ENTRY | WITH ⇔ WITHOUT |
| AUTO LIGHT | WITH ⇔ WITHOUT |
| FR FOG LAMP | WITH ⇔ WITHOUT |
| DTRL | WITH ⇔ WITHOUT |
| SPD SNS WIP | WITH ⇔ WITHOUT |
| DISPLAY STYLE | MODE1*1 ⇔ MODE2*2 |
| THEFT ALARM | WITH ⇔ WITHOUT |

*1: Without NAVI

*2: With NAVI

Do not apply MODE3 or MODE4.

NOTE:

Confirm vehicle model. Refer to [GI-48, "Model Variation"](#) in GI section.

10. Touch "CHNG SETTING" on "WRITE CONFIGURATION" screen.

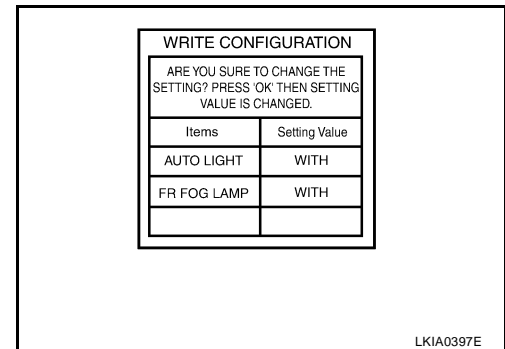
CAUTION:

Make sure to touch "CHNG SETTING" even if the indicated configuration of new BCM is same as the desirable configuration.

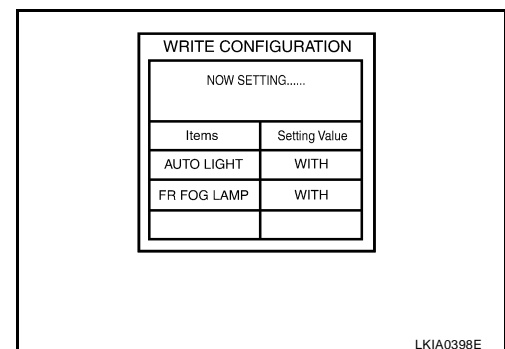
If not, configuration which is set automatically by selecting vehicle model cannot be memorized.

11. Touch "OK" on "WRITE CONFIGURATION" screen.

If "CANCEL" is touched, it will return to previous screen.



12. Wait until the next screen during setting.



BCM (BODY CONTROL MODULE)

13. WRITE CONFIGURATION results are printed out automatically. Confirm "WRITE CONFIGURATION" is correctly executed by comparing sheet automatically printed out with applicable configuration list shown in step 9.

NISSAN
CONSULT-II
WRITE CONFIGURATION

SYSTEM XXXXXXXXX
DATE MM/DD/YYYY HH:MM:SS
P# P#
VEHICLE XX

MANUAL SETTING ITEM

| Items | Setting Value |
|-------------|---------------|
| AUTO LIGHT | WITH |
| FR FOG LAMP | WITH |

AUTO SETTING ITEM

| Items | Setting Value |
|---------------|---------------|
| KEYLESS ENTRY | WITH |
| H/L BULB | DEFAULT |

NOTE: EXAMPLE SHOWN. ACTUAL DISPLAY MAY DIFFER.

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14. Touch "OK" on "WRITE CONFIGURATION" screen. WRITE CONFIGURATION is completed.

WRITE CONFIGURATION

PLEASE CHECK THE PRINTOUT AND
PRESS 'OK' TO RETURN SYSTEM
SELECTION SCREEN.

| Items | Setting Value |
|-------------|---------------|
| AUTO LIGHT | WITH |
| FR FOG LAMP | WITH |
| | |
| | |
| | |

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BCM (BODY CONTROL MODULE)

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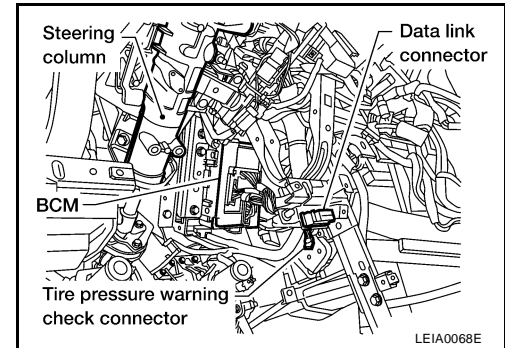
BCM REMOVAL AND INSTALLATION

Removal

NOTE:

If possible, before removing BCM, retrieve current BCM configuration to use for reference when configuring new BCM after installation. Refer to [BCS-19, "Configuration"](#) .

1. Disconnect battery negative cable.
2. Remove lower knee bolster. Refer to [IP-10, "Removal and Installation"](#) .
3. Remove screw and release BCM.
4. Disconnect connectors and then remove BCM.



Installation

Install in the reverse order of removal.

NOTE:

- When replacing BCM, it must be configured. Refer to [BCS-19, "Configuration"](#) .
- When replacing BCM, perform initialization of NATS system and registration of all NATS ignition key IDs. Refer to [BL-128, "NVIS\(NISSAN Vehicle Immobilizer System-NATS\)"](#) .
- When replacing BCM, perform ID registration procedure of low tire pressure warning system. Refer to [WT-13, "ID Registration Procedure"](#) .